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FINAL

HUMAN HEALTH BASELINE RISK ASSESSMENT OF THE CREEKS ADJACENT TO DSCR

FOR

DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA

Prepared for:

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MACTEC

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12 June 2006

Project No. 6301-06-0016

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Contract : Contract No. F41624-03-D-8606 – TO 81

Subject: Final Human Health Baseline Risk Assessment
Defense Supply Center Richmond (DSCR)

Dear Mr. Shrove:

MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to submit an electronic copy of the Final Human Health Baseline Risk Assessment. This document was prepared in continued support of the Defense Logistics Agency (DLA) at DSCR.

Additional copies of this document have been issued as shown in the attached distribution list. If you have any questions or need further information, please contact me at 770-499-6849 or Steve Youngs at 770-421-3377.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Laura M. Smith, RHSP
Senior Scientist

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Senior Project Manager

Enclosures

DISTRIBUTION LIST

FINAL HUMAN HEALTH BASELINE RISK ASSESSMENT OF THE CREEKS ADJACENT TO DSCR

DEFENSE SUPPLY CENTER RICHMOND
RICHMOND, VIRGINIA

JUNE 2006

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LIST OF ACRONYMS AND ABBREVIATIONS

ADD	Average Daily Dose
ADDc	Average Daily Dose for Carcinogens
ADDn	Average Daily Dose for Noncarcinogens
AFCEE	Air Force Center for Environmental Excellence
AT	Averaging Time
ATc	Averaging Time for Carcinogens
ATn	Averaging Time for Noncarcinogens
CEM	Conceptual Exposure Model
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm^2	Square centimeters
CMP	Creek Monitoring Program
COC	Constituent of Concern
COPC	Constituent of Potential Concern
d/yr	Days per year
DA_{event}	Absorbed Dose per Event
DCE	cis-1,2-Dichloroethene
DDD	p,p'-Dichlorodiphenyldichloroethane
DDE	p,p'-Dichlorodiphenyldichloroethylene
DDT	p,p'-Dichlorodiphenyltrichloroethane
DLA	Defense Logistics Agency
DQOs	Data Quality Objectives
DSCR	Defense Supply Center Richmond
ED	Exposure Duration
EPC	Exposure Point Concentration
FOD	Frequency of Detection
FS	Feasibility Study
FTA	Fire Training Area
HHBRA	Human Health Baseline Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
IA	Intake Assumptions
IEUBK	Integrated Exposure Uptake Biokinetic
IR	Ingestion Rate

LIST OF ACRONYMS AND ABBREVIATIONS

IRIS	Integrated Risk Information System
kg	kilogram
L/d	liter per day
MACTEC	MACTEC Engineering and Consulting Inc.
MDC	Maximum Detected Concentration
mg/cm^2-d	Milligram per square centimeter per day
mg/kg-d	Milligram per kilogram per day
µg/dL	Microgram per deciliter
NCEA	National Center for Exposure Assessment
ND	Nondetections
NGA	National Guard Area
OSA	Open Storage Area
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
RAGS-E	Risk Assessment Guidance for Superfund Part E
RBC	Risk-Based Concentration
RfD	Reference Dose
RME	Reasonable Maximum Exposure
ROD	Record of Decision
SFs	Slope Factors
SQL	Sample Quantitation Limit
SVOC	Semivolatile Organic Compound
SWQS	Surface Water Quality Standards
TCE	Trichloroethene
TS	Transitory Shelter
UCL	95 Percent Upper Confidence Limit on the Mean
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
VOC	Volatile Organic Compound

LIST OF ACRONYMS AND ABBREVIATIONS

WBU	Water Bearing Unit
VC	Vinyl Chloride
VDEQ	Virginia Department of Environmental Quality

EXECUTIVE SUMMARY

This human health baseline risk assessment (HHBRA) evaluated the significance of potential exposures to constituents detected in Kingsland Creek, No Name Creek, and Falling Creek Tributary (the adjacent creeks) surface water and sediment. The HHBRA is a companion report to the *Results of Three-Year Creek Monitoring Program* (MACTEC, 2005), which address ecological risks. This HHBRA presents the findings for a current recreational creek use scenario and uses current detected surface water concentrations as the exposure point concentrations. Each of the three adjacent creeks is too narrow and shallow to allow swimming; however, recreational creek use does include possible wading by receptors. While small fish and minnows have been documented, the creeks are too shallow to support game fish suitable for consumption by a recreational angler. The revised HHBRAs for Operable Units (OUs) 6 and 7 consider potential future recreational exposures to No Name Creek and Kingsland Creek, respectively, and are based on projected discharges of groundwater to surface water features.

A conservative screening assessment was performed to identify the constituents of potential concern (COPCs). Cumulatively, surface water COPCs in the adjacent creeks included arsenic, iron, lead, manganese, mercury, thallium, benzene, cis-1,2-dichloroethene, styrene, tetrachloroethene, trichloroethene, vinyl chloride, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene. Sediment COPCs in the adjacent creeks included arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. Exposure pathways evaluated include incidental ingestion and dermal contact with creek water and dermal contact with creek sediment for three different receptor groups: a child wader (1 to 6 years), an adolescent wader (7 to 18 years), and an adult wader. Although little fine sediments are present in the adjacent creeks, the dermal exposure pathway for sediment was included as an added level of conservatism.

Results for Kingsland Creek showed no unacceptable noncancer hazards for the recreational receptors. Cumulative excess cancer risk (3×10^{-6}) for children and adults was slightly above the off-installation risk goal of 1×10^{-6}; however, the risk associated with exposure to surface water is driven by an infrequently detected inorganic constituent, arsenic, which was detected in 1 of 20 samples. No further action is recommended to protect human health from potential installation impacts to Kingsland Creek.

Results for No Name Creek showed no unacceptable noncancer hazards for the recreational receptors. Cumulative excess cancer risks (1×10^{-5}) for children and adults were above the off-installation risk goal

of 1×10^{-6}. Most of the estimated risk was associated with arsenic and VC in surface water. Both arsenic and VC were infrequently detected constituents, and VC has a short half-life in surface water due to its volatile nature. Therefore, the risk associated with exposure to No Name Creek surface water is overestimated. In addition, the risk associated with dermal contact with sediment is likely overstated since very little fine sediment is present. No further action is recommended to protect human health from potential installation impacts. The potential for continuing discharges of impacted groundwater to No Name Creek is further considered in the OU 6 HHBRA.

Noncarcinogenic hazards for Falling Creek Tributary were not evaluated because toxicity data for the detected COPCs (benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and benzo(a)pyrene) are based on potential carcinogenic effects. Cumulative excess cancer risks (6×10^{-6}) for children and adults were above the off-installation risk goal of 1×10^{-6}; however, the risk associated with exposure to surface water is driven by infrequently detected constituents, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene, which were detected once in 24 samples. Dermal contact risk associated with sediments is likely overstated since very little fine sediment is present. No further action is recommended to protect human health from potential installation impacts to Falling Creek Tributary.

1.0 INTRODUCTION

The Defense Supply Center Richmond (DSCR) installation ("the installation") was added to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List in 1987. In 1990, DSCR, the Defense Logistics Agency (DLA), the United States Environmental Protection Agency (USEPA), and the Virginia Department of Environmental Quality (VDEQ) signed a Federal Facilities Agreement that established DLA as the lead agency responsible for evaluating, selecting, and executing necessary, feasible, and reasonable response actions to ensure protection of human health and the environment at the installation.

Since 2000, DSCR has been integrating investigations for source and groundwater Operable Units (OUs) as part of a comprehensive, installation-wide completion strategy that recognizes the interdependence of soil, groundwater, and surface water impacts. Industrial and construction worker scenarios are appropriate for most OUs and will be applied to on-installation exposures only. Potential off-installation exposure scenarios are addressed as residential or recreational. This strategy is consistent with DLA's intent to implement land use controls to maintain current and anticipated future land use for industrial purposes.

DLA has tasked the United States Air Force Center for Environmental Excellence (AFCEE) to assist in revising Human Health Baseline Risk Assessments (HHBRAs) at DSCR. AFCEE contracted MACTEC Engineering and Consulting, Inc. (MACTEC) to prepare this HHBRA that addresses potential installation-related impacts at three creeks near DSCR's installation in Chesterfield County, Virginia (Figure 1-1). This report, a *Human Health Baseline Risk Assessment of the Creeks Adjacent to DSCR*, is a companion report to the *Results of Three-Year Creek Monitoring Program* (CMP; MACTEC, 2005). The HHBRA was prepared in agreement with the *Revised Human Health Baseline Risk Assessment Work Plan* (MACTEC, 2006a) and with USEPA guidance for conducting risk assessments (USEPA, 1989, 2003, 2004a, 2006). This report presents the findings of the HHBRA for a current recreational creek use scenario and uses current detected surface water concentrations as exposure point concentrations (EPCs). Please refer to these documents for the future exposure and risk characterizations for these two creeks.

1.1 PURPOSE

The purpose of the HHBRA was to determine whether potential impacts related to historical facility activities detected in creek surface waters and sediments pose an unacceptable health hazard. The potential exposure is based on current conditions for recreational child, adolescent, and adult receptors. Potential ecological impacts to the creeks are addressed in the CMP (MACTEC, 2005). The revised HHBRAs for OU 6 and OU 7 consider potential future recreational exposures to No Name Creek and Kingsland Creek, respectively, with modeled EPCs that assume surface water will receive groundwater discharges.

1.2 BACKGROUND

The three creeks addressed in the CMP and referred to herein as the "DSCR Adjacent Creeks" are:

- Kingsland Creek
- No Name Creek
- Falling Creek Tributary

The three creek substrates are mostly composed of sands, gravels, rocks, and boulders; very little sediment is present. In fact, creek sediment sampling was complicated by the lack of significant sediments observed during MACTEC's field operations (Section 2.0). While small fish (e.g., minnows) have been observed by MACTEC personnel during site visits, few, if any, larger game fish have been observed. A detailed description of each creek is presented in the following sections.

1.2.1 Kingsland Creek

Kingsland Creek is a non-tidal, perennial stream in the James River Basin (Figure 1-1). The creek originates approximately 5.5 miles west of the installation, passes through Crosby's Lake approximately 1.5 miles downstream of its origin, flows east, and forms an approximately 1-mile-long portion of the installation's southern property boundary (Figure 1-1). The creek flows east for less than a mile beyond the installation's southeastern boundary before draining into the James River. The creek's watershed is approximately 6,792 acres. The portion of the installation that potentially contributes to Kingsland Creek by overland flow or through stormwater discharge comprises approximately 162 acres, or 2.3 percent, of the watershed.

Most free-flowing waters in the Middle James River sub-basin that are not otherwise designated have a Virginia surface-water use classification of "swimmable." Kingsland Creek is too narrow and shallow for swimming adjacent to the installation, although wading is possible.

North of Kingsland Creek, a fence running along the southern installation boundary could limit access to Kingsland Creek by installation employees. Several privately-owned residential plots south of Kingsland Creek could access Kingsland Creek. The area surrounding Kingsland Creek is heavily wooded with associated wetlands and flood plains. East and west of the installation, the creek is accessible to the public via bridge overpasses and public lands.

Kingsland Creek is not used as a public water supply. Multiple stormwater outfalls both originating on- and off-installation discharge to Kingsland Creek (Figure 1-1).

1.2.2 No Name Creek

No Name Creek is a non-tidal creek located in the James River Basin. The headwater is classified as an intermittent stream by the United States Geological Survey (USGS, 1994) and the Commonwealth of Virginia. No Name Creek first surfaces on the installation as it discharges from a storm sewer culvert in the National Guard Area (NGA) (Figure 1-1). Downstream from the installation, No Name Creek becomes perennial (although it is shown as intermittent on the USGS map) and meanders in an easterly direction for approximately 2 miles until its confluence with the James River. Surface water flow has been observed from the storm sewer culvert during each visit to No Name Creek (in the NGA to the most downstream sampling location, just upstream of Jefferson Davis Highway). The upstream watershed for No Name Creek encompasses approximately 620 acres. The portion of the installation that potentially contributes to the creek by overland flow or through stormwater discharge comprises approximately 85 acres, or 13 percent of the watershed. Two stormwater outflows drain Zone 2 of the installation to No Name Creek Outfall 006A and Outfall 006B (Figure 1-1). The creek is shallow and considered wadeable rather than swimmable. Landowners or the public could access No Name Creek along the segment downstream of the installation. No Name Creek is not used as a public water supply. Multiple stormwater outfalls originating on- and off-site discharge to No Name Creek (Figure 1-1).

1.2.3 Falling Creek Tributary

Falling Creek Tributary is a non-tidal perennial stream in the James River Basin. This tributary flows north along the installation's northwestern property boundary for approximately 1,800 feet until it flows under Highway 301 and another 0.5 mile to Falling Creek (Figure 1-1). Falling Creek flows into the James River less than 1 mile east of the confluence of Falling Creek Tributary and Falling Creek. The creek's watershed area is approximately 920 acres. The portion of the installation that potentially contributes to Falling Creek Tributary by overland flow or through stormwater discharge occupies approximately 35 acres, or 3.7 percent, of the watershed. Because of the grade of the railroad along the western boundary, the flow of surface runoff from the installation may be restricted to Falling Creek Tributary.

Most free-flowing waters in the Middle James River sub-basin that are not otherwise designated have a Virginia surface-water use classification of "swimmable." Falling Creek Tributary is too narrow and shallow for swimming adjacent to the site but may be wadeable. The area along the Tributary is wooded. The Tributary flows near a pasture and residential area and is accessible to residential areas west of DSCR.

The installation and Falling Creek Tributary are separated by railroad tracks that run parallel to the western boundary for approximately 2,700 feet. North of the installation, Falling Creek Tributary crosses through culverts beneath two roads, a railroad, and a structure for a gas pipeline corridor. Falling Creek Tributary then flows through a wooded habitat until its confluence with Falling Creek.

Falling Creek Tributary is not used as a public water supply. One stormwater outfall (Outfall 005) near the installation's north entrance gate (Figure 1-1) discharges to the Tributary. The combined stormwater flow discharges to Falling Creek Tributary via a culvert beneath the railroad bed approximately 3,200 feet north of Outfall 005.

1.3 CERCLA RISK ASSESSMENT PROCESS

This HHBRA was performed in agreement with USEPA guidance for conducting CERCLA risk assessments (USEPA, 1989, 2003, and 2004a). A risk assessment is a systematic process. The HHBRA process involves the following steps:

- Data evaluation

- Exposure assessment
- Toxicity assessment
- Risk characterization
- Identification of uncertainties

In the data evaluation, available chemical data are reviewed. The data selected for use comprise the risk assessment dataset. Once this dataset has been established, a Conceptual Exposure Model (CEM) is developed to identify potential exposure pathways. The risk assessment data undergo a conservative screening process to identify constituents of potential concern (COPCs). This process involves comparing the maximum detected chemical concentrations (MDCs) with appropriate screening criteria. COPCs are the focus of the creeks-specific HHBRA.

In the exposure assessment, COPC concentrations are mathematically combined with "intake assumptions" (IAs) and average daily doses (ADDs) for each COPC, receptor, and pathway. COPC exposure point concentrations are determined statistically for each applicable medium. Statistics are used to identify the 95 percent upper confidence limit of the arithmetic mean (UCL) detected concentrations. These media-specific UCLs are then compared with the MDCs, and the lesser of the two is selected for use in the HHBRA per USEPA (1989) guidance.

In the toxicity assessment, toxicity values are obtained from appropriate regulatory sources [i.e., Integrated Risk Information System (IRIS); National Center for Exposure Assessment (NCEA)]. These values are used to evaluate both noncarcinogenic and carcinogenic health effects from potential exposures to COPCs via the pathways identified in the CEM. Toxicity values reflect the "dose-response" behavior for each COPC by toxicity type (i.e., carcinogenic or noncarcinogenic [systemic effects]).

In the risk characterization, the ADDs are combined with the dose-response values to predict the site-specific health effects for each receptor, pathway, and COPC. These individual responses, in the form of noncarcinogenic "hazard quotients" (HQs) or individual excess cancer risks, are then summed to give the total noncarcinogenic "hazard index" (HI) and cumulative risk. If the HI and cumulative risk exceed acceptable levels, the contributing constituents are identified as constituents of concern (COCs). Should COCs be identified, subsequent feasibility studies and remedial action plans may present remedial goals based on risk.

In the uncertainties analysis, the variabilities associated with each step are identified and evaluated. The goal of this analysis is to qualify the level of conservatism in the HHBRA results (i.e., estimated levels

overestimate or underestimate actual risk) so that risk managers may make decisions regarding the need for a remedy.

2.0 DATA EVALUATION

During data evaluation, collected data were reviewed and selected for inclusion in the HHBRA. Both sediment and surface water chemical data were collected from the three creeks and included in the HHBRA.

2.1 DATA COLLECTION

Surface water data collection activities have been described in supporting documents (MACTEC, 2002, 2005). Both dissolved (filtered) and particulate-bound (unfiltered or total) inorganic chemical analyses were collected for Kingsland Creek and No Name Creek. Only unfiltered analyses were completed for Falling Creek Tributary. Although the filtered fraction represents the most bioavailable portion, total inorganic results (i.e., the unfiltered results) have been used to characterize risk for the creeks. This approach adds conservatism to the risk assessment. The parameters analyzed in surface water from Kingsland Creek, No Name Creek, and Falling Creek Tributary were selected based on the constituents previously detected at the installation. Surface water samples were analyzed for the following:

- Metals and inorganic compounds
- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Polycyclic aromatic hydrocarbons (PAHs)
- Organochlorine pesticides (e.g., p,p'-dichlorodiphenyltrichloroethane [DDT])
- Polychlorinated biphenyls (PCBs)

Four sediment samples were collected during each monitoring event from both Kingsland Creek and Falling Creek Tributary, and three sediment samples were collected from No Name Creek. These sediment samples were co-located within the same sampling reach as the surface water sampling locations.

Sediment samples were collected in accordance with procedures outlined in the *Third Revised Final Creek Study Work Plan and Screening-Level Ecological Risk Assessment for Kingsland, No Name, and Falling Creeks* (LAW, 2001) and the *Technical Memorandum for Creek Monitoring – November 2001, Kingsland Creek, No Name Creek, and Falling Creek Tributary* (MACTEC, 2002).

The parameters analyzed in sediments from Kingsland Creek, No Name Creek, and Falling Creek Tributary were selected based on the constituents previously detected at the installation. Sediment samples were analyzed for the following parameters:

- Metals and inorganic compounds
- VOCs
- SVOCs
- PAHs
- Organochlorine pesticides
- PCBs

2.2 SURFACE WATER RISK ASSESSMENT DATASET

The surface water risk assessment dataset (those data used in the risk assessment process described in Section 1.3) included chemicals detected in at least one sample and not excluded by appropriate data selection rules. The data selection rules were used to select data from the total database (MACTEC, 2006a and references cited therein) to generate the risk assessment dataset. The data selection rules, which were developed in accordance with the project's data quality objectives (DQOs), are as follows:

- Due to the long history of data collection at the installation, the database potentially contains aged analytical results that might not represent current conditions. Most of the surface water data used in this HHBRA are associated with the CMP (2001 to 2004). However, because the datasets may be limited in size, some data points are included that predate 2001 and may not represent current site conditions.
- Data corresponding to analytical QA/QC results were identified and removed.
- Data corresponding to physical water quality results such as dissolved oxygen, sulfate, pH, and conductance were removed. If pH measurements are either highly acidic (<3 standard units) or highly alkaline (>12), the hazard for human receptors are assessed qualitatively.
- Data for essential nutrients that do not have a Region 3 Risk-Based Concentrations (RBCs) for comparison (i.e., calcium, potassium, chloride, and sodium) were not included in the risk assessment dataset (USEPA, 1989).
- Organic data qualified as "B" (detected in the blank sample) or "R" (unusable) were removed. Data that are B-qualified represent analyte concentrations that are less than 5 or 10 times the concentration of the same analyte detected in the associated laboratory and/or field blanks (5 times for common laboratory contaminants and 10 times for all other chemicals [USEPA, 1989]). Data that are R-qualified represent analytical results that are considered by data validators to be of insufficient quality with respect to the project DQOs.

- Upstream surface water samples were considered representative of background conditions. Upstream samples, KGC-1 and BM-4, were collected for Kingsland Creek and Falling Creek Tributary, respectively (Section 2.1). These two locations are upstream of the installation and are unaffected by installation activities. Because of the flow characteristics of No Name Creek, an upstream location was not identified. Data from these two locations were set aside as background data (Appendix A, Tables A-2 and A-3). Except for the two upstream locations, all other sampling locations were retained in the risk assessment dataset.

- Data collected before 1992 were not used because the validation of these older data could not be confirmed. 1992 was selected as the "cut-off" year because DSCR's Sampling and Analysis Plan (MACTEC, 2004; LAW, 1992), which contained data validation requirements and procedures, was first used in 1992. The retained data collected in 1992 or later comprised nine or more sampling events and are considered representative of current installation conditions.

In addition to these data selection rules, duplicate sample results were identified and averaged to generate a single data point.

The three surface water risk assessment datasets were used as follows.

2.2.1 Kingsland Creek

Table 2-1 summarizes the surface water dataset for Kingsland Creek. The complete data are provided in Appendix A. As shown, 17 metal/inorganic and 17 organic constituents were detected in samples from Kingsland Creek. VOCs comprised 16 of the 17 detected organic constituents. The remaining organic constituent was an SVOC (benzoic acid).

2.2.2 No Name Creek

Table 2-2 summarizes the surface water dataset for No Name Creek. The complete data are provided in Appendix A. As shown, 18 metal/inorganic and 17 organic constituents were detected. VOCs comprised 11 of the 17 organic constituents. The remaining six organic constituents were PAHs.

2.2.3 Falling Creek Tributary

Table 2-3 summarizes the surface water dataset for Falling Creek Tributary. The complete data are provided in Appendix A. As shown, 11 metal/inorganic and 10 organic constituents were detected. VOCs comprised 2 of the 10 organic constituents, and the remaining 8 organic constituents were PAHs.

2.3 SEDIMENT RISK ASSESSMENT DATASET

The sediment risk assessment dataset (those data used in the risk assessment process described in Section 1.3) included chemicals detected in at least one sample and not excluded by appropriate data selection rules. The data selection rules were used to select data from the total database (MACTEC, 2006a and references cited therein) to generate the risk assessment dataset. The data selection rules, which were developed in accordance with the project's DQOs, are as follows:

- Data points qualified as "B" (detected in the blank sample) or "R" (unusable) were removed.
- Data collected between 2001 and 2004 and contained in the CMP were used in this HHBRA, and are considered representative of current installation conditions.

In addition to these data selection rules, duplicate sample results were identified and averaged to generate a single data point.

The three sediment risk assessment datasets were used as follows.

2.3.1 Kingsland Creek

Table 2-4 summarizes the sediment dataset for Kingsland Creek. The complete data are provided in Appendix A. As shown, 19 metal/inorganic, 14 VOCs, 16 PAHs, and 6 pesticides were detected.

2.3.2 No Name Creek

Table 2-5 summarizes the sediment dataset for No Name Creek. The complete data are provided in Appendix A. As shown, 20 metal/inorganic, 6 VOCs, 19 PAHs, 8 pesticides, and 2 SVOCs were detected.

2.3.3 Falling Creek Tributary

Table 2-6 summarizes the sediment dataset for Falling Creek Tributary. The complete data are provided in Appendix A. As shown, 18 metal/inorganic, 3 VOCs, 19 PAHs, 6 pesticides, 1 PCB, and 1 SVOC were detected.

2.4 CONCEPTUAL EXPOSURE MODEL

The CEM is a tool that identifies complete exposure pathways for the HHBRA. The CEM was developed based on the risk assessment datasets and the current and anticipated future installation land use. The CEM is shown in Figure 2-1 and is discussed below.

An exposure pathway describes the course a chemical or physical agent takes from a source to an exposed individual. A pathway has four sequential components, defined by USEPA (1989) as follows:

- A source and mechanism of chemical release (e.g., chemical use at the installation)
- An environmental retention or transport medium (e.g., stormwater runoff)
- A point of potential human contact with the medium (referred to as the exposure point)
- A receptor and an exposure route at the exposure point

For an exposure pathway to be considered complete, all four of the previously listed elements must be present (USEPA, 1989). For example, fish ingestion is an incomplete pathway for the recreational receptor since only small fish (e.g., minnows) have been observed. Although this pathway satisfies the first and third components, there is no final retention medium (no game fish in the creeks) and no exposure point, resulting in an incomplete pathway.

In addition to the criterion of pathway completeness, a risk assessor also considers the potential significance of a complete pathway. Insignificant pathways may have multiple media transfer steps, which reduce the chemical concentration reaching an exposure point, known as the EPC. An example of an insignificant pathway is inhalation of chemical vapors from surface water (Figure 2-1); outdoor air dispersion is an additional transport medium or mechanism that tends to reduce the EPCs. Pathways considered during development of this HHBRA are listed on Table 2-7.

The following three complete and potentially significant pathways were identified for evaluation:

- Current incidental ingestion of surface water by recreational children, adolescents, and adults wading in the creek
- Current dermal contact with surface water by recreational children, adolescents, and adults wading in the creek

- Current dermal contact with sediments by recreational children, adolescents, and adults wading in the creek

2.5 CONSTITUENTS OF POTENTIAL CONCERN

COPCs are site-related chemicals likely to contribute to the overall health risk. The COPC selection process focuses on those constituents most likely to contribute to an unacceptable risk. Detected chemical concentrations were compared with screening criteria to identify any exceedances and generate a list of COPCs.

Before the COPC selection process is presented, the operational history of the OUs that could impact each of the three creeks is reviewed. A qualitative comparison of the constituents expected in creek surface water with the risk assessment dataset should provide additional perspective. Some of the constituents used and released to soils at various OUs have limited mobility in the environment (e.g., PCBs, pesticides). VOCs, which are a mobile class of chemicals, were detected in surface water and sediments. Inorganic compounds may be naturally occurring or related to past OU activities.

2.5.1 Installation Operational History

The following sections present a brief installation operational history, as these activities may have impacted the three creeks (Dames and Moore, 1989a, 1989b; MACTEC, 2006b).

Kingsland Creek – Activities occurring within OUs 4, 7, 11, 12, and 13 could have impacted Kingsland Creek (Figure 1-1). The operational histories of these five OUs are as follows.

OU 4: Former Fire Training Area Soils – The former fire training area (FTA), located in the southern portion of the installation, consisted of three unlined pits used to burn various waste chemicals. The former pits have been covered with soil. The former FTA is used for open storage of construction materials. Previous investigations indicated the presence of VOCs (e.g., tetrachloroethene [PCE], trichloroethene [TCE], and vinyl chloride [VC]), SVOCs, and pesticides. Because OU 4 is the primary source for chlorinated VOCs in groundwater at OU 7, a soil removal action was completed in December 2004 to remove the principal threat source material.

OU 7: Former Fire Training Area Groundwater – The impacted groundwater beneath and downgradient from the former FTA is designated as OU 7. Chlorinated VOCs (particularly PCE, TCE,

cis-1,2-dichloroethene [DCE], and VC) have been detected in groundwater at OU 7. Three groundwater units, the upper water bearing unit (WBU), the lower WBU, and the saprolite bedrock unit have detectable concentrations of VOCs, indicating both horizontal transport towards and beneath Kingsland Creek, and vertical transport to the bedrock WBU.

OU 11: Transitory Shelter 202 – Building 202, a Transitory Shelter (TS), was formerly an open-front storage shed located along the western installation border. Sections of the TS were used to store approximately 800 drums of DDT. Seepage from the drums was discovered in 1981. Previous investigations indicated the presence of DDT, arsenic, p,p'-dichlorodiphenyldichloroethane (DDD), and p,p'-dichlorodiphenyldichloroethylene (DDE) in soils. The shed was demolished in October 2004. Impacts to groundwater from soil constituents were minimal at OU ll. The maximum detected concentrations of arsenic and thallium exceed the Virginia MCLs, but only slightly.

OU 12: Former Building 112 – Former Building 112, located in the southwest portion of the installation, was previously used to store and mix pesticides. The soils associated with former Building 112 are designated as OU 12. Previous investigations indicated surface soil impacts from chlordane, DDT, arsenic, and heptachlor above background and RBCs. Only arsenic was detected in subsurface soils at concentrations exceeding the RBC. Former Building 112 was demolished in July 2004. While groundwater beneath the site is not impacted, some OU-specific constituents have been detected in adjacent storm sewer sediments.

OU 13: Polycyclic Aromatic Hydrocarbon Area – The PAH Area in the south-central portion of the installation borders adjacent Kingsland Creek and a former aboveground fuel oil storage tank. Soil impacts are believed to be the result of a tank spill in 1978 in which Number 4 fuel oil flowed overland to Kingsland Creek. Soils were remediated and replaced with 4 to 10 feet of clean fill. Previous investigations at OU 13 detected PAHs, PCBs, pesticides, and metals in shallow, upland soils and in low-lying, wooded areas near Kingsland Creek.

The operational histories of OUs 4, 7, 11, 12, and 13 suggest that one or more chemical classes could have impacted Kingsland Creek:

- VOCs (including PCE, TCE, and VC)
- PAHs
- Pesticides (DDT, DDD, DDE, chlordane, and heptachlor)
- Phenols

- Bis-ethylhexylphthalate
- PCBs
- Herbicides
- Inorganic compounds (arsenic and iron)

Of these constituents, VOCs, inorganic compounds, and benzoic acid were detected in Kingsland Creek surface water samples (Table 2-1). Metals, VOCs, PAHs, and pesticides were detected in Kingsland Creek sediment samples (Table 2-4). Based on the concentrations of constituents detected in groundwater at OU 7, it is reasonable to observe low detectable levels of VOCs in Kingsland Creek. PAHs, pesticides, and inorganic compounds may be associated with surface runoff, storm drain discharge, groundwater discharge, or may be naturally-occurring.

No Name Creek – Activities occurring within OUs 1, 2, 3, 6, and 9 could have impacted No Name Creek (Figure 1-1). The operational histories of these five OUs are as follows.

OU 1: Open Storage Area Soil – The Open Storage Area (OSA) is centrally located within the installation. The OSA was formerly used for bulk storage of drummed chemicals; recovery of liquids from leaking drums (recoupment); and the repair and replacement of damaged containers. The area presently is used to store empty compressed gas cylinders, electrical transformers, fire extinguishers, and miscellaneous items. Chemicals in soils at OU 1 include PAHs, VOCs, pesticides, and metals.

OU 2: Area 50 Landfill Soil – The Area 50 Landfill is centrally located within the installation. The landfill served as a disposal area for liquid chemicals, construction debris, and scrap metal from the mid-1960s to the early 1970s. The area has been filled, graded to street level, and landscaped since 1975. Previous investigations detected SVOCs, VOCs, pesticides, total petroleum hydrocarbons, phenols, PCBs, and metals in the surrounding soil. A remedial action technical memorandum and revised HHBRA for OU 2 were completed in 2006.

OU 3: National Guard Area Soils – The NGA is an approximately 15-acre parcel in the east-central portion of the installation. Prior activities included the use of solvent degreasers, underground and aboveground storage tanks, and wastewater sludge disposal. The constituents impacting the surrounding soil included VOCs, SVOCs, petroleum hydrocarbons, and metals. A remedial investigation completed in 1994 and a feasibility study (FS) completed in 1995 concluded that there were no direct threats to human health or to No Name Creek from NGA soils. A revised HHBRA for OU 3 was completed in 2006.

OUs 6 and 9: Open Storage Area, Area 50, and NGA Groundwater – The impacted groundwater in the upper and lower WBUs beneath and downgradient of the OSA, Area 50 Landfill, and NGA is designated as OU 6. Chlorinated VOCs (primarily PCE, TCE, and daughter breakdown compounds) and chlorobenzenes have been found. The primary source of OU 6 impact is believed to be Area 50 soil (OU 2) and the NGA (OU 3). A Record of Decision (ROD) signed in September 1993 outlined a groundwater extraction and treatment system designed to limit further offsite migration of impacted groundwater.

The operational histories of OUs 1, 2, 3, 6, and 9 suggest that one or more of the following five chemical classes could be present in samples of surface water collected from No Name Creek:

- PCBs
- Pesticides
- PAHs (particularly benzo[a]pyrene)
- VOCs (including, PCE, TCE, and VC)
- Chlorobenzenes

Of these constituents, PAHs, VOCs, and inorganic compounds were detected in creek surface water samples (Table 2-2) and PAHs, SVOCs, VOCs, pesticides, and inorganic compounds were detected in sediments (Table 2-5).

Falling Creek Tributary – Activities occurring within OUs 5, 8, and 10 (Figure 1-1) could have impacted Falling Creek Tributary. The operational histories of these OUs are as follows.

OU 5: Acid Neutralization Pits Soils – The acid neutralization pits consisted of two concrete settling tanks near Building 65 used for the neutralization of wastewater from metal cleaning and painting operations. Unauthorized solvent disposal was also suspected due to chlorinated VOCs and SVOCs detected in soil. The tanks were decommissioned in 1985; however, cracks were observed in the bottom and sides of the tanks suggesting a possible migration pathway to soil. Detected VOCs included TCE, PCE, and 1,2-dichloroethane. The impacted soil was designated as OU 5. The ROD for OU 5 was signed in 1992; since that time, VOC concentrations have decreased to below the action levels outlined in the ROD. The pits have been filled with clean soil and covered with concrete to prevent reuse.

OU 8: Acid Neutralization Pits Area Groundwater – The groundwater beneath and downgradient from OU 5 is designated as OU 8. Groundwater samples chlorinated VOCs, including TCE and PCE, and bromodichloromethane.

OU 10: Former Building 68 – OU 10 is former Building 68, which was used as a pesticide storage and operations facility. The surrounding gravel lot was also used to store electrical transformers. Chemicals detected in OU 10 soil include arsenic, pesticides (particularly dieldrin), and PAHs.

The operational histories of OUs 5, 8, and 10 suggest that one or more of the following seven chemicals and chemical classes could have impacted Falling Creek Tributary:

- VOCs (PCE, TCE, and VC)
- Pesticides
- PCBs
- PAHs
- Chlorofluoromethanes
- Inorganic compounds (arsenic)

Of these constituents, inorganic compounds, VOCs, and PAHs were detected in surface water samples from Falling Creek Tributary (Table 2-3). Inorganic compounds, VOCs, PAHs, one SVOC, PCB-1248, and pesticides were detected in sediment samples (Table 2-6). The COPCs were all PAHs.

2.5.2 Upstream Background Data

As Figure 1-1 shows, two surface water sampling locations (KGC-1 and BM-4), are upstream of possible installation discharge points. KGC-1 is associated with Kingsland Creek and BM-4 with Falling Creek Tributary. These two sampling locations were used for background comparisons with data collected from downstream sampling locations for the two creeks. Constituents could be released at the various stormwater outfall points (Figure 1-1), but stream flow should prevent chemicals from reaching the two upstream locations. Therefore, chemicals detected at KGC-1 and BM-4 should reflect the influence of natural metals and inorganics and regional anthropogenic sources (Section 2.2) unrelated to facility activities. No upstream sampling location was identified for No Name Creek because the creek begins at an outfall from the installation.

Upstream or background data for VOCs, SVOCs, and inorganic compounds was provided at the two reference locations, and those constituents that exceeded screening criteria were then compared to the

MDC in the surface water background dataset. A simple comparison of MDCs was applied because background data points were insufficient for statistical analysis (i.e., less than four for each location). These background comparisons helped identify potential risks from installation-related activities but were not used as a means to eliminate COPCs. As stated in Section 2.2, the upstream data for KGC-1 and BM-4 are contained in Appendix A. The maximum detected downstream concentrations from Kingsland Creek for arsenic, mercury, and thallium did not exceed the maximum background concentrations at KGC-1. The maximum detected concentrations of the four COPCs for Falling Creek Tributary also did not exceed the maximum detected upstream concentrations for BM-4 (Table 2-3).

2.5.3 Surface Water and Sediment Screening Criterion

For surface water, the lower of the Virginia Surface Water Quality Standards (SWQS) for public water supplies (VDEQ, 2004), Virginia maximum contaminant levels (MCLs; Virginia Department of Health, 2004), and USEPA Region 3 Tapwater RBCs were used as screening criteria (USEPA, 2006). Since this HHBRA addresses a recreational exposure scenario and the surface water is not used for either drinking water or for fishing, the Region 3 RBCs associated with noncarcinogenic toxicity were not adjusted to account for multi-chemical exposures (e.g., HI=1), and carcinogenic constituents were screened using tapwater RBCs based on a target cancer risk of 10^{-5}. Tables 2-1 to 2-3 show the screening values compared to the maximum values detected in the creeks surface water samples.

For sediment, the USEPA Region 3 RBCs for residential soil were used as screening criteria (USEPA, 2006a). The Region 3 RBCs associated with noncarcinogenic toxicity were not adjusted to account for multi-chemical exposures (e.g., HI=1), and carcinogenic constituents were screened using residential soil RBCs based on a target cancer risk of 10^{-5}. Tables 2-4 to 2-6 show the screening values compared to the maximum values detected in the creeks sediment water samples.

2.5.4 Application of Screening Criteria and Identification of COPCs

The COPC selection criteria discussed in the preceding sections were applied to the MDCs listed in Tables 2-1 to 2-6, with the following results.

COPCs for Kingsland Creek – Table 2-1 lists the surface water COPC selection criteria used for Kingsland Creek. The following nine constituents were identified as surface water COPCs:

- Arsenic
- Iron
- Manganese
- Mercury
- Thallium
- Benzene
- cis-1,2-Dichloroethene
- PCE
- TCE

Table 2-4 lists the sediment COPC selection process. Of the 55 total detected constituents, only 1 metal, arsenic, was identified as a sediment COPC.

COPCs for No Name Creek – Table 2-2 lists the surface water COPC selection criteria for No Name Creek. The following 12 constituents were identified as surface water COPCs:

- Arsenic
- Iron
- Lead
- Manganese
- Mercury
- Thallium
- cis-1,2-Dichloroethene
- Styrene
- PCE
- TCE
- VC
- Chrysene

These 12 constituents were further evaluated in the creek-specific risk assessment for No Name Creek. However, lead was evaluated separately because: 1) standard toxicity values have not been developed for chronic exposures to lead, and 2) exposures to lead are potentially serious for young children (developmental effects). Lead in children is evaluated based on an estimated *daily* intake and compared with an allowable threshold level (i.e., the estimated blood lead concentration). The evaluation of lead is described in Section 6.0.

Table 2-5 lists the sediment COPC selection criteria. The following five constituents were identified as sediment COPCs:

- Arsenic
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene

COPCs for Falling Creek Tributary – Table 2-3 lists the surface water COPC selection criteria for Falling Creek Tributary. The following three constituents were identified as surface water COPCs:

- Benzo(b)fluoranthene
- Chrysene
- Indeno(1,2,3-cd)pyrene

Table 2-6 lists the sediment COPC selection criteria for Falling Creek. The only constituent selected as a sediment COPC benzo(a)pyrene.

2.6 SUMMARY

The results of the COPC selection process for the three creeks were consistent with the operational history analysis. Based on the number of COPCs identified, Falling Creek Tributary was the least impacted of the three creeks. No Name Creek appears to have greater installation-related impacts than Kingsland Creek.

Discharges from stormwater outfalls, surface runoff, and groundwater were the primary potential sources of impact to the creeks. Based on the sources closest to Kingsland Creek, the most mobile compounds were expected to be VOCs, and VOCs along with metals were the compounds most frequently detected in Kingsland Creek. For No Name Creek, metals, VOCs, and PAHs were the most frequently detected constituents. The detection of VOCs and PAHs was consistent with OU 6 groundwater impacts and constituents detected in surface soils at OUs 1, 2, and 3. The primary constituents detected in Falling Creek Tributary were PAHs and metals. VOCs were largely not detected, although they were detected previously at OUs 5 and 8. Inorganic compounds were detected in all three creeks and were present in background samples.

3.0 EXPOSURE ASSESSMENT

The Exposure Assessment for this HHBRA has been conducted in accordance with the *Revised Human Health Risk Assessment Work Plan* for DSCR (MACTEC, 2006a). The goal of the Exposure Assessment is to estimate an ADD, expressed in the form of mass (milligrams) of COPC per mass (kilograms) body weight per time (day) exposed (mg/kg-d). ADDs are estimated for each toxicity endpoint (i.e., cancer or noncancer), COPC, pathway, and receptor per exposure unit. An exposure unit is an area in which people might move around while performing activities and, in doing so, might be exposed to substances in environmental media. The results of the sampling performed in each exposure unit allow investigators to determine the ADD that an individual could receive over time through exposure to the area.

The ADD for a COPC includes two components: 1) IAs and 2) EPCs for each exposure medium. IAs include as ingestion rate (IR), body weight, and exposure duration (ED). Both the EPC and IA components of the ADD may be receptor- and pathway-specific. The EPC is the chemical concentration that a receptor may contact at a specific location (i.e., the "exposure point").

ADDs are computed separately for noncarcinogens and carcinogens. The only difference between noncarcinogenic ADDs (ADDn) and carcinogenic ADDs (ADDc) is in the averaging time (AT). The AT for noncarcinogens (ATn) is equal to the exposure duration for that particular receptor, while the AT for carcinogens (ATc) is a constant value set equal to a human lifetime (70 years or 25,550 days).

3.1 EXPOSURE POINT CONCENTRATIONS

The analytical results for the COPCs includes both detections and nondetections (NDs; i.e., the constituent is not detected above the sample quantitation limit [SQL]). Where analytical results are reported as ND, the ND concentrations are estimated to be equal to one-half of the SQL (USEPA, 2002a). The detected values, along with the one-half SQL values, comprise the statistical datasets. The lesser of the MDC and the UCL is used for EPC development for each COPC. The use of the lesser of the MDC and the UCL concentration is consistent with the standard USEPA Superfund protocol for conducting site-specific, reasonable maximum exposure (RME) risk assessments (USEPA, 1989).

The UCL values are computed using ProUCL. ProUCL, a USEPA statistical package, computes UCLs using a variety of methods, then recommends which value is "best" based on statistical tests of the

dataset. As stated in the HHBRA Work Plan, the statistical methods recommended by ProUCL are accepted. The results of ProUCL statistical computations are shown in Appendix B.

3.1.1 EPCs for Kingsland Creek COPCs

Table 3-1 lists the EPCs for Kingsland Creek surface water COPCs. The surface water dataset for Kingsland Creek includes both filtered and unfiltered surface water results for inorganic compounds. Surface water EPCs were calculated using only unfiltered (total) data for inorganic constituents. Table 3-4 lists the EPC for the Kingsland Creek sediment COPC.

3.1.2 EPCs for No Name Creek COPCs

Table 3-2 lists the EPCs for No Name Creek COPCs. The surface water dataset for No Name Creek includes both filtered and unfiltered surface water results for inorganic compounds. Surface water EPCs were calculated using only unfiltered (total) data for inorganic constituents.

Table 3-2 lists the arithmetic mean surface water concentration for lead data. In accordance with the Integrated Exposure Uptake Biokinetic (IEUBK) modeling guidelines (USEPA, 2005) and the HHBRA Work Plan, the EPC for lead is the arithmetic mean concentration rather than the UCL or MDC. Table 3-4 lists the EPCs for No Name Creek sediment COPCs.

3.1.3 EPCs for Falling Creek Tributary COPCs

Table 3-3 lists the EPCs for Falling Creek Tributary surface water COPCs. The surface water dataset for Falling Creek Tributary includes both filtered and unfiltered surface water results for inorganic compounds. Surface water EPCs were calculated using only unfiltered (total) data for inorganic constituents. Table 3-4 lists the EPC for the Falling Creek Tributary sediment COPC.

3.2 INTAKE ASSUMPTIONS

Intake assumptions are those exposure assessment values that are receptor- or behavior-specific. Some examples include the water ingestion rate, exposure duration, and exposed skin surface area. Intake assumptions were obtained from regulatory guidance documents or were based on professional judgment.

Table 3-5 shows the intake assumptions used for the young child, adolescent, and the adult wader receptors. The exposure duration for off-installation recreational adults was assumed to be 24 years, per Region 3 guidance (USEPA, 2003). An exposure duration of 12 years was used for recreational adolescents who were assumed to be between 7 and 18 years old (professional judgment), and an exposure duration of 6 years was used for children who were assumed to be between the ages of 1 and 6 years old (USEPA, 2003).

An exposure frequency of 52 days per year (d/yr) was assumed for all three age groups exposed to surface water and sediment in the creeks surrounding the installation. This value was based on 104 weekend days per year for the 6 months of the year most suitable for recreational wading. The duration of each event was assumed to be 4 hours (VDEQ, 2005). It was also assumed that child, adolescent, and adult recreational receptors incidentally ingest 0.05 liter of water per hour (VDEQ, 2005) during a 4-hour event, or 0.2 liter per day (L/d).

The skin area exposed to surface water and sediment was based on the surface areas of the hands, forearms, legs, and face. This averaged to be 2,700 square centimeters (cm^2) for the child, 5,940 cm^2 for the adolescent, and 8,400 cm^2 for the adult wader (USEPA, 2004a). Average body weights were also used for each receptor group, or 15 kilograms (kg) for the child, 47 kg for the adolescent, and 70 kg for the adult (USEPA, 1997 and 2003). The soil-to-skin adherence fraction, which is based on the RME for residential soil (USEPA, 2004a), was 0.2 milligram per square centimeter per day (mg/cm^2-d) for the child and adolescent, and 0.07 mg/cm^2-d for the adult receptor.

3.3 COMPUTATION OF AVERAGE DAILY DOSES

Before the ADDs were computed, some intermediary calculations were made for the dermal pathways. The absorbed dose per event (DA_{event}) was first estimated for receptors of all age ranges. Throughout this process, USEPA (2004a) *Risk Assessment Guidance for Superfund, Human Health Evaluation Manual, Part E* (RAGS-E) was followed. RAGS-E represents the currently accepted USEPA methods and inputs for the dermal exposure route.

DA_{event} was computed differently for inorganic and organic chemicals. For inorganic compounds, the computation is shown in Tables 3-6 (Kingsland Creek) and 3-7 (No Name Creek). The dermal permeability coefficients for inorganic compounds were obtained from RAGS-E.

For organic COPCs, the computation of DA_{event} is more complex than the methodology for inorganic COPCs. Tables 3-8 through 3-10 show these computations for recreational receptors for all three creeks. Values for chemical-specific inputs for organic COPCs, such as lag times, times to reach steady state, and dermal permeability coefficients, were obtained from RAGS-E. The calculated DA_{event} values for the Kingsland Creek, No Name Creek, and Falling Creek Tributary COPCs are summarized on Tables 3-11 through 3-13.

3.3.1 ADDs for Kingsland Creek COPCs

The calculated ADDs for exposure to Kingsland Creek surface water can be found in Tables D-1 through D-6. Tables D-1 and D-4 show the ADDs for the child wader, Tables D-2 and D-5 show the ADDs for the adolescent wader, and Tables D-3 and D-6 show the ADDs for the adult wader.

The calculated ADDs for exposure to Kingsland Creek sediment can be found in Tables D-20 through D-22. Table D-20 shows the ADDs for the child wader, Table D-21 shows the ADDs for the adolescent wader, and Table D-22 shows the ADDs for the adult wader.

3.3.2 ADDs for No Name Creek COPCs

The calculated ADDs for exposure to No Name Creek surface water can be found in Tables D-7 through D-12. Tables D-7 and D-10 show the ADDs for the child wader, Tables D-8 and D-11 show the ADDs for the adolescent wader, and Tables D-9 and D-12 show the ADDs for the adult wader.

The calculated ADDs for exposure to No Name Creek sediment can be found in Tables D-20 through D-22. Table D-20 shows the ADDs for the child wader, Tables D-21 shows the ADDs for the adolescent wader, and Tables D-22 shows the ADDs for the adult wader.

3.3.3 ADDs for Falling Creek Tributary COPCs

The calculated ADDs for exposure to Falling Creek Tributary surface water can be found in Tables D-13 through D-18. Tables D-13 and D-16 show the ADDs for the child wader, Tables D-14 and D-17 show the ADDs for the adolescent wader, and Tables D-15 and D-18 show the ADDs for the adult wader.

The calculated ADDs for exposure to Falling Creek Tributary sediment can be found in Tables D-20 through D-22. Table D-20 shows the ADDs for the child wader, Table D-21 shows the ADDs for the adolescent wader, and Table D-22 shows the ADDs for the adult wader.

4.0 TOXICITY ASSESSMENT

In the toxicity assessment, toxicity values necessary to evaluate both noncarcinogenic and carcinogenic effects associated with the COPCs were identified using USEPA's hierarchy for toxicological information. USEPA's IRIS was used as the primary source of toxicity data; if data were unavailable on IRIS, provisional values proposed by NCEA were used (USEPA, 2006).

4.1 NONCARCINOGENIC TOXICITY

Noncarcinogenic toxicity is evaluated using reference doses (RfDs). RfDs are expressed in mg/kg-d. Inhalation RfDs may be derived from reference concentrations. Table 4-1 presents the surface water toxicity values used for noncarcinogenic risk characterization of the COPCs, and Table 4-2 presents the sediment toxicity values.

4.2 CARCINOGENIC TOXICITY

Carcinogenic toxicity is evaluated using cancer potency slope factors (SFs). SFs are expressed in $mg/kg\text{-}d^{-1}$. Table 4-1 presents the surface water toxicity values used for risk characterization of the COPCs, and Table 4-2 presents the sediment toxicity values.

4.3 TOXICITY VIA DERMAL ABSORPTION

USEPA has not developed toxicity values specifically for the dermal exposure route, and oral toxicity values are used as surrogate values (RAGS-E). Because of the different basis for evaluating oral and dermal risks from the measured chemical concentration, it is sometimes necessary to adjust the oral toxicity values for characterization of dermal exposure risks, especially for those chemicals where an assumption that the administered oral dose equals the absorbed dose is less certain. Exhibit 4-1 from USEPA's *RAGS - E,* lists gastrointestinal absorption rates for commonly detected chemicals. The dermal RfDs for mercury and manganese were adjusted for gastrointestinal absorption, but adjustment for the remaining COPCs was not required (USEPA, 2004a).

5.0 RISK CHARACTERIZATION

Risk characterization quantitatively integrates the results of the exposure and toxicity assessments. The estimated ADD_ns and the RfDs for each noncarcinogenic COPC are compared to characterize potential noncarcinogenic effects. Estimated ADD_cs are multiplied by SFs to characterize potential carcinogenic effects. Cumulative risks for each receptor, for multichemical and multipathway results, are summarized in a tabular format. Risk characterization serves as the bridge between risk assessment and risk management and is a key step in the decision-making process (USEPA, 1989).

5.1 NONCARCINOGENS

The following sections present the noncarcinogenic risk characterization. The cumulative HI for DSCR HHBRAs has been set at 1. If the organ-specific HI for a particular receptor exceeds 1, those COPCs and pathways primarily responsible for the exceedance are identified. Those COPCs contributing to unacceptable risk are identified as COCs, which then become the focus of risk management decisions.

Kingsland Creek – Table 5-1 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to Kingsland Creek surface water and sediment. Tables D-1 through D-6 and Tables D-20 through D-22 in Appendix D present the noncarcinogenic HQs for recreational children, adolescents, and adults. The cumulative HI value for a recreational child receptor assumed to periodically wade in Kingsland Creek was 0.1, which is less than the remedial goal of 1. The cumulative HI values for adolescent and adult waders in Kingsland Creek were 0.04 and 0.03, respectively. Adverse noncarcinogenic effects are not expected to occur following recreational exposures to Kingsland Creek.

No Name Creek – Table 5-2 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to No Name Creek surface water and sediment. Tables D-7 through D-12 and Tables D-20 through D-22 in Appendix D present the noncarcinogenic HQs for recreational children, adolescents, and adults wading in No Name Creek. The cumulative HI value for a recreational child receptor assumed to periodically wade in No Name Creek was 0.2, which is less than the remedial goal of 1. The cumulative HI values for adolescent and adult waders in No Name Creek were 0.1 and 0.05, respectively. Adverse noncarcinogenic effects are not expected to occur following recreational exposures to No Name Creek.

Falling Creek Tributary – Table 5-3 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to Falling Creek Tributary surface water and sediment. Since the selected COPCs exhibit carcinogenic effects only, noncarcinogenic hazards were not estimated.

5.2 CARCINOGENS

All three adjacent creeks have detectable levels of carcinogens in both surface water and sediment. The following sections present the carcinogenic risk characterization for COPCs. The risk goal for DSCR HHBRAs has been established at 1×10^{-4} for on-installation receptors and 1×10^{-6} for off-installation receptors. If the cumulative excess cancer risk for an off-installation receptor exceeds 1×10^{-6}, those carcinogenic COPCs primarily responsible for the exceedance are identified as COCs.

Kingsland Creek – Table 5-1 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to Kingsland Creek surface water and sediment. Tables D-1 through D-6 and Tables D-20 through D-22 in Appendix D present the carcinogenic risk estimates for recreational children, adolescents, and adults. For children, the excess cancer risk estimate was 2×10^{-6}. For adolescents and adults, the excess cancer risk estimates were 7×10^{-7} and 1×10^{-6}, respectively. The cumulative excess risk for adults and children was 3×10^{-6}, which is slightly greater than the target goal of 1×10^{-6}. The majority of the total excess risk is attributable to arsenic, PCE, and TCE.

The mid-point of the NCEA slope factor range for TCE was used in the risk calculations for Kingsland Creek. If the most protective end of the range were used to calculate risk, the cumulative risk estimates for adults and children would have increased slightly from 3×10^{-6} to 4×10^{-6}. Estimated risk would be unchanged if the least protective part of the range were used.

No Name Creek – Table 5-2 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to No Name Creek. Tables D-7 through D-12 and Tables D-20 through D-22 in Appendix D present the carcinogenic risk estimates for recreational children, adolescents, and adults. For children, the excess cancer risk estimate was 7×10^{-6}. For adolescents and adults, the excess cancer risk estimates were 5×10^{-6} and 4×10^{-6}, respectively. The cumulative excess risk for adults and children was 1×10^{-5}, which exceeds the target goal of 1×10^{-6}. The majority of the total excess risk is attributable to arsenic and VC in surface water, and to arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene in sediments.

The midpoint of the NCEA slope factor range for TCE was used in the risk calculations for No Name Creek. If the most and least protective ends of the range were used to calculate risk, the cumulative risk estimates for adults and children would have remained unchanged. TCE was not a risk-driver for potential exposures at No Name Creek.

Falling Creek Tributary – Table 5-3 summarizes the estimated risk for each pathway and each recreational receptor potentially exposed to Falling Creek Tributary. Tables D-13 through D-18 in Appendix D show the carcinogenic risk estimates for Falling Creek Tributary COPCs. For children, the excess cancer risk estimate was 2×10^{-6}. For adolescents and adults, the excess cancer risk estimates were 2×10^{-6} and 4×10^{-6}, respectively. The cumulative excess risk for children and adults was 6×10^{-6}, which is slightly greater than the target goal of 1×10^{-6}. The majority of the total excess risk is attributable to benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene in surface water.

6.0 LEAD IN NO NAME CREEK

Lead was identified as a COPC for No Name Creek (Section 2.5.5). As mentioned, lead must be evaluated separately from the other COPCs. A blood-lead concentration for a potentially exposed child was estimated in units of micrograms per deciliter (µg/dL). This estimated blood-lead concentration was then compared to values considered acceptable by USEPA. The generally acceptable blood-lead concentration is 10 µg/dL (USEPA, 2002b, 2005). However, this is a *total* allowable concentration. Calculated blood-lead levels consider specific creek contributions, public drinking water, and soil background contributions (default values).

To estimate the blood-lead concentration in the child wader receptor, USEPA's IEUBK model was used (USEPA, 2002b). This is the most widely accepted model for quantifying children's exposure to lead from various sources and pathways. The arithmetic mean surface water concentration was computed and used to evaluate water ingestion in the model. The model was designed to address ingestion and inhalation pathways and was not used to estimate intakes via the dermal pathway.

The IEUBK model has input options for drinking water with the alternative to include fountain water. The fountain water alternative was used to estimate intakes based on incidental ingestion of surface water. Since the estimated surface water intake per event is 0.2 L/day, the surface water was assumed to serve as 20 percent of the daily intake source (i.e., 0.2 L/day divided by 1 L/day = 0.2). This adaptation overestimates exposure since surface water exposures are assumed to occur only 52 days of each year. For water consumption, the following assumptions were used:

- Water consumption rate (L/d) for the relevant age intervals: 0 to 6 years
- Alternate water values used – percentage of total as first draw: 80 percent with default concentration of 4 µg/L used as first draw and flushed household drinking water concentration
- Percentage of total consumed from surface water (i.e., fountain water: 20 percent)
- Lead concentration in surface water (i.e., fountain water): the mean surface water concentration of 6.8 µg/L)

The model results in Appendix C (Table C-1) indicated that the site-specific pathways contribute a minimal percentage to the total lead uptake for a child wader receptor. The estimated blood-lead levels ranged from 2.6 µg/dL for a 6 to 7 year old to 4.2 µg/dL for a 1 to 2 year old. Thus, the blood-lead level

predicted by the model for the child wader receptor is less than the allowable threshold of 10 µg/dL. Exposure to lead in No Name Creek during wading is not associated with potential adverse health effects.

7.0 UNCERTAINTIES

Uncertainty is inherent in the risk assessment process. Exposure is hypothetical, and the calculations are based in part on assumed conditions. An important part of the risk assessment process is characterization of the main underlying uncertainties. Understanding the uncertainties is important for interpreting and ultimately using the risk assessment results because actual risk may be underestimated or overestimated.

A qualitative uncertainties analysis was performed. Uncertainties for components of the HHBRA are discussed and evaluated as follows.

7.1 DATA EVALUATION

The following uncertainties apply to the data evaluation:

UNCERTAINTY	RESOLUTION
The nature and extent of potential installation impacts to the creeks has been adequately characterized.	The creeks have been investigated for several years, with a large database of analytical results. It is unlikely that significant impacts remain uncharacterized.
The analytical results in the database represent quality data that conform to the Quality Control standards (e.g., matrix spike recovery) and DQOs for use in quantitative risk assessment (LAW, 1993; MACTEC. 2004).	Only data that have been verified as validated for quantitative use (i.e., 1992 and more recent) were used in the HHBRA. The risk assessment datasets meet the project DQOs.
No significant risk assessment dataset chemicals were eliminated from further evaluation in the identification of COPCs.	The COPC screening compared maximum detected surface water concentrations with drinking water criteria and maximum sediment concentrations to soil RBCs. These do not address the dermal pathway. Using these criteria for significantly lower creek water and sediment ingestion rates represents a level of conservatism that compensates for the lack of dermal pathway consideration during screening.

From the above analysis, these uncertainties are not expected to be large or to affect the risk management decision-making.

7.2 EXPOSURE ASSESSMENT

The following uncertainties apply to the exposure assessment:

UNCERTAINTY	RESOLUTION
The receptors and exposure pathways identified and quantified capture the potentially significant exposures and risks (i.e., indicate that other pathways are insignificant).	No other pathways or receptors are considered significant. The risk quantified is hypothetical and is not known to occur. The conservative assumptions used would overestimate risk. Furthermore, a study of the physical nature of the creeks indicated a lack of significant, fine-grained sediment, and dermal contact with sediment is likely limited to the soles of the feet. It is unlikely that exposure to sediments would occur in significant levels; however, this pathway was evaluated in the HHBRA as an added level of conservatism.
The statistical methods employed generate representative, site-wide EPCs.	USEPA's ProUCL program was used for all statistical computations. This statistical software program was developed specifically for use with environmental data, and a variety of statistical methods is included.
The intake assumptions employed are accurate reflections of the behavior of actual current and future site receptors.	Approximately half of the intake assumptions used in the HHBRA was obtained from USEPA regulatory guidance, which is conservative. The other, site-specific, assumptions were selected based on professional judgment. In general, the conservative assumptions used tend to overestimate actual risk.
The IEUBK lead modeling analysis provides an accurate assessment of lead exposures at the creeks.	The IEUBK model is the preferred model in the regulatory community for this application. Even under the conservative set of assumptions used, adverse risk was not predicted.

From the above analysis, these uncertainties are expected to overestimate the actual risk.

7.3 TOXICITY ASSESSMENT

The following uncertainties apply to the toxicity assessment:

UNCERTAINTY	RESOLUTION
The toxicity values used accurately capture the dose-response behavior of the evaluated chemicals.	Two of the three carcinogenic COPCs, arsenic and VC, are Class A carcinogens. These SFs are based on human toxicity data (epidemiological studies), not animal studies, thus introducing less uncertainty. Other toxicity values used represent the best data available. For TCE, provisional NCEA values are available to evaluate risk. These values are conservative and may not realistically represent the risk associated with the pathways addressed in the Creeks HHBRA. In addition, the NCEA slope factors for TCE are presented as a range. The mid-range values were used in this risk assessment. These mid-range values are considered to be conservatively protective of human health. In fact, the NCEA toxicity values are much more conservative than provisional values used prior to 2001 or current California EPA values.

From the above analysis, these overall uncertainties are difficult to quantify, but represent the best data available. For TCE, actual risk is most likely overestimated.

7.4 RISK CHARACTERIZATION

The following uncertainties apply to the risk characterization:

UNCERTAINTY	RESOLUTION
The summing of HQs for noncarcinogens to generate an HI result leads to reasonable estimates of the total noncarcinogenic effects resulting from exposure to COPCs.	Even under the conservative approach of additive HIs, adverse effects were not predicted.

UNCERTAINTY	RESOLUTION
Summing of the HQs for the individual noncarcinogenic COPCs, without regard for target organ specificity, leads to an overly conservative estimate of the HI for each receptor.	Effects are not truly additive when different target organs are affected. For Kingsland Creek and its two COPCs (TCE and PCE), both potentially cause adverse impacts to the liver. However, the cumulative HI remains less than 1. All additional surface water and sediment COPCs did not share target organs.
Risk associated with background concentrations of COPCs may contribute to site risk estimates.	Several COPCs, including arsenic and the carcinogenic PAHs, were also detected in upstream or background sampling locations. No attempt was made to subtract background risks. Therefore, risk for the Creeks is most likely overestimated.

From the above analysis, these uncertainties are expected to result in overestimation of actual risk.

7.5 CONCLUSIONS

When the uncertainties identified and discussed in this section are evaluated, along with their estimated magnitudes and directions (i.e., tendency to underestimate or overestimate risk), the conservative uncertainties outweigh the "non-conservative" ones; therefore, the final estimates of risk, as presented in this HHBRA, are likely higher than the actual risk posed by chemicals from the installation.

8.0 CONCLUSIONS

The following subsections present the HHBRA conclusions for the DSCR adjacent creeks. The HHBRA examined a child, an adolescent, and an adult creek wader receptor with ingestion and dermal exposures to surface water and dermal exposure to sediment.

8.1 KINGSLAND CREEK

A conservative HHBRA was performed for chemicals detected in Kingsland Creek surface water and sediment. Of the 34 detected chemicals in surface water, only 9 (arsenic, iron, manganese, mercury, thallium, benzene, cis-1,2-dichloroethene, PCE, and TCE) were selected as COPCs. Of the 55 detected chemicals in sediment, only arsenic was selected as a COPC. A site-specific risk assessment was conducted for these COPCs in Kingsland Creek. The results indicated that the noncarcinogenic HI values are less than the installation target goal of 1; however, the cumulative excess cancer risk for adults and children of 3×10^{-6} is slightly above the off-installation goal of 1×10^{-6}. The majority of the risk is associated with arsenic, PCE, and TCE (Tables 8-1 and 8-2). The carcinogenic risk estimate for adolescent waders was less than 1×10^{-6}. Arsenic is infrequently detected, and the highest detected concentration in surface water (2.92 µg/L) was below the VDEQ SWQS for a public water supply (10 µg/L). The maximum concentrations of TCE and PCE are also less than their VDEQ SWQS and are likely to volatilize from the water column, reducing the potential for exposure. Since Kingsland Creek is not used as a public water supply and only off-installation portions of the creek are accessible for recreational receptors, the risk associated with arsenic, TCE, and PCE appears overstated. Furthermore, the risk associated with exposure to sediment is most likely overestimated due to the lack of fine-grained sediments. No further action is recommended at Kingsland Creek to protect human health from potential installation impacts.

8.2 NO NAME CREEK

A conservative HHBRA was performed for chemicals detected in No Name Creek surface water and sediment. Of the 35 detected chemicals in surface water, 12 (arsenic, iron, lead, manganese, mercury, thallium, cis-1,2-dichloroethene, styrene, PCE, TCE, VC, and chrysene) were selected as COPCs. Of the 55 detected chemicals in sediment, 5 (arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene) were selected as COPCs. A site-specific risk assessment was conducted for these COPCs for No Name Creek. The results showed that the HQs for all three receptors were less than

the installation target goal of 1. The cumulative excess cancer risk for children and adults exposed to No Name Creek was 1×10^{-5}. The majority of risk is associated with arsenic, VC, and PAHs in sediment (Tables 8-3, 8-4, and 8-5). Arsenic was infrequently detected (3 of 25 samples) and the highest detected concentration in surface water (12.4 µg/L) only slightly exceeded the VDEQ SWQS for a public water supply (10 µg/L). Since No Name Creek is not used as a public water supply and only off-installation portions of the creek are accessible for recreational receptors, the risk associated with arsenic appears overstated.

VC was also an infrequently detected constituent in surface water (2 of 35 samples from No Name Creek). VC was detected twice in 2001, but has not been detected in samples collected since then. Because of its volatile nature, VC has a short half-life in surface water (0.171 day) and is readily volatilized to ambient air (USEPA, 2004b). Therefore, the risk associated with VC in surface water appears overstated. Furthermore, the risk associated with exposure to sediment is potentially overstated due to the lack of fine-grained sediments. The potential for continuing discharges of impacted groundwater to No Name Creek is further considered in the OU 6 HHBRA. The OU 6 HHBRA finds no significant risk for future surface water exposures.

8.3 FALLING CREEK TRIBUTARY

A conservative HHBRA was performed for chemicals detected in Falling Creek Tributary surface water and sediment. Of the 21 detected chemicals in surface water, only benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were selected as COPCs. Of the 48 detected chemicals in sediment, only benzo(a)pyrene was selected as a COPC. A site-specific risk assessment was conducted for these COPCs in Falling Creek Tributary. No noncarcinogenic COPCs were identified; therefore, noncarcinogenic hazards were not estimated for recreational receptors. The cumulative excess cancer risk for adults and children of 6×10^{-6} was slightly greater than the installation target goal of 1×10^{-6}. The majority of the risk is associated with benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene in surface water and benzo(a)pyrene in sediment (Tables 8-6, 8-7, and 8-8). Benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene were infrequently detected (only 4 percent of samples). Because Falling Creek Tributary is not used as a public water supply and only off-installation portions of the creek are accessible for recreational receptors, the risk associated with benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene appears overstated. Furthermore, the risk associated with exposure to sediment is potentially overstated due to the lack of fine-grained sediments. No further action is recommended at Falling Creek Tributary to protect human health from potential installation impacts.

9.0 REFERENCES

Dames and Moore. 1989a. *Remedial Investigation Fire Training Area, Defense General Supply Center.* Contract No. DACA63-86-C-0131. Richmond, Virginia. May.

Dames and Moore. 1989b. *Remedial Investigation Area 50, Open Storage Area, and National Guard Area.* Defense General Supply Center, Richmond, Virginia. July.

LAW, 1992. *Final Sampling and Analyses Plan For Remedial Investigation & Expanded Site Investigation.* Defense General Supply Center, Richmond, Virginia, Contract DACW87-90-D0023. August.

LAW, 1993. *Draft Quality Control Summary Report (QCSR) for Remedial Investigation Addenda & Expanded Site Inspection Reports.* Defense General Supply Center, Richmond, Virginia. Contract No. DACW-87-D-0023. April.

LAW, 2001. *Third Revised Final Creek Study Work Plan and Screening-Level Ecological Risk Assessment for Kingsland, No Name, and Falling Creeks*, Defense Supply Center, Richmond, Virginia.

MACTEC, 2002. *Technical Memorandum for Creek Monitoring – November 2001, Kingsland Creek, No Name Creek, and Falling Creek Tributary.* Defense Supply Center Richmond, Richmond, Virginia. Contract No. DACA87-94-D-0016, T. O. 0032. December 2002.

MACTEC, 2004. *Final General Sampling and Analyses Plan.* Defense Supply Center Richmond, Richmond, Virginia, Contract DACW87-02-D-0007. October 2004.

MACTEC, 2005. *Results of Three-Year Creek Monitoring Program, 2001-2004,* Defense Supply Center Richmond, Richmond, Virginia, Draft. August 2005.

MACTEC, 2006a. *Revised Human Health Risk Assessment Work Plan,* Defense Supply Center Richmond, Richmond, Virginia, Draft. April 2006.

MACTEC, 2006b. *Conceptual Site Model*, Defense Supply Center Richmond, Richmond, Virginia, April 2006.

USEPA, 1989. *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final*, December 1989.

USEPA, 1997. *Exposure Factors Handbook*, Office of Research and Development, Washington, D.C. EPA/600/P-95/002Fb. August 1997.

USEPA, 2002a. *National Recommended Water Quality Criteria: 2002. EPA/822/R/02/047.* USEPA Office of Water, Washington, D.C. November 2002.

USEPA, 2002b. User's Guide for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK), Windows® Version-32 Bit Version, EPA/540/K/01/005, May 2002.

USEPA, 2003. *Technical Background Information: Development of Risk-Based Concentrations.* Jennifer Hubbard, Region 3: http://www.epa.gov/reg3hwmd/risk/human/info/tech.htm, April 16, 2003.

USEPA, 2004a. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final.* EPA/540/R/99/005. July 2004.

USEPA, 2004b. Superfund Chemical Data Matrix (SCDM): http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm.

USEPA, 2005. IEUBK Frequently Asked Questions, Question XII, Metals Work Groups, Superfund, February download: http://www.epa.gov/superfund/programs/lead/ieubkfaq.htm

USEPA, 2006. Risk-Based Concentration Table. Region 3. April 2006.

United States Geological Survey. 1994. Drewrys Bluff Quadrangle, Virginia. 7.5 Minute Series (Topographic). Commonwealth of Virginia, Division of Mineral Resources. 1969, Revised 1994.

VDEQ, 2004. *Virginia Water Quality Standards, Virginia Department of Environmental Quality, 9 VAC 25-260.* February 2004.

VDOH, 2004. *Virginia Department of Health, Office of Drinking Water, Waterworks Regulations* (Part II, Article I-80, Tables 2.2 and 2.3).

VDEQ, 2005. *Voluntary Remediation Program, Risk Assessment Guidance.* http://www.deq.state.va.us/vrprisk/raguide.html. Virginia Department of Environmental Quality.

TABLES

TABLE 2-1

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SURFACE WATER
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Number of Analyses (a)	Number of Detections (a)	Frequency of Detection (FOD) (%)	FOD ≥5% ?	Minimum Detected Concentration (µg/L) (a)	Maximum Detected Concentration (MDC) (µg/L) (a)	VDEQ SWQS for Human Health (Public Water Supply) (µg/L) (b)	Virginia Primary Maximum Contaminant Level (MCL) (µg/L) (c)	Region 3 Tapwater Risk-Based Concentration (RBC) (µg/L) (d)	Surface Water Screening Criterion (µg/L) (e)	Maximum Background Data (f)	Constituent of Potential Concern (COPC)?	
Metal/Inorganic Chemicals													
Aluminum	16	13	81%	YES	3.32E+02	8.40E+02	NA	NA	3.70E+04	3 70E+04	NA	NO	
Arsenic	20	1	5%	YES	2.92E+00	2.92E+00	1.00E+01	1.00E+01	4.50E-01	4.50E-01	<5.00E+00	YES	
Barium	21	21	100%	YES	3.41E+01	6.42E+01	2.00E+03	NA	7.30E+03	2.00E+03	NA	NO	
Beryllium	20	1	5%	YES	6.10E-01	6.10E-01	NA	4.00E+00	7.30E+01	4.00E+00	NA	NO	
Chromium	17	1	6%	YES	8.00E+00	8.00E+00	1.00E+02	1.00E+02	110 (g)	1.00E+02	NA	NO	
Cobalt	18	5	28%	YES	1.24E+00	1.70E+00	NA	NA	NA	NA	NA	NO	
Copper	14	2	14%	YES	8.20E+00	9.20E+00	1.30E+03	1.30E+03	1 50E+03	1.30E+03	NA	NO	
Iron	21	21	100%	YES	3.94E+02	6.37E+03	3.00E+02	3.00E+02	1.10E+04	3.00E+02	1.59E+03	YES	
Lead	21	3	14%	YES	1.24E+00	7.90E+00	1.50E+01	1.50E+01	NA	1.50E+01	NA	NO	
Manganese	21	21	100%	YES	1.26E+01	2.30E+02	5.00E+01	5.00E+01	5.10E+03	5.00E+01	6 88E+01	YES	
Mercury	16	1	6%	YES	7.00E-02	7.00E-02	5.00E-02	2.00E+00	1.10E+01	5 00E-02	<1.00E+00	YES	
Molybdenum	15	3	20%	YES	1.72E+00	7.12E+00	NA	NA	1.80E+02	1.80E+02	NA	NO	
Nickel	20	5	25%	YES	1.76E+00	3.70E+00	6.10E+02	1.00E+02	7.30E+02	1.00E+02	NA	NO	
Selenium	21	1	5%	YES	2.76E+00	2.76E+00	1.70E+02	5.00E+01	1 80E+02	5.00E+01	NA	NO	
Thallium	21	1	5%	YES	1.96E+00	1.96E+00	1.70E+00	2.00E+00	2 60E+00	1.70E+00	<2.00E+00	YES	
Vanadium	19	11	58%	YES	7.70E-01	2.10E+00	NA	NA	3.70E+01	3.70E+01	NA	NO	
Zinc	20	13	65%	YES	1.41E+01	5.08E+01	9.10E+03	5.00E+03	1.10E+04	5 00E+03	NA	NO	
VOCs													
1,1,1-Trichloroethane	20	4	20%	YES	4.70E-01	1.05E+00	NA	2.00E+02	1.70E+03	2.00E+02	NA	NO	
1,1-Dichloroethane	20	1	5%	YES	1.70E-01	1.70E-01	NA	NA	9.00E+02	9.00E+02	NA	NO	
1,1-Dichloroethene	20	1	5%	YES	2 80E-01	2.80E-01	3 10E+02	7.00E+00	3.50E+02	7 00E+00	NA	NO	
1,2,4-Trichlorobenzene	37	1	3%	NO	4.20E-01	4.20E-01	2.60E+02	NA	6 10E+01	6.10E+01	NA	NO	
Acetone	12	3	25%	YES	1 80E+00	2.60E+00	NA	NA	5 50E+03	5.50E+03	NA	NO	
Benzene	19	1	5%	YES	6.65E+00	6.65E+00	1.20E+01	5.00E+00	3 40E+00	3.40E+00	NA	YES	
Chloroform	20	1	5%	YES	5.60E-01	5 60E-01	3.50E+02	NA	1.50E+00	1.50E+00	NA	NO	
Chloromethane	20	3	15%	YES	4.10E-01	7.00E-01	NA	NA	1.90E+02	1.90E+02	NA	NO	
cis-1,2-Dichloroethene	17	6	35%	YES	4.20E-01	3.20E+00	700 (h)	7.00E+01	6.10E+01	6.10E+01	NA	YES	(i)
Ethylbenzene	19	1	5%	YES	9.00E-01	9 00E-01	3.10E+03	7.00E+02	1 30E+03	7 00E+02	NA	NO	
Methyl tert-butyl ether	2	2	100%	YES	3.00E+00	1.50E+01	NA	NA	2 60E+01	2 60E+01	NA	NO	
Styrene	17	1	6%	YES	9.00E-01	9.00E-01	NA	1.00E+02	1.60E+03	1.00E+02	NA	NO	
Tetrachloroethene	20	4	20%	YES	3.60E-01	1.35E+00	8.00E+00	5.00E+00	1.00E+00	1 00E+00	NA	YES	
Toluene	15	1	7%	YES	1.45E+00	1.45E+00	6.80E+03	1.00E+03	2 30E+03	1 00E+03	NA	NO	
Trichloroethene	19	9	47%	YES	3 60E-01	4.25E+00	2.70E+01	5.00E+00	2 60E-01	2 60E-01	NA	YES	
Xylenes, Total	14	2	14%	YES	4 80E+00	7.60E+00	NA	1.00E+04	2.10E+02	2.10E+02	NA	NO	
SVOCs													
Benzoic acid	20	1	5%	YES	1 70E+01	1.70E+01	NA	NA	1.50E+05	1.50E+05	NA	NO	

Notes:

µg/L Microgram per liter
VDEQ Virginia Department of Environmental Quality
SWQS Surface water quality standards
NA Not applicable or SQL of background sample > detected concentration.

(a) From Table A-1 and Table A-4 **Bolded chemicals are identified as COPCs.**
(b) VDEQ (2004).
(c) Virginia Primary MCLs, VDOH (2004).
(d) USEPA (2006). Values listed are based on higher target risk levels (i.e., 10^{-5} or HI of 1) since the surface water is used only for the recreational scenario and not for drinking water or for fishing.
(e) The lowest of the three listed values for the VDEQ SWQS, MCL and RBC
(f) From Table A-6.
(g) For chromium VI.
(h) The value for the trans-isomer was used; the cis-isomer is not listed
(i) This constituent is selected as a COPC even though the MDC is below the screening criterion because it is a degradation product of another COPC.

PREPARED/DATE: MKB 4/3/06
CHECKED/DATE: LMS 4/3/06

TABLE 2-2

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SURFACE WATER
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Number of Analyses (a)	Number of Detections (a)	Frequency of Detection (FOD) (%)	FOD ≥5% ?	Minimum Detected Concentration (µg/L) (a)	Maximum Detected Concentration (MDC) (µg/L) (a)	VDEQ SWQS for Human Health (Public Water Supply) (µg/L) (b)	Virginia Primary Maximum Contaminant Level (MCL) (µg/L) (c)	Region 3 Tapwater Risk-Based Concentration (RBC) (µg/L) (d)	Surface Water Screening Criterion (µg/L) (e)	Constituent of Potential Concern (COPC)?	
Metal/Inorganic Chemicals												
Aluminum	26	17	65%	YES	6.52E+01	4.27E+03	NA	NA	3.70E+04	NA	NO	
Antimony	29	3	10%	YES	2.30E+00	3.60E+00	1.40E+01	6.00E+00	1.50E+01	6.00E+00	NO	
Arsenic	25	3	12%	YES	2.60E+00	1.24E+01	1.00E+01	1.00E+01	4.50E-01	4.50E-01	**YES**	
Barium	29	29	100%	YES	1.36E+01	8.66E+01	2.00E+03	2.00E+03	7.30E+03	2.00E+03	NO	
Cadmium	29	4	14%	YES	3.10E-01	3.40E+00	5.00E+00	5.00E+00	1.80E+01	5.00E+00	NO	
Chromium	24	1	4%	NO	2.60E+00	2.60E+00	1.00E+02	1.00E+02	110 (g)	1.00E+02	NO	
Cobalt	26	15	58%	YES	1.40E+00	3.44E+00	NA	NA	NA	NA	NO	
Copper	26	8	31%	YES	2.12E+00	1.17E+02	1.30E+03	1.30E+03	1.50E+03	1.30E+03	NO	
Iron	28	28	100%	YES	1.75E+02	2.28E+04	3.00E+02	3.00E+02	1.10E+04	3.00E+02	**YES**	
Lead	29	12	41%	YES	1.40E+00	3.58E+01	1.50E+01	1.50E+01	NA	1.50E+01	**YES**	
Manganese	29	29	100%	YES	7.60E+00	2.61E+02	5.00E+01	5.00E+01	5.10E+03	5.00E+01	**YES**	
Mercury	28	1	4%	NO	1.20E-01	1.20E-01	5.00E-02	2.00E+00	1.10E+01	5.00E-02	**YES**	
Molybdenum	25	2	8%	YES	1.36E+00	3.30E+00	NA	NA	1.80E+02	1.80E+02	NO	
Nickel	27	4	15%	YES	2.08E+00	4.64E+00	6.10E+02	1.00E+02	7.30E+02	1.00E+02	NO	
Selenium	29	1	3%	NO	1.10E+00	1.10E+00	1.70E+02	5.00E+01	1.80E+02	5.00E+01	NO	
Thallium	29	3	10%	YES	1.70E+00	2.00E+00	1.70E+00	2.00E+00	2.60E+00	1.70E+00	**YES**	
Vanadium	29	12	41%	YES	8.20E-01	7.24E+00	NA	NA	3.70E+01	3.70E+01	NO	
Zinc	26	25	96%	YES	1.23E+01	2.24E+02	9.10E+03	5.00E+03	1.10E+04	5.00E+03	NO	
VOCs												
1,4-Dichlorobenzene	64	1	2%	NO	1.90E-01	1.90E-01	4.00E+02	7.50E+01	4.70E+00	4.70E+00	NO	
Acetone	13	2	15%	YES	6.70E-01	1.00E+00	NA	NA	5.50E+03	5.50E+03	NO	
Chloroform	35	2	6%	YES	2.00E-01	4.20E-01	3.50E+02	NA	1.50E+00	1.50E+00	NO	
Chloromethane	33	3	9%	YES	3.50E-01	5.20E-01	NA	NA	1.90E+02	1.90E+02	NO	
cis-1,2-Dichloroethene	31	16	52%	YES	2.80E-01	4.50E+01	700 (f)	7.00E+01	6.10E+01	7.00E+02	**YES**	(i)
Methyl tert-butyl ether	9	1	11%	YES	6.00E-01	6.00E-01	NA	NA	2.60E+01	2.60E+01	NO	
Methylene Chloride	32	2	6%	YES	3.50E-01	1.00E+00	4.70E+01	5.00E+00	4.10E+01	5.00E+00	NO	
Styrene	31	3	10%	YES	6.10E+00	1.20E+02	NA	1.00E+02	1.60E+03	1.00E+02	**YES**	
Tetrachloroethene	35	15	43%	YES	4.50E-01	2.10E+00	8.00E+00	5.00E+00	1.00E+00	1.00E+00	**YES**	
Trichloroethene	35	30	86%	YES	2.60E-01	2.10E+01	2.70E+01	5.00E+00	2.60E-01	2.60E-01	**YES**	
Vinyl chloride	35	2	6%	YES	4.40E+00	6.10E+00	2.30E-01	2.00E+00	1.50E-01	1.50E-01	**YES**	
PAHs												
Benzo(b)fluoranthene	38	1	3%	NO	5.10E-02	5.10E-02	NA	NA	9.20E-01	9.20E-01	NO	
Chrysene	38	3	8%	YES	5.60E-02	1.20E-01	4.40E-02	NA	9.20E+01	4.40E-02	**YES**	
Fluoranthene	38	3	8%	YES	1.85E-01	2.50E-01	3.00E+02	NA	1.50E+03	3.00E+02	NO	
Naphthalene	64	1	2%	NO	4.00E-01	4.00E-01	NA	NA	6.50E+00	6.50E+00	NO	
Phenanthrene	38	2	5%	YES	3.70E-02	1.40E-01	960 (g)	NA	1.80E+02	9.60E+02	NO	
Pyrene	38	3	8%	YES	1.85E-01	3.50E-01	9.60E+02	NA	1.80E+02	1.80E+02	NO	

Notes:

mg/kg-d	Milligram per kilogram per day
µg/L	Microgram per liter
VDEQ	Virginia Department of Environmental Quality
SWQS	Surface water quality standards
NA	Not available / not applicable

(a) From Table A-1 and A-4. Total results for metals and inorganics. **Bolded chemicals are identified as COPCs.**
(b) VDEQ (2004).
(c) Virginia Primary MCLs, VDOH (2004).
(d) USEPA (2006). Values listed are based on higher target risk levels (i.e., 10^{-5} or HI of 1) since the surface water is used only for the recreational scenario and not for drinking water or for fishing.
(e) The lowest of the three listed values for the VDEQ SWQS, MCL and RBC.
(f) The value for the trans-isomer was used, a closely related compound, as the cis-isomer is not listed.
(h) The value for pyrene was used, a closely related compound, as phenanthrene is not listed.
(i) This constituent is selected as a COPC even though the MDC is below the screening criterion because it is a degradation product of another COPC.

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CHECKED/DATE LMS 4/3/06

TABLE 2-3

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SURFACE WATER
FALLING CREEK TRIBUTARY
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical (a)	Number of Analyses (a)	Number of Detections (a)	Frequency of Detection (FOD) (%)	FOD ≥5% ?	Minimum Detected Concentration (µg/L) (a)	Maximum Detected Concentration (MDC) (µg/L) (a)	VDEQ SWQS for Human Health (µg/L) (b)	Virginia Primary Maximum Contaminant Level (MCL) (µg/L) (c)	Region 3 Tapwater Risk-Based Concentration (RBC) (µg/L) (d)	Surface Water Screening Criterion (µg/L) (e)	Maximum Background Concentration (ug/L) (f)	Constituent of Potential Concern (COPC)?
Metal/Inorganic Chemicals												
Aluminum	12	12	100%	YES	2.17E+02	5.33E+02	NA	NA	3.70E+04	NA	NA	NO
Barium	15	15	100%	YES	3.06E+01	6.65E+01	2.00E+03	2.00E+03	7.30E+03	2.00E+03	NA	NO
Chromium	11	2	18%	YES	1.90E+00	3.80E+00	1.00E+02	1.00E+02	1.10E+02	1.00E+02	NA	NO
Cobalt	15	2	13%	YES	9.00E-01	1.00E+00	NA	NA	NA	NA	NA	NO
Copper	7	1	14%	YES	2.44E+00	2.44E+00	1.30E+03	1.30E+03	1.50E+03	1.30E+03	NA	NO
Iron	15	13	87%	YES	2.80E+02	1.08E+03	NA	NA	1.10E+04	1.10E+04	NA	NO
Lead	15	1	7%	YES	1.36E+00	1.36E+00	1.50E+01	1.50E+01	NA	1.50E+01	NA	NO
Manganese	15	15	100%	YES	3.70E+00	3.38E+01	5.00E+01	5.00E+01	5.10E+03	5.00E+01	NA	NO
Nickel	13	2	15%	YES	1.56E+00	2.56E+00	6.10E+02	1.00E+02	7.30E+02	1.00E+02	NA	NO
Vanadium	15	5	33%	YES	9.30E-01	2.00E+00	NA	NA	3.70E+01	3.70E+01	NA	NO
Zinc	15	10	67%	YES	1.23E+01	3.00E+01	9.10E+03	5.00E+03	1.10E+04	9.10E+03	NA	NO
VOCs												
Acetone	11	2	18%	YES	2.10E+00	3.00E+00	NA	NA	5.50E+03	5.50E+03	NA	NO
Chloromethane	13	1	8%	YES	5.70E-01	5.70E-01	NA	NA	1.90E+02	1.90E+02	NA	NO
PAHs												
Benzo(a)anthracene	24	1	4%	NO	3.50E-02	3.50E-02	4.40E-02	NA	9.20E-01	4.40E-02	NA	NO
Benzo(b)fluoranthene	24	1	4%	NO	9.00E-02	9.00E-02	4.40E-02	NA	9.20E-01	4.40E-02	0.64	**YES**
Benzo(ghi)perylene	24	1	4%	NO	5.20E-02	5.20E-02	960 (g)	NA	1.80E+02	1.80E+02	NA	NO
Chrysene	24	1	4%	NO	7.10E-02	7.10E-02	4.40E-02	NA	9.20E+01	4.40E-02	0.44	**YES**
Fluoranthene	24	1	4%	NO	1.10E-01	1.10E-01	3.00E+02	NA	1.50E+03	3.00E+02	NA	NO
Indeno(1,2,3-cd)pyrene	24	1	4%	NO	4.90E-02	4.90E-02	4.40E-02	NA	9.20E-01	4.40E-02	0.28	**YES**
Phenanthrene	24	1	4%	NO	4.30E-02	4.30E-02	960.(g)	NA	1.80E+02	1.80E+02	NA	NO
Pyrene	24	1	4%	NO	9.40E-02	9.40E-02	9.60E+02	NA	1.80E+02	1.80E+02	NA	NO

Notes:

mg/kg-d Milligram per kilogram per day
µg/L Microgram per liter
VDEQ Virginia Department of Environmental Quality
SWQS Surface water quality standards
NA Not applicable or SQL of background sample > detected concentration.

(a) From Table A-4. Total results for metals and inorganics. **Bolded chemicals are identified as COPCs.**
(b) VDEQ (2004).
(c) Virginia Primary MCLs, VDOH (2004).
(d) USEPA (2006). Values listed are based on higher target risk levels (i.e., 10^{-5} or HI of 1) since the surface water is used only for the recreational scenario and not for drinking water or for fishing.
(e) The lowest of the three listed values for the VDEQ SWQS, MCL and RBC.
(f) From Table A-5.
(g) The value for pyrene, a closely related compound, was used as phenanthrene is not listed.

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TABLE 2-4

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC) (mg/kg) (b)	Constituent of Potential Concern (COPC)?
Metals/Inorganics								
Aluminum	20	20	100%	YES	2.66E+02	9.27E+02	7.80E+04 (e)	NO
Antimony	2	20	10%	YES	4.50E-01	1.10E+00	3.10E+01	NO
Arsenic	10	17	59%	YES	4.67E-01	5.80E+00	4.30E+00	**YES**
Barium	20	20	100%	YES	1.85E+00	1.28E+01	1.60E+04	NO
Beryllium	15	16	94%	YES	4.88E-02	1.40E-01	1.60E+02	NO
Chromium	20	20	100%	YES	4.80E-01	4.10E+00	2.30E+02 (c)	NO
Cobalt	20	20	100%	YES	3.20E-01	1.50E+00	1.60E+03 (e)	NO
Copper	16	20	80%	YES	5.43E-01	1.44E+01	3.10E+03	NO
Iron	20	20	100%	YES	8.58E+02	8.34E+03	2.30E+04	NO
Lead	20	20	100%	YES	3.80E-01	1.48E+01	4.00E+02 (d)	NO
Manganese	20	20	100%	YES	9.90E+00	7.19E+01	1.60E+03	NO
Mercury	4	13	31%	YES	5.10E-03	6.70E-02	2.30E+01 (c)	NO
Molybdenum	8	18	44%	YES	1.61E-01	5.06E+00	3.90E+02	NO
Nickel	16	20	80%	YES	2.10E-01	4.40E+00	1.60E+03	NO
Selenium	2	20	10%	YES	4.13E-01	1.01E+02	3.90E+02	NO
Silver	1	20	5%	YES	1.40E-01	1.40E-01	3.90E+02	NO
Thallium	4	19	21%	YES	1.10E-01	1.90E-01	5.50E+00	NO
Vanadium	20	20	100%	YES	1.00E+00	4.13E+00	7.80E+01	NO
Zinc	20	20	100%	YES	2.10E+00	3.24E+01	2.30E+04	NO
Volatile Organic Compounds								
Acetone	3	18	17%	YES	8.10E-03	1.00E-02	7.00E+04	NO
Carbon disulfide	2	19	11%	YES	3.00E-03	3.40E-03	7.80E+03	NO
Chloroform	1	20	5%	YES	8.90E-04	8.90E-04	7.80E+02	NO
Dichlorobenzene, 1,2-	2	20	10%	YES	1.75E-03	5.70E-03	7.00E+03	NO
Dichlorobenzene, 1,4-	1	20	5%	YES	1.50E-03	1.50E-03	2.70E+02	NO
Dichlorodifluoromethane	1	20	5%	YES	2.90E-03	2.90E-03	1.60E+04	NO
Dichloroethane, 1,1-	1	20	5%	YES	1.40E-02	1.40E-02	1.60E+04	NO
Dichloroethene, 1,1-	1	20	5%	YES	1.50E-02	1.50E-02	3.90E+03	NO
Dichloroethene, cis-1,2-	2	20	10%	YES	1.65E-03	1.80E-01	7.80E+02 (e)	NO
Dichloroethene, trans-1,2-	1	20	5%	YES	9.60E-04	9.60E-04	1.60E+03	NO
Tetrachloroethene	2	20	10%	YES	1.15E-03	3.20E-02	1.20E+01	NO
Trichlorobenzene, 1,2,4-	1	20	5%	YES	9.30E-04	9.30E-04	7.80E+02	NO
Trichloroethane, 1,1,1-	1	20	5%	YES	2.20E-02	2.20E-02	2.20E+04	NO
Trichloroethene	2	20	10%	YES	2.10E-03	1.30E-01	1.60E+01	NO

TABLE 2-4

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC) (mg/kg) (b)	Constituent of Potential Concern (COPC)?
Polycylic Aromatic Hydrocarbons (g)								
Acenaphthene	4	20	20%	YES	4.20E-03	7.80E-03	4.70E+03	NO
Acenaphthylene	3	20	15%	YES	2.30E-03	3.30E-03	4.70E+03 (c)	NO
Anthracene	7	20	35%	YES	1.10E-03	2.49E-02	2.30E+04	NO
Benzo(a)anthracene	11	20	55%	YES	2.70E-03	1.10E-01	8.70E+00	NO
Benzo(a)pyrene	11	20	55%	YES	2.10E-03	1.40E-01	8.70E-01	NO
Benzo(b)fluoranthene	12	20	60%	YES	3.00E-03	1.50E-01	8.70E+00	NO
Benzo(ghi)perylene	13	20	65%	YES	1.90E-03	1.00E-01	2.30E+03 (c)	NO
Benzo(k)fluoranthene	11	20	55%	YES	1.70E-03	9.10E-02	8.70E+01	NO
Chrysene	11	20	55%	YES	2.90E-03	1.30E-01	8.70E+02	NO
Dibenzo(a,h)anthracene	5	20	25%	YES	3.10E-03	2.30E-02	8.70E-01	NO
Fluoranthene	11	20	55%	YES	3.60E-03	2.00E-01	3.10E+03	NO
Fluorene	5	20	25%	YES	1.60E-03	1.04E-02	3.10E+03	NO
Indeno(1,2,3-cd)pyrene	10	20	50%	YES	1.90E-03	6.10E-02	8.70E+00	NO
Naphthalene	2	20	10%	YES	3.00E-03	4.10E-03	1.60E+03	NO
Phenanthrene	11	20	55%	YES	1.50E-03	1.10E-01	2.30E+03 (c)	NO
Pyrene	12	20	60%	YES	4.50E-03	1.70E-01	2.30E+03	NO
Pesticides								
alpha-Chlordane	4	20	20%	YES	1.20E-03	1.20E-02	1.80E+01 (c)	NO
gamma-Chlordane	6	20	30%	YES	6.10E-04	4.90E-03	1.80E+01 (c)	NO
4,4'-DDD	2	20	10%	YES	3.20E-03	9.10E-03	2.70E+01	NO
4,4'-DDE	4	20	20%	YES	9.10E-04	3.60E-03	1.90E+01	NO
4,4'-DDT	2	20	10%	YES	3.80E-03	1.20E-02	1.90E+01	NO
Endrin ketone	1	20	5%	YES	3.10E-03	3.10E-03	2.30E+01 (c)	NO

Notes:

mg/kg Milligram per kilogram
NA Not available

(a) From Table A-7. **Bolded chemicals are identified as COPCs.**
(b) USEPA, 2006. United States Environmental Protection Agency Region 3, Risk-Based Concentration Table, April 2006. Values listed are for and HI=1 and a risk of 1E-5.
(c) Value for chromium VI used as a surrogate for total chromium; mercuric chloride used as a surrogate for mercury; acenaphthene used as a surrogate for acenaphthylene; pyrene used as a surrogate for benzo(ghi)perylene and phenanthrene; total chlordane used as a surrogate for alpha-Chlordane and gamma-Chlordane; and endrin used as a surrogate for endrin ketone.
(d) OSWER Directive 9344.4-12, July 1994.
(e) Value listed is from the previous (April 2005) version of the Region 3 RBC table since the removal of these constituents has occurred in the current version.

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TABLE 2-5

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC)		Constituent of Potential Concern (COPC)?
Metals/Inorganics									
Aluminum	15	15	100%	YES	7.75E+02	8.07E+03	7.80E+04	(e)	NO
Antimony	5	15	33%	YES	7.30E-01	3.33E+00	3.10E+01		NO
Arsenic	15	15	100%	YES	1.50E+00	9.40E+00	4.30E+00		**YES**
Barium	15	15	100%	YES	2.90E+00	5.02E+01	1.60E+04		NO
Beryllium	10	11	91%	YES	1.05E-01	4.18E-01	1.60E+02		NO
Cadmium	4	15	27%	YES	5.80E-02	2.87E-01	7.80E+01		NO
Chromium	15	15	100%	YES	1.50E+00	4.17E+01	2.30E+02	(c)	NO
Cobalt	15	15	100%	YES	4.10E-01	4.90E+00	1.60E+03	(e)	NO
Copper	15	15	100%	YES	1.90E+00	4.45E+01	3.10E+03		NO
Iron	15	15	100%	YES	1.83E+03	1.22E+04	2.30E+04		NO
Lead	15	15	100%	YES	3.00E+00	1.98E+02	4.00E+02	(d)	NO
Manganese	15	15	100%	YES	1.01E+01	8.78E+01	1.60E+03		NO
Mercury	6	10	60%	YES	1.30E-02	7.40E-01	2.30E+01	(c)	NO
Molybdenum	9	12	75%	YES	2.30E-01	6.80E+00	3.90E+02		NO
Nickel	15	15	100%	YES	4.30E-01	8.41E+00	1.60E+03		NO
Selenium	5	15	33%	YES	3.21E-01	9.20E-01	3.90E+02		NO
Silver	1	15	7%	YES	3.40E-01	3.40E-01	3.90E+02		NO
Thallium	6	15	40%	YES	1.50E-01	4.50E-01	5.50E+00		NO
Vanadium	15	15	100%	YES	3.80E+00	3.74E+01	7.80E+01		NO
Zinc	13	13	100%	YES	1.34E+01	4.65E+01	2.30E+04		NO
Volatile Organic Compounds									
Carbon disulfide	3	12	25%	YES	1.90E-03	3.10E-03	7.80E+03		NO
Dichlorodifluoromethane	2	15	13%	YES	2.60E-03	3.35E-03	1.60E+04		NO
Methylene chloride	2	9	22%	YES	2.10E-03	2.90E-03	8.50E+02		NO
Styrene	1	15	7%	YES	2.15E-03	2.15E-03	1.60E+04		NO
Tetrachloroethene	1	15	7%	YES	2.50E-03	2.50E-03	1.20E+01		NO
Trichloroethene	2	15	13%	YES	2.50E-03	3.10E-03	1.60E+01		NO
Polycyclic Aromatic Hydrocarbons (g)									
Acenaphthene	11	15	73%	YES	1.70E-03	2.80E+00	4.70E+03		NO
Acenaphthylene	2	21	10%	YES	1.45E-03	2.90E-03	4.70E+03	(c)	NO
Anthracene	14	15	93%	YES	1.40E-02	4.40E+00	2.30E+04		NO
Benzo(a)anthracene	15	15	100%	YES	3.70E-02	1.00E+01	8.70E+00		**YES**
Benzo(a)pyrene	15	15	100%	YES	3.50E-02	9.50E+00	8.70E-01		**YES**
Benzo(b)fluoranthene	15	15	100%	YES	4.90E-02	1.10E+01	8.70E+00		**YES**
Benzo(ghi)perylene	15	15	100%	YES	1.70E-02	5.30E+00	2.30E+03	(c)	NO
Benzo(k)fluoranthene	15	15	100%	YES	2.80E-02	6.50E+00	8.70E+01		NO
Carbazole	3	3	100%	YES	4.70E-03	6.60E-02	3.20E+02		NO
Chrysene	15	15	100%	YES	4.80E-02	1.20E+01	8.70E+02		NO
Dibenzo(a,h)anthracene	15	15	100%	YES	5.50E-03	1.50E+00	8.70E-01		**YES**

TABLE 2-5

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC)		Constituent of Potential Concern (COPC)?
Fluoranthene	15	15	100%	YES	7.30E-02	2.60E+01	3.10E+03		NO
Fluorene	12	15	80%	YES	1.40E-03	1.50E+00	3.10E+03		NO
Indeno(1,2,3-cd)pyrene	15	15	100%	YES	1.80E-02	4.80E+00	8.70E+00		NO
1-Methylnaphthalene	2	6	33%	YES	7.70E-03	1.40E-02	3.10E+02	(c)	NO
2-Methylnaphthalene	3	6	50%	YES	1.10E-02	2.60E-02	3.10E+02		NO
Naphthalene	9	15	60%	YES	1.40E-03	8.60E-01	1.60E+03		NO
Phenanthrene	15	15	100%	YES	3.00E-02	1.90E+01	2.30E+03	(c)	NO
Pyrene	15	15	100%	YES	7.90E-02	2.60E+01	2.30E+03		NO
Pesticides									
alpha-Chlordane	1	15	7%	YES	1.10E-03	1.10E-03	1.80E+01	(c)	NO
gamma-Chlordane	3	15	20%	YES	2.10E-03	2.60E-03	1.80E+01	(c)	NO
4,4'-DDD	3	15	20%	YES	8.40E-04	5.70E-03	2.70E+01		NO
4,4'-DDE	4	15	27%	YES	9.50E-04	3.70E-03	1.90E+01		NO
4,4'-DDT	5	15	33%	YES	2.05E-03	6.65E-03	1.90E+01		NO
Dieldrin	2	15	13%	YES	6.80E-04	1.15E-03	4.00E-01		NO
Endrin ketone	2	13	15%	YES	3.60E-03	4.50E-03	2.30E+01	(c)	NO
Methoxychlor	2	15	13%	YES	2.50E-03	4.65E-03	3.90E+02		NO
Semi-Volatile Organic Compounds									
bis(2-Ethylhexyl)phthalate	4	14	29%	YES	2.70E-02	1.10E+00	4.60E+02		NO
Dibenzofuran	2	15	13%	YES	3.70E-02	6.00E-01	1.60E+02	(e)	NO

Notes:

mg/kg Milligram per kilogram
NA Not available

(a) From Table A-8. **Bolded chemicals are identified as COPCs.**
(b) USEPA, 2006. United States Environmental Protection Agency Region 3, Risk-Based Concentration Table, April 2006. Values listed are for and HI=1 and a risk of 1E-5.
(c) Value for chromium VI used as a surrogate for total chromium; mercuric chloride used as a surrogate for mercury; acenaphthene used as a surrogate for acenaphthylene; pyrene used as a surrogate for benzo(ghi)perylene and phenanthrene; 2-methylnaphthalene used as a surrogate for 1-methylnaphthalene; total chlordane used as a surrogate for alpha-Chlordane and gamma-Chlordane; and endrin used as a surrogate for endrin ketone.
(d) OSWER Directive 9344.4-12, July 1994.
(e) Value listed is from the previous (April 2005) version of the Region 3 RBC table since the removal of these constituents has occurred in the current version.

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TABLE 2-6

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
FALLING CREEK TRIBUTARY
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC) (mg/kg) (b)		Constituent of Potential Concern (COPC)?
Metals/Inorganics									
Aluminum	20	20	100%	YES	3.45E+02	3.00E+03	7.80E+04	(e)	NO
Antimony	4	20	20%	YES	4.80E-01	7.00E-01	3.10E+01		NO
Arsenic	9	17	53%	YES	5.40E-01	2.70E+00	4.30E+00		NO
Barium	20	20	100%	YES	2.50E+00	2.30E+01	1.60E+04		NO
Beryllium	10	11	91%	YES	4.11E-02	4.45E-01	1.60E+02		NO
Chromium	20	20	100%	YES	6.70E-01	6.00E+00	2.30E+02	(c)	NO
Cobalt	17	17	100%	YES	2.84E-01	2.41E+00	1.60E+03	(e)	NO
Copper	17	18	94%	YES	2.40E-01	4.49E+00	3.10E+03		NO
Iron	20	20	100%	YES	4.50E+02	5.32E+03	2.30E+04		NO
Lead	16	16	100%	YES	1.50E+00	1.22E+01	8.00E+02	(d)	NO
Manganese	20	20	100%	YES	6.80E+00	1.09E+02	1.60E+03		NO
Mercury	8	17	47%	YES	4.00E-03	1.45E-02	2.30E+01	(c)	NO
Molybdenum	7	15	47%	YES	2.90E-01	7.23E+00	3.90E+02		NO
Nickel	19	20	95%	YES	3.60E-01	3.19E+00	1.60E+03		NO
Selenium	5	20	25%	YES	2.39E-01	6.00E-01	3.90E+02		NO
Thallium	6	20	30%	YES	1.30E-01	2.40E-01	5.50E+00		NO
Vanadium	20	20	100%	YES	1.40E+00	1.20E+01	7.80E+01		NO
Zinc	16	16	100%	YES	3.47E+00	1.55E+01	2.30E+04		NO
Volatile Organic Compounds									
Acetone	4	14	29%	YES	2.90E-03	8.50E-03	7.00E+04		NO
Dichlorodifluoromethane	6	20	30%	YES	8.30E-04	3.40E-03	1.60E+04		NO
p-Isopropyltoluene	1	20	5%	YES	1.50E-03	1.50E-03	7.80E+03	(c)	NO
Polycyclic Aromatic Hydrocarbons (h)									
Acenaphthene	13	20	65%	YES	1.40E-03	9.70E-02	4.70E+03		NO
Acenaphthylene	1	20	5%	YES	1.00E-03	1.00E-03	4.70E+03	(c)	NO
Anthracene	18	20	90%	YES	7.10E-03	4.80E-01	2.30E+04		NO
Benzo(a)anthracene	20	20	100%	YES	5.00E-02	1.70E+00	8.70E+00		NO
Benzo(a)pyrene	20	20	100%	YES	6.00E-02	2.00E+00	8.70E-01		**YES**
Benzo(b)fluoranthene	20	20	100%	YES	7.60E-02	2.40E+00	8.70E+00		NO
Benzo(ghi)perylene	20	20	100%	YES	2.50E-02	1.30E+00	2.30E+03	(c)	NO
Benzo(k)fluoranthene	20	20	100%	YES	3.60E-02	1.40E+00	8.70E+01		NO
Carbazole	4	4	100%	YES	1.00E-02	1.30E-01	3.20E+02		NO
Chrysene	20	20	100%	YES	6.30E-02	2.30E+00	8.70E+02		NO
Dibenzo(a,h)anthracene	20	20	100%	YES	6.90E-03	3.50E-01	8.70E-01		NO
Fluoranthene	20	20	100%	YES	1.50E-01	5.00E+00	3.10E+03		NO
Fluorene	15	20	75%	YES	2.50E-03	1.20E-01	3.10E+03		NO
Indeno((1,2,3-cd)pyrene	20	20	100%	YES	2.50E-02	1.20E+00	8.70E+00		NO
1-Methylnaphthalene	1	8	13%	YES	5.60E-03	5.60E-03	3.10E+02	(c)	NO
2-Methylnaphthalene	1	8	13%	YES	1.10E-02	1.10E-02	3.10E+02		NO
Naphthalene	3	20	15%	YES	1.30E-03	8.10E-03	1.60E+03		NO
Phenanthrene	20	20	100%	YES	6.60E-02	2.30E+00	2.30E+03	(c)	NO
Pyrene	20	20	100%	YES	9.70E-02	3.00E+00	2.30E+03		NO

TABLE 2-6

SELECTION OF CONSTITUENTS OF POTENTIAL CONCERN IN SEDIMENT
FALLING CREEK TRIBUTARY
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Chemical	Number of Detections (a)	Number of Analyses (a)	Frequency of Detection (FOD) (%)	FOD ≥ 5% ?	Minimum Detected Concentration (mg/kg) (a)	Maximum Detected Concentration (MDC) (mg/kg) (a)	Residential Risk-Based Soil Concentration (RBC) (mg/kg) (b)	Constituent of Potential Concern (COPC)?
Pesticides								
alpha-Chlordane	5	20	25%	YES	1.30E-03	8.84E-03	1.80E+01 (c)	NO
gamma-Chlordane	5	20	25%	YES	6.50E-04	6.19E-03	1.80E+01 (c)	NO
4,4'-DDD	2	20	10%	YES	2.30E-03	2.30E-03	2.70E+01	NO
4,4'-DDE	3	20	15%	YES	7.50E-04	2.20E-03	1.90E+01	NO
Endrin aldehyde	2	20	10%	YES	4.20E-03	4.20E-03	2.30E+01 (c)	NO
Endrin ketone	1	18	6%	YES	1.10E-02	1.10E-02	2.30E+01 (c)	NO
Polychlorinate Biphenyls								
PCB-1248	3	20	15%	YES	9.10E-03	2.10E-02	3.20E+00	NO
Semi-Volatile Organic Compounds								
bis(2-Ethylhexyl)phthalate	4	20	20%	YES	3.00E-02	2.98E-01	4.60E+02	NO

Notes:
mg/kg Milligram per kilogram
NA Not available

(a) From Table A-9 . **Bolded chemicals are identified as COPCs.**
(b) USEPA, 2006. United States Environmental Protection Agency Region 3, Risk-Based Concentration Table, April 2006. Values listed are for and HI=1 and a risk of 1E-5.
(c) Value for chromium VI used as a surrogate for total chromium; mercuric chloride used as a surrogate for mercury; cumene used as a surrogate for p-isopropyltoluene; acenaphthene used as a surrogate for acenaphthylene; pyrene used as a surrogate for benzo(ghi)perylene and phenanthrene; 2-methylnaphthalene used as a surrogate for 1-methylnaphthalene; total chlordane used as a surrogate for alpha-Chlordane and gamma-Chlordane; and endrin used as a surrogate for endrin aldehyde and endrin ketone.
(d) OSWER Directive 9344.4-12, July 1994.
(e) Value listed is from the previous (April 2005) version of the Region 3 RBC table since the removal of these constituents has occurred in the current version.

PREPARED BY/DATE: MKB 4/6/06
CHECKED BY/DATE: LMS 4/6/06

TABLE 2-7

SELECTION OF EXPOSURE PATHWAYS
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Surface Water	Water	Incidental Contact	Recreational Wader	Child/Adult	Ingestion	Quant.	Pathway potentially complete.
				Recreational Wader	Child/Adult	Dermal	Quant.	Pathway potentially complete.
		Air	Vapor Emissions	Recreational Wader	Child/Adult	Inhalation	None	May come into contact with vapors during wading; however, maximum concentrations not expected to contribute significantly to risk in an outdoor setting.
Current	Surface Water	Water	Incidental Contact	Recreational Wader	Adolescent	Ingestion	Quant.	Pathway potentially complete.
				Recreational Wader	Adolescent	Dermal	Quant.	Pathway potentially complete.
		Air	Vapor Emissions	Recreational Wader	Adolescent	Inhalation	None	May come into contact with vapors during wading; however, maximum concentrations not expected to contribute significantly to risk in an outdoor setting.
Current	Sediment	Sediment	Incidental Contact	Recreational Wader	Child/Adult	Dermal	Quant.	The three creeks substrates are mostly composed of sands, gravels, rocks, and boulders. Very little sediment is present; however, this pathway is assumed potentially complete.
				Recreational Wader	Adolescent	Dermal	Quant.	The three creeks substrates are mostly composed of sands, gravels, rocks, and boulders. Very little sediment is present; however, this pathway is assumed potentially complete.
Current	Fish	Fish	Ingestion	Recreational Wader	Child/Adult	Ingestion	None	Each of the creeks is too narrow and shallow for fish populations large enough for recreational fishing.
			Ingestion	Recreational Wader	Adolescent	Ingestion	None	Each of the creeks is too narrow and shallow for fish populations large enough for recreational fishing.

PREPARED/DATE: MKB 4/6/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-1

EXPOSURE POINT CONCENTRATIONS
FOR KINGSLAND CREEK SURFACE WATER CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Maximum Detected Concentration (MDC) (µg/L) (a)	95% Upper Confidence Limit (95UCL) (µg/L) (b)	Exposure Point Concentration (EPC) (µg/L) (c)
Metals/Inorganics			
Arsenic	2.92E+00	2.56E+00	2.56E+00
Iron	6.37E+03	1.80E+03	1.80E+03
Manganese	2.30E+02	7.24E+01	7.24E+01
Mercury	7.00E-02	5.20E-01	7.00E-02
Thallium	1.96E+00	1.12E+00	1.12E+00
VOCs			
Benzene	6.65E+00	2.64E+00	2.64E+00
cis-1,2-Dichloroethene	3.20E+00	1.97E+00	1.97E+00
Tetrachloroethene	1.35E+00	6.78E-01	6.78E-01
Trichloroethene	4.25E+00	1.91E+00	1.91E+00

Notes:
(a) From Table 2-1
(b) From Appendix B
(c) The lesser of the MDC and 95UCL, per USEPA (1989)

µg/L Microgram per liter
VOCs Volatile organic compounds

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-2

EXPOSURE POINT CONCENTRATIONS
FOR NO NAME CREEK SURFACE WATER CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Maximum Detected Concentration (MDC) (µg/L) (a)	95% Upper Confidence Limit (95UCL) (µg/L) (b)	Exposure Point Concentration (EPC) (µg/L) (c)
Metals/Inorganics			
Arsenic	1.24E+01	4.14E+00	4.14E+00
Iron	2.28E+04	1.00E+04	1.00E+04
Lead	NA	NA	6.80E+00
Manganese	2.61E+02	1.00E+02	1.00E+02
Mercury	1.20E-01	1.00E-01	1.00E-01
Thallium	2.00E+00	1.22E+00	1.22E+00
VOCs			
cis-1,2-Dichloroethene	4.50E+01	3.00E+01	3.00E+01
Styrene	1.20E+02	5.43E+01	5.43E+01
Tetrachloroethene	2.10E+00	7.94E-01	7.94E-01
Trichloroethene	2.10E+01	3.06E+00	3.06E+00
Vinyl chloride	6.10E+00	1.61E+00	1.61E+00
PAHs			
Chrysene	1.20E-01	1.02E-01	1.02E-01

Notes:
(a) From Table 2-2
(b) From Appendix B
(c) The lesser of the MDC and 95UCL, per USEPA (1989). For lead, the arithmetic mean concentration is the EPC for the IEUBK model (Appendix C).

µg/L Microgram per liter
VOCs Volatile organic compounds
PAHs Polycyclic aromatic hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/05/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-3

EXPOSURE POINT CONCENTRATIONS
FOR FALLING CREEK TRIBUTARY SURFACE WATER CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Maximum Detected Concentration (MDC) (µg/L) (a)	95% Upper Confidence Limit (95UCL) (µg/L) (b)	Exposure Point Concentration (EPC) (µg/L) (c)
PAHs			
Benzo(b)fluoranthene	9.00E-02	1.00E-01	9.00E-02
Chrysene	7.10E-02	1.00E-01	7.10E-02
Indeno(1,2,3-cd)pyrene	4.90E-02	1.00E-01	4.90E-02

Notes:
(a) From Table 2-3
(b) From Appendix B
(c) The lesser of the MDC and 95UCL, per USEPA (1989).

µg/L Microgram per liter
PAHs Polycyclic aromatic hydrocarbons

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE 3-4

EXPOSURE POINT CONCENTRATIONS
FOR SEDIMENT CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Maximum Detected Concentration (MDC) (mg/kg) (a)	95% Upper Confidence Limit (95UCL) (mg/kg) (b)	Exposure Point Concentration (EPC_{sed}) (mg/kg) (c)
Kingsland Creek			
Arsenic	5.80E+00	2.35E+00	2.35E+00
No Name Creek			
Arsenic	9.40E+00	5.84E+00	5.84E+00
Benzo(a)anthracene	1.00E+01	5.57E+00	5.57E+00
Benzo(a)pyrene	9.50E+00	4.68E+00	4.68E+00
Benzo(b)fluoranthene	1.10E+01	5.70E+00	5.70E+00
Dibenzo(a,h)anthracene	1.50E+00	4.21E-01	4.21E-01
Falling Creek			
Benzo(a)pyrene	2.00E+00	6.90E-01	6.90E-01

Notes:
(a) From Table 2-4, 2-5, and 2-6.
(b) From Appendix B.
(c) The lesser of the MDC and 95UCL, per USEPA (1989).

mg/kg milligrams per kilograms

PREPARD BY/DATE: MKB 4/06/06
CHECKED BY/DATE: LMS 4/7/06

TABLE 3-5

INTAKE ASSUMPTIONS FOR RECREATIONAL EXPOSURES
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Child Creek Wader (1-6 years)

Intake Assumption	Symbol	Units	Value	
Exposed skin area, child	SAc	cm^2	2700	(a)
Drinking water ingestion rate	IR	mL/hr	50	(b)
Duration of event	t_{event}	hr/event	4	(b)
Event frequency	EV	events/d	1	(c)
Exposure frequency	EF	d/yr	52	(d)
Exposure duration, child	EDc	year	6	(e)
Carcinogenic averaging time	ATc	day	25550	(h)
Non-carcinogenic averaging time	ATn	day	2190	(i)
Body Weight, Child	BWc	kg	15	(j)
Unit Conversion Factor 1	UCF1	mg/µg	1 0E-03	
Unit Conversion Factor 2	UCF2	L/mL	1.0E-03	
Unit Conversion Factor 3	UCF3	kg/mg	1 0E-06	
Soil-to-Skin Adherence Fraction, child	SAFc	mg/cm^2-d	2 0E-01	(k)

Adolescent Creek Wader (7-18 years)

Intake Assumption	Symbol	Units	Value	
Exposed skin area, adolescent	SAad	cm^2	5940	(a)
Drinking water ingestion rate	IR	mL/hr	50	(b)
Duration of event	t_{event}	hr/event	4	(b)
Event frequency	EV	events/d	1	(c)
Exposure frequency	EF	d/yr	52	(d)
Exposure duration, adolescent	EDad	year	12	(f)
Carcinogenic averaging time	ATc	day	25550	(h)
Non-carcinogenic averaging time	ATn	day	4380	(i)
Body Weight, adolescent	BWad	kg	47	(j)
Unit Conversion Factor 1	UCF1	mg/µg	1.0E-03	
Unit Conversion Factor 2	UCF2	L/mL	1.0E-03	
Unit Conversion Factor 3	UCF3	kg/mg	1.0E-06	
Soil-to-Skin Adherence Fraction, adolescent	SAFad	mg/cm^2-d	2.0E-01	(k)

Adult Creek Wader

Intake Assumption	Symbol	Units	Value	
Exposed skin area, adult	SAa	cm^2	8400	(a)
Creek water ingestion rate	IR	mL/hr	50	(b)
Event duration	t_{event}	hr/event	4	(b)
Event frequency	EV	events/d	1	(c)
Exposure frequency	EF	d/yr	52 0	(d)
Exposure duration, adult	EDa	year	24	(g)
Carcinogenic averaging time	ATc	day	25550	(h)
Non-carcinogenic averaging time	ATn	day	8760	(i)
Body Weight, adult	BWa	kg	70	(j)
Unit Conversion Factor 1	UCF1	mg/µg	1.0E-03	
Unit Conversion Factor 2	UCF2	L/mL	1 0E-03	
Unit Conversion Factor 3	UCF3	kg/mg	1 0E-06	
Soil-to-Skin Adherence Fraction, adult	SAFa	mg/cm^2-d	7.0E-02	(k)

Notes:

(a) USEPA, 2004a
(b) VDEQ, 2005
(c) Professional judgment
(d) 2 days/year for 26 weeks per year
(e) For child ages 1 to 6
(f) For adolescent child ages 7 to 18
(g) From USEPA Region 3, 2003
(h) USEPA, 1989
(i) ED x 365 days/yr
(j) From USEPA, 1997. For children and adolescents, value is the mean of average body weights at each age interval.
(k) RME Assumption for residential soil, USEPA, 2004

cm^2 Centimeter squared
mL/hr Milliliter per hour
hr/event Hours per event
event/d Events per day
d/yr Days per year
kg Kilogram
mg/µg Milligram per microgram
L/ml Liter per milliliter
kg/mg Kilogram per milligram
mg/cm^2-d Milligram per square centimeter per day

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-6

DERMALLY ABSORBED DOSE PER EVENT FOR INORGANIC CONSTITUENTS OF POTENTIAL CONCERN
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Dermal Permeability Coefficient (Kp) (cm/hr) (a)	Exposure Point Concentration (EPC) (µg/L) (b)	Unit Conversion Factor (UCF) (mg/cm^3 per µg/L)	Constituent Concentration in Water (Cw) (mg/cm^3) (c)	Event Duration (t_{event}) (hrs/event) (d)	Dermally Absorbed dose per Event (DA_{event}) (mg/cm^2-event) (e)
Arsenic	1.00E-03	2.56E+00	1.00E-06	2.56E-06	4	1.02E-08
Iron	1.00E-03	1.80E+03	1.00E-06	1.80E-03	4	7.20E-06
Manganese	1.00E-03	7.24E+01	1.00E-06	7.24E-05	4	2.90E-07
Mercury	1.00E-03	7.00E-02	1.00E-06	7.00E-08	4	2.80E-10
Thallium	1.00E-03	1.12E+00	1.00E-06	1.12E-06	4	4.48E-09

Notes:

(a) USEPA, 2004a
(b) From Table 3-1
(c) EPC x UCF
(d) Assumed for creek wading event
(e) Kp x Cw x t_{event}, per RAGS E for inorganic chemicals

cm/hr Centimeter per hour
µg/L Microgram per liter
mg/cm^3 per µg/L Milligram per cubic centimeter per microgram per liter
µg/L Microgram per liter
mg/cm^3 Milligram per cubic centimeter
hrs/event Hours per event
mg/cm^2-event Milligram per square centimeter per event

PREPARED/DATE: MKB 4/05/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-7

DERMALLY ABSORBED DOSE PER EVENT FOR INORGANIC CONSTITUENTS OF POTENTIAL CONCERN
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Dermal Permeability Coefficient (Kp) (cm/hr) (a)	Exposure Point Concentration (EPC) (µg/L) (b)	Unit Conversion Factor (UCF) (mg/cm^3 per µg/L)	Constituent Concentration in Water (Cw) (mg/cm^3) (c)	Event Duration (t_{event}) (hrs/event) (d)	Dermally Absorbed dose per Event (DA_{event}) (mg/cm^2-event) (e)
Arsenic	1.00E-03	4.1E+00	1.00E-06	4.14E-06	4	1.66E-08
Iron	1.00E-03	1.0E+04	1.00E-06	1.00E-02	4	4.02E-05
Manganese	1.00E-03	1.0E+02	1.00E-06	1.00E-04	4	4.00E-07
Mercury	1.00E-03	1.0E-01	1.00E-06	1.00E-07	4	4.00E-10
Thallium	1.00E-03	1.2E+00	1.00E-06	1.22E-06	4	4.88E-09

Notes:

(a) USEPA, 2004a
(b) From Table 3-2
(c) EPC x UCF
(d) Assumed for creek wading event
(e) Kp x Cw x t_{event}, per RAGS E for inorganic chemicals

cm/hr Centimeter per hour
µg/L Microgram per liter
mg/cm^3 per µg/L Milligram per cubic centimeter per microgram per liter
µg/L Microgram per liter
mg/cm^3 Milligram per cubic centimeter
hrs/event Hours per event
mg/cm^2-event Milligram per square centimeter per event

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-8

DERMALLY ABSORBED DOSE PER EVENT FOR ORGANIC CONSTITUENTS OF POTENTIAL CONCERN
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Lag time per event (τ_{event}) (hr/event) (a)	Time to reach steady-state (t*) (hr) (a)	Event Duration (t_{event}) (hrs/event) (b)	$t_{event} > t^*$?	Fraction Absorbed (FA) (a)	Dermal Permeability Coefficient (Kp) (cm/hr) (a)	Exposure Point Concentration (EPC) (µg/L) (c)	Unit Conversion Factor (UCF) (mg/cm^3 per µg/L)	Constituent Concentration in Water (Cw) (mg/cm^3) (d)	B (a)	X (e)	Y (f)	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event) (g)
Benzene	2.90E-01	0.70	4	YES	1	0.015	2.64E+00	1.00E-06	2.64E-06	0.1	0.264	1.099	3.57E-08
cis-1,2-Dichloroethene (h)	3.70E-01	0.89	4	YES	1	0.0077	1.97E+00	1.00E-06	1.97E-06	0.0	0.370	1.000	1.68E-08
Tetrachloroethene	9.10E-01	2.18	4	YES	1	0.033	6.78E-01	1.00E-06	6.78E-07	0.20	0.758	1.194	6.56E-08
Trichloroethene	5.80E-01	1.39	4	YES	1	0.012	1.91E+00	1.00E-06	1.91E-06	0.10	0.527	1.099	4.13E-08

Notes:

(a) Values from USEPA, 2004a.
(b) Assumed for creek wader event.
(c) From Table 3-1.
(d) EPC x UCF.
(e) $\tau_{event}/(1 + B)$, per USEPA, 2004a.
(f) $[(1 + 3B + 3 B^2)/(1 + B)^2]$, per USEPA, 2004a.
(g) $DA_{event} = FA \times Kp \times Cw \times (X + 2 \tau_{event} \times Y)$.
(h) Chemical parameters listed are for trans-1,2-Dichloroethene since there is not data for the cis-isomer.

hrs/event	Hours per event
hr	Hours
cm/hr	Centimeter per hour
µg/L	Microgram per liter
mg/cm^3 per µg/L	Milligram per cubic centimeter per microgram per liter
mg/cm^3	Milligram per cubic centimeter
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (ve)
mg/cm^2-event	Milligram per square centimeter per event

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-9

DERMALLY ABSORBED DOSE PER EVENT FOR ORGANIC CONSTITUENTS OF POTENTIAL CONCERN
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Lag time per event (τ_{event}) (hr/event) (a)	Time to reach steady-state (t*) (hr) (a)	Event Duration (t_{event}) (hrs/event) (b)	$t_{event} > t^*$?	Fraction Absorbed (FA) (a)	Dermal Permeability Coefficient (Kp) (cm/hr) (a)	Exposure Point Concentration (EPC) (µg/L) (c)	Unit Conversion Factor (UCF) (mg/cm^3 per µg/L)	Constituent Concentration in Water (Cw) (mg/cm^3) (d)	B (a)	X (e)	Y (f)	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event) (g)
cis-1,2-Dichloroethene (h)	3.70E-01	0.89	4	YES	1	0.0077	3.00E+01	1.00E-06	3.00E-05	0.0	0.370	1.000	2.56E-07
Styrene	4.10E-01	0.98	4	YES	1	0.037	5.43E+01	1.00E-06	5.43E-05	0.1	0.373	1.099	2.56E-06
Tetrachloroethene	9.10E-01	2.18	4	YES	1	0.033	7.94E-01	1.00E-06	7.94E-07	0.20	0.758	1.194	7.68E-08
Trichloroethene	5.80E-01	1.39	4	YES	1	0.012	3.06E+00	1.00E-06	3.06E-06	0.10	0.527	1.099	6.62E-08
Vinyl chloride	2.40E-01	0.57	4	YES	1	0.0056	1.61E+00	1.00E-06	1.61E-06	0.00	0.240	1.000	6.49E-09
Chrysene	2.03E+00	8.53	4	NO	1	0.47	1.02E-01	1.00E-06	1.02E-07	2.8	NA	NA	3.78E-07

Notes:

(a) Values from USEPA, 2004a.
(b) Assumed for creek wader event.
(c) From Table 3-2.
(d) EPC x UCF.
(e) $\tau_{event}/(1 + B)$, per USEPA, 2004a.
(f) $[(1 + 3B + 3 B^2)/(1 + B)^2]$, per USEPA, 2004a.
(g) If $t_{event} > t^*$: $DA_{event} = FA \times Kp \times Cw \times (X + 2 \tau_{event} \times Y)$.
If $t_{event} <= t^*$: $DA_{event} = 2 \times FA \times Kp \times CW \times [(6 \times \tau_{event} \times t_{event})/\pi]^{0.5}$
Both equations from USEPA, 2004a
(h) Chemical parameters listed are for trans-1,2-Dichloroethene since there is not data for the cis-isomer.

hrs/event	Hours per event
hr	Hours
cm/hr	Centimeter per hour
µg/L	Microgram per liter
mg/cm^3 per µg/L	Milligram per cubic centimeter per microgram per liter
mg/cm^3	Milligram per cubic centimeter
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (ve)
mg/cm^2-event	Milligram per square centimeter per event

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-10

DERMALLY ABSORBED DOSE PER EVENT FOR ORGANIC CONSTITUENTS OF POTENTIAL CONCERN
FALLING CREEK TRIBUTARY
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Lag time per event (τ_{event}) (hr/event) (a)	Time to reach steady-state (t*) (hr) (a)	Event Duration (t_{event}) (hrs/event) (b)	$t_{event} > t^*$?	Fraction Absorbed (FA) (a)	Dermal Permeability Coefficient (Kp) (cm/hr) (a)	Exposure Point Concentration (EPC) (µg/L) (c)	Unit Conversion Factor (UCF) (mg/cm^3 per µg/L)	Constituent Concentration in Water (Cw) (mg/cm^3) (d)	B (a)	X (e)	Y (f)	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event) (g)
Benzo(b)fluoranthene	2.77	12.03	4	NO	1	0.7	9.00E-02	1.00E-06	9.00E-08	4.3	NA	NA	5.80E-07
Chrysene	2.03	8.53	4	NO	1	0.47	7.10E-02	1.00E-06	7.10E-08	2.8	NA	NA	2.63E-07
Indeno(1,2,3-cd)pyrene	3.78	16.83	4	NO	0.6	1	4.90E-02	1.00E-06	4.90E-08	6.7	NA	NA	3.16E-07

Notes:

(a) Values from USEPA, 2004a.
(b) Assumed for creek wader event.
(c) From Table 3-3.
(d) EPC x UCF.
(e) $\tau_{event}/(1 + B)$, per USEPA, 2004a.
(f) $[(1 + 3B + 3 B^2)/(1 + B)^2]$, per USEPA, 2004a.
(g) If $t_{event} > t^*$: $DA_{event} = FA \times Kp \times Cw \times (X + 2 \tau_{event} \times Y)$.
If $t_{event} <= t^*$: $DA_{event} = 2 \times FA \times Kp \times CW \times [(6 \times \tau_{event} \times t_{event})/\pi]^{0.5}$
Both equations from USEPA, 2004a

hrs/event	Hours per event
hr	Hours
cm/hr	Centimeter per hour
µg/L	Microgram per liter
mg/cm^3 per µg/L	Milligram per cubic centimeter per microgram per liter
mg/cm^3	Milligram per cubic centimeter
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (ve)
mg/cm^2-event	Milligram per square centimeter per event

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE 3-11

SUMMARY OF DERMALLY ABSORBED DOSES FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event)
Metals/Inorganics	
Arsenic	1.02E-08 (a)
Iron	7.20E-06 (a)
Manganese	2.90E-07 (a)
Mercury	2.80E-10 (a)
Thallium	4.48E-09 (a)
VOCs	
Benzene	3.57E-08 (b)
cis-1,2-Dichloroethene	1.68E-08 (b)
Tetrachlorethene	6.56E-08 (b)
Trichloroethene	4.13E-08 (b)

Notes:

(a) From Table 3-6
(b) From Table 3-8

mg/cm^2-event Milligrams per square centimeter per event
VOCs Volatile organic compounds

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-12

SUMMARY OF DERMALLY ABSORBED DOSES FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event)
Metals/Inorganics	
Arsenic	1.66E-08 (a)
Iron	4.02E-05 (a)
Manganese	4.00E-07 (a)
Mercury	4.00E-10 (a)
Thallium	4.88E-09 (a)
VOCs	
cis-1,2-Dichloroethene	2.56E-07 (b)
Styrene	2.56E-06 (b)
Tetrachloroethene	7.68E-08 (b)
Trichloroethene	6.62E-08 (b)
Vinyl chloride	6.49E-09 (b)
PAHs	
Chrysene	3.78E-07 (b)

Notes:

(a) From Table 3-7
(b) From Table 3-9

mg/cm^2-event Milligrams per square centimeter per event
VOCs Volatile organic compounds
PAHs Polycyclic aromatic hydrocarbons

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 3-13

SUMMARY OF DERMALLY ABSORBED DOSES FOR FALLING CREEK TRIBUTARY
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Dermally Absorbed dose per event (DA_{event}) (mg/cm^2-event)
PAHs	
Benzo(b)fluoranthene	5.80E-07 (a)
Chrysene	2.63E-07 (a)
Indeno(1,2,3-cd)pyrene	3.16E-07 (a)

Notes:

(a) From Table 3-10

mg/cm^2-event Milligrams per square centimeter per event
PAHs Polycyclic aromatic hydrocarbons

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE 4-1

TOXICITY VALUES FOR SURFACE WATER CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Oral Reference Dose (RfDo) (mg/kg-d)	Source	Dermal Reference Dose (RfDd) (mg/kg-d)	Source	Oral Cancer Slope Factor (SFo) $(mg/kg\text{-}d)^{-1}$	Source	Dermal Cancer Slope Factor (SFd) $(mg/kg\text{-}d)^{-1}$	Source	Weight of Evidence Characterization (c)	Source
Metals/Inorganics:										
Arsenic	3.0E-04	IRIS	3.0E-04	RfDo	1.5E+00	IRIS	1.5E+00	SFo	A	IRIS
Iron	3.0E-01	NCEA	3.0E-01	RfDo	NA	NA	NA	NA	ND	NA
Manganese	2.0E-02	IRIS	8.0E-04	RfDo (b)	NA	NA	NA	NA	D	IRIS
Mercury (a)	3.0E-04	IRIS	2.1E-05	RfDo (b)	NA	NA	NA	NA	C	IRIS
Thallium	7.0E-05	Region 3	7.0E-05	RfDo	NA	NA	NA	NA	ND	NA
VOCs										
Benzene	4.0E-03	IRIS	4.0E-03	RfDo	5.5E-02	IRIS	5.5E-02	SFo	A	IRIS
cis-1,2-Dichloroethene	1.0E-02	EPA PPV	1.0E-02	RfDo	NA	NA	NA	NA	D	IRIS
Styrene	2.0E-01	IRIS	2.0E-01	RfDo	NA	NA	NA	NA	ND	IRIS
Tetrachloroethene	1.0E-02	IRIS	1.0E-02	RfDo	5.4E-01	CAL EPA	5 4E-01	SFo	ND	IRIS
Trichloroethene	3.0E-04	NCEA	3 0E-04	RfDo	2.1E-01	Mid-point	2.1E-01	SFo	B-C	NCEA
Vinyl Chloride (child)	3.0E-03	IRIS	3 0E-03	RfDo	1.4E+00	IRIS	1.4E+00	SFo	A	IRIS
Vinyl Chloride (adult)	3.0E-03	IRIS	3.0E-03	RfDo	7.2E-01	IRIS	7.2E-01	SFo	A	IRIS
PAHs										
Benzo(b)fluoranthene	NA	IRIS	NA	NA	7.3E-01	NCEA	7 3E-01	SFo	B2	IRIS
Chrysene	NA	IRIS	NA	NA	7.3E-03	NCEA	7.3E-03	SFo	B2	IRIS
Indeno(1,2,3-cd)pyrene	NA	IRIS	NA	NA	7.3E-01	NCEA	7.3E-01	SFo	B2	IRIS

Notes:

(a) Toxicological information for mercuric chloride used as a surrogate in absence of specific data for mercury.
(b) Adjusted to 4% of RfDo for manganese and 7% of RfDo for mercuric chloride per USEPA (2004a).
(c) Weight of evidence: A - human carcinogen, B - probable human carcinogen, B2 - sufficient animal evidence but no evidence in humans, C - possible human carcinogen, D - not classifiable, ND - no data

NA Not Available
mg/kg-d milligrams per kilogram per day
$(mg/kg\text{-}d)^{-1}$ per milligram per kilogram per day
VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
IRIS (USEPA's) Integrated Risk Information System
NCEA National Center for Environmental Assessment
Region 3 USEPA Region 3 Risk-Based Concentration Table, October 2005.
CAL EPA California Evironmental Protection Agency
EPA PPV EPA Provisional Peer-reviewed Value

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 4-2

TOXICITY VALUES FOR SEDIMENT CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Oral Reference Dose (RfDo) (mg/kg-d)	Source	Dermal Reference Dose (RfDd) (mg/kg-d)	Source	Oral Cancer Slope Factor (SFo) $(mg/kg\text{-}d)^{-1}$	Source	Dermal Cancer Slope Factor (SFd) $(mg/kg\text{-}d)^{-1}$	Source	Weight of Evidence Characterization (a)	Source
Metals/Inorganics:										
Arsenic	3.0E-04	IRIS	3.0E-04	RfDo	1.5E+00	IRIS	1.5E+00	SFo	A	IRIS
PAHs										
Benzo(a)anthracene	NA	NA	NA	NA	7.3E-01	NCEA	7.3E-01	SFo	B2	IRIS
Benzo(a)pyrene	NA	NA	NA	NA	7.3E+00	IRIS	7.3E+00	SFo	B2	IRIS
Benzo(b)fluoranthene	NA	NA	NA	NA	7.3E-01	NCEA	7.3E-01	SFo	B2	IRIS
Dibenzo(a,h)anthracene	NA	NA	NA	NA	7.3E+00	NCEA	7.3E+00	SFo	B2	IRIS

Notes:

NA	Not Available
mg/kg-d	milligrams per kilogram per day
$(mg/kg\text{-}d)^{-1}$	per milligram per kilogram per day
PAHs	Polycyclic Aromatic Hydrocarbons
IRIS	(USEPA's) Integrated Risk Information System
NCEA	National Center for Environmental Assessment
(a)	Weight of evidence: A - human carcinogen, B - probable human carcinogen, B2 - sufficient animal evidence but no evidence in humans, C - possible human carcinogen, D - not classifiable, ND - no data

PREPARD BY/DATE: MKB 4/06/06
CHECKED BY/DATE: LMS 4/7/06

TABLE 5-1

RISK CHARACTERIZATION SUMMARY FOR KINGSLAND CREEK CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Child Creek Wader

	Hazard Index	Risk
Creek Water Ingestion	0.08	8.E-07
Dermal Contact with Creek Water	0.02	2.E-06
Dermal Contact with Sediment	0.001	5.E-08
TOTAL	**0.1**	**2.E-06**

Adolescent Creek Wader

	Hazard Index	Risk
Creek Water Ingestion	0.03	5.E-07
Dermal Contact with Creek Water	0.01	2.E-07
Dermal Contact with Sediment	0.0008	7.E-08
TOTAL	**0.04**	**7.E-07**

Adult Creek Wader

	Hazard Index	Risk
Creek Water Ingestion	0.02	7.E-07
Dermal Contact with Creek Water	0.01	4.E-07
Dermal Contact with Sediment	0.0003	4.E-08
TOTAL	**0.03**	**1.E-06**

Combined Child and Adult Creek Wader

	Hazard Index	Risk
Creek Water Ingestion	NA	1.E-06
Dermal Contact with Creek Water	NA	2.E-06
Dermal Contact with Sediment	NA	9.E-08
TOTAL	**NA**	**3.E-06**

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 5-2

RISK CHARACTERIZATION SUMMARY FOR NO NAME CREEK CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Child Creek Wader

	HI	Risk
Creek Water Ingestion	0.2	4.E-06
Dermal Contact with Creek Water	0.03	3.E-07
Dermal Contact with Sediment	0.003	3.E-06
TOTALS	**0.2**	**7.E-06**

Adolescent Creek Wader

	HI	Risk
Creek Water Ingestion	0.05	1.E-06
Dermal Contact with Creek Water	0.02	3.E-07
Dermal Contact with Sediment	0.002	4.E-06
TOTALS	**0.1**	**5.E-06**

Adult Creek Wader

	HI	Risk
Creek Water Ingestion	0.03	1.E-06
Dermal Contact with Creek Water	0.02	5.E-07
Dermal Contact with Sediment	0.0007	3.E-06
TOTALS	**0.05**	**4.E-06**

Combined Child and Adult Creek Wader

	HI	Risk
Creek Water Ingestion	NA	5.E-06
Dermal Contact with Creek Water	NA	8.E-07
Dermal Contact with Sediment	NA	5.E-06
TOTALS	**NA**	**1.E-05**

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE 5-3

RISK CHARACTERIZATION SUMMARY FOR FALLING CREEK TRIBUTARY CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Child Creek Wader

	HI	Risk
Creek Water Ingestion	NA	2.E-08
Dermal Contact with Creek Water	NA	1.E-06
Dermal Contact with Sediment	NA	3.E-07
TOTALS	**NA**	**2.E-06**

Adolescent Creek Wader

	HI	Risk
Creek Water Ingestion	NA	1.E-08
Dermal Contact with Creek Water	NA	2.E-06
Dermal Contact with Sediment	NA	4.E-07
TOTALS	**NA**	**2.E-06**

Adult Creek Wader

	HI	Risk
Creek Water Ingestion	NA	1.E-08
Dermal Contact with Creek Water	NA	4.E-06
Dermal Contact with Sediment	NA	3.E-07
TOTALS	**NA**	**4.E-06**

Combined Child and Adult Creek Wader

	HI	Risk
Creek Water Ingestion	NA	3.E-08
Dermal Contact with Creek Water	NA	5.E-06
Dermal Contact with Sediment	NA	6.E-07
TOTALS	**NA**	**6.E-06**

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE 8-1

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
KINGSLAND CREEK, CHILD
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population: Recreational Wader in Kingsland Creek
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Arsenic	6.E-07	--	4.E-07	1.E-06	Skin	0 02	NA	0 0009	0.02
			Tetrachloroethene	6.E-08	--	9.E-07	1.E-06	Liver	0.0001	--	0.0002	0 0003
			Trichloroethene	7.E-08	--	2.E-07	3.E-07	Liver, Kidney	0.01	--	0.004	0.02
			Total	8.E-07	--	2.E-06	2.E-06		0.03	--	0.005	0.03
		Exposure Point Total					2.E-06					0.03
Medium Total							2 E-06					0.03
Sediment	Sediment	Sediment	Arsenic	--	--	5 E-08	5.E-08	Skin	--	--	0.001	0.001
			Total	--	--	5 E-08	5.E-08		--	--	0.001	0.001
		Exposure Point Total					5 E-08					0 001
Medium Total							5.E-08					0 001
Receptor Total							2.E-06				Receptor HI Total	0 03
							2.E-06				Total Hazard Across All Media	0.03

Total Skin HI Across All Media =	0.02
Total Kidney HI Across All Media =	0.02
Total Liver HI Across All Media =	0.02

PREPARED/DATE: MKB 4/11/06
CHECKED/DATE: LMS 4/12/06

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TABLE 8-2

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
KINGSLAND CREEK, ADULT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population: Recreational Wader in Kingsland Creek
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Arsenic	5 E-07	--	9.E-08	6.E-07	Skin	0 004	NA	0 0006	0.004
			Tetrachloroethene	5.E-08	--	2.E-07	3.E-07	Liver	0.00003	--	0.0001	0 0001
			Trichloroethene	6 E-08	--	5.E-08	1 E-07	Liver, Kidney	0.003	--	0 002	0.005
			Total	6.E-07	--	4.E-07	1.E-06		0.006	--	0.003	0.009
		Exposure Point Total					1.E-06					0.009
Medium Total							1.E-06					0.009
Sediment	Sediment	Sediment	Arsenic	--	--	4 E-08	4.E-08	Skin	--	--	0.0003	0.0003
			Total	--	--	4.E-08	4 E-08		--	--	0 0003	0 0003
		Exposure Point Total					4 E-08					0.0003
Medium Total							4.E-08					0.0003
Receptor Total							1 E-06				Receptor HI Total	0.01
							1.E-06				Total Hazard Across All Media	0.01

Total Skin HI Across All Media =	0 004
Total Kidney HI Across All Media =	0.005
Total Liver HI Across All Media =	0.005

PREPARED/DATE: MKB 4/11/06
CHECKED/DATE: LMS 4/12/06

TABLE 8-3

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
NO NAME CREEK, CHILD
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population: Recreational Wader in No Name Creek
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Arsenic	1.E-06	--	6.E-08	1.E-06	Skin	0 03	NA	0 001	0.03
			Vinyl Chloride	2.E-06	--	1.E-07	3.E-06	Liver	0 001	--	0.0001	0.001
			Total	3 E-06	--	2 E-07	4.E-06		0.03	--	0.001	0.03
		Exposure Point Total					4 E-06					0.028
Medium Total							4.E-06					0.028
Sediment	Sediment	Sediment	Arsenic	--	--	1.E-07	1.E-07	Skin	--	--	0.003	0.003
			Benzo(a)anthracene			2.E-07	2.E-07	NA	--	--	NA	NA
			Benzo(a)pyrene			2.E-06	2.E-06	NA	--	--	NA	NA
			Benzo(b)fluoranthene			2.E-07	2 E-07	NA	--	--	NA	NA
			Dibenzo(a,h)anthracene			2.E-07	2.E-07	NA	--	--	NA	NA
			Total	--	--	3.E-06	3.E-06		--	--	--	0.003
		Exposure Point Total					3 E-06					0 003
Medium Total							3 E-06					0 003
Receptor Total							6.E-06				Receptor HI Total	0 03
							6 E-06				Total Hazard Across All Media	0.03

Total Skin HI Across All Media = 0 03
Total Liver HI Across All Media = 0.001

PREPARED/DATE: MKB 4/11/06

TABLE 8-4

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
NO NAME CREEK, ADOLESCENT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population: Recreational Wader in No Name Creek
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Arsenic	7.E-07	--	8 E-08	7.E-07	Skin	0 008	NA	0.001	0.009
			Vinyl Chloride	2.E-07	--	3.E-08	3 E-07	Liver	0.0003	--	0.0004	0 0007
			Total	9.E-07	--	1.E-07	1 E-06		0 009	--	0.001	0.01
		Exposure Point Total					1.E-06					0.01
Medium Total							1.E-06					0.01
Sediment	Sediment	Sediment	Arsenic	--	--	2 E-07	2 E-07	Skin	--	--	0 002	0.002
			Benzo(a)anthracene	--	--	3 E-07	3 E-07	NA			NA	AN
			Benzo(a)pyrene			3.E-06	3 E-06	NA			NA	AN
			Benzo(b)fluoranthene			3.E-07	3 E-07	NA			NA	NA
			Dibenzo(a,h)anthracene			2 E-07	2 E-07	NA			NA	NA
			Total	--	--	4 E-06	4 E-06		--	--	--	0.002
		Exposure Point Total					4.E-06					0.002
Medium Total							4 E-06					0 002
Receptor Total							5 E-06				Receptor HI Total	0.01
							5 E-06				Total Hazard Across All Media	0.01

Total Skin HI Across All Media = 0.01
Total Liver HI Across All Media = 0.0007

PREPARED/DATE: MKB 4/11/06

TABLE 8-5

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
NO NAME CREEK, ADULT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population: Recreational Wader in No Name Creek
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Arsenic	9.E-07	--	2.E-07	1 E-06	Skin	0.006	NA	0.001	0 007
			Vinyl Chloride	2.E-07	--	3 E-08	2.E-07	Liver	0.0002	--	0 00004	0.0003
			Total	1.E-06	--	2.E-07	1.E-06		0.006	--	0.001	0.007
		Exposure Point Total					1.E-06					0 007
Medium Total							1.E-06					0 007
Sediment	Sediment	Sediment	Arsenic	--	--	1.E-07	1.E-07	Skin	--	--	0.001	0.001
			Benzo(a)anthracene			2.E-07	2.E-07	NA	--	--	NA	NA
			Benzo(a)pyrene			2.E-06	2.E-06	NA	--	--	NA	NA
			Benzo(b)fluoranthene			2.E-07	2.E-07	NA	--	--	NA	NA
			Dibenzo(a,h)anthracene			2.E-07	2.E-07	NA	--	--	NA	NA
			Total	--	--	3.E-06	3.E-06		--	--	--	0 001
		Exposure Point Total					3.E-06					0.001
Medium Total							3.E-06					0 001
Receptor Total							4.E-06				Receptor HI Total	0.007
							4.E-06				Total Hazard Across All Media	0.007

Total Skin HI Across All Media = 0.007
Total Liver HI Across All Media = 0.0003

PREPARED/DATE: MKB 4/11/06

TABLE 8-6

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
FALLING CREEK TRIBUTARY, CHILD
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe:	Current
Receptor Population	Recreational Wader in Falling Creek Tributary
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Benzo(b)fluoranthene	1.E-08	--	9.E-07	9 E-07	NA	NA	--	NA	NA
			Indeno(1,2,3-cd)pyrene	6.E-09		5.E-07	5.E-07	NA	NA	--	NA	NA
			Total	2.E-08	--	1.E-06	1.E-06		NA	--	NA	NA
		Exposure Point Total					1.E-06					--
Medium Total							1.E-06					--
Sediment	Sediment	Sediment	Benzo(a)pyrene	--	--	3.E-07	3.E-07	NA	NA	--	NA	NA
			Total	--	--	3 E-07	3.E-07		NA	--	NA	NA
		Exposure Point Total					3.E-07					NA
Medium Total							3.E-07					NA
Receptor Total							2.E-06				Receptor HI Total	NA
							2.E-06				Total Hazard Across All Media	NA

PREPARED/DATE: MKB 4/11/06
CHECKED/DATE: LMS 4/12/06

TABLE 8-7

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
FALLING CREEK TRIBUTARY, ADOLESCENT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Scenario Timeframe: Current
Receptor Population Recreational Wader in Falling Creek Tributary
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Benzo(b)fluoranthene	7 E-09	--	1.E-06	1 E-06	NA	NA	--	NA	NA
			Indeno(1,2,3-cd)pyrene	4.E-09		7.E-07	7.E-07	NA	NA	--	NA	NA
			Total	1.E-08	--	2 E-06	2.E-06		NA	--	NA	NA
		Exposure Point Total					2 E-06					--
Medium Total							2 E-06					--
Sediment	Sediment	Sediment	Benzo(a)pyrene	--	--	4.E-07	4.E-07	NA	NA	--	NA	NA
			Total	--	--	4.E-07	4.E-07		NA	--	NA	NA
		Exposure Point Total					4 E-07					NA
Medium Total							4.E-07					NA
Receptor Total							2.E-06				Receptor HI Total	NA
							2.E-06				Total Hazard Across All Media	NA

PREPARED/DATE: MKB 4/11/06
CHECKED/DATE: LMS 4/12/06

TABLE 8-8

RISK SUMMARY, REASONABLE MAXIMUM EXPOSURE
FALLING CREEK TRIBUTARY, ADULT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

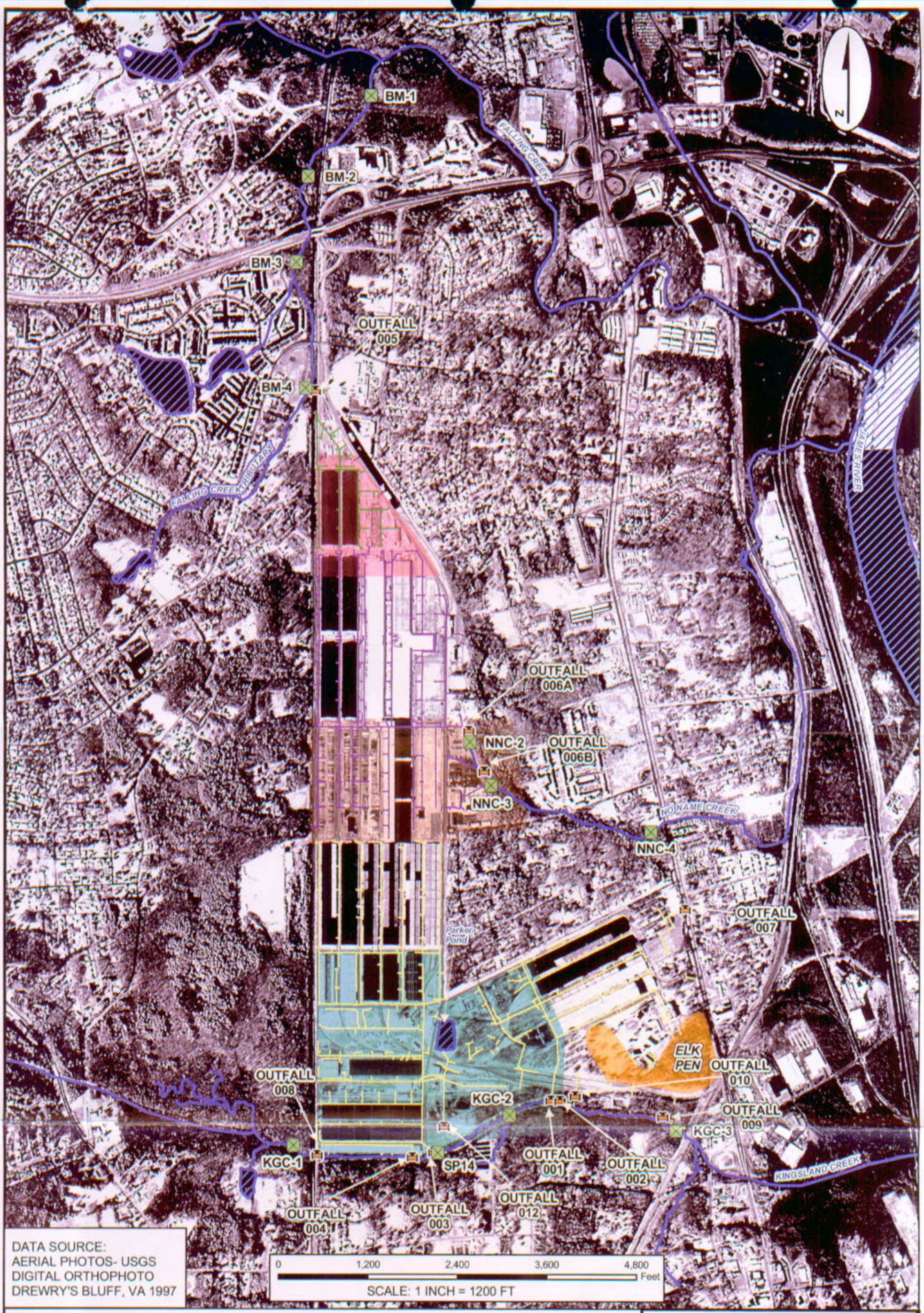
Scenario Timeframe: Current
Receptor Population: Recreational Wader to Falling Creek Tributary
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water	Benzo(b)fluoranthene	9 E-09	--	3.E-06	3.E-06	NA	NA	--	NA	NA
			Indeno(1,2,3-cd)pyrene	5 E-09	--	1.E-06	1 E-06	NA	NA	--	NA	NA
			Total	1 E-08	--	4.E-06	4.E-06		NA	--	NA	NA
		Exposure Point Total					4 E-06					NA
Medium Total							4 E-06					NA
Sediment	Sediment	Sediment	Benzo(a)pyrene	--	--	3.E-07	3 E-07	NA	NA	--	NA	NA
			Total	--	--	3.E-07	3.E-07		NA	--	NA	NA
		Exposure Point Total					3.E-07					NA
Medium Total							3 E-07					NA
Receptor Total							4.E-06				Receptor HI Total	NA
							4 E-06				Total Hazard Across All Media	NA

PREPARED/DATE: MKB 4/11/06
CHECKED/DATE: LMS 4/12/06

FIGURES

841 89A



SAMPLING LOCATIONS

STORM SEWER OUTFALLS

STORM SEWER DRAINAGE INTO NO NAME CREEK

STORM SEWER DRAINAGE INTO KINGSLAND CREEK

STORM SEWER DRAINAGE INTO FALLING CREEK TRIBUTARY

SURFACE WATER

GROUNDWATER ZONE NUMBER

1

2

3

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE

DEFENSE SUPPLY CENTER RICHMOND
RICHMOND, VIRGINIA

HUMAN HEALTH BASELINE RISK ASSESMENT
OF THE CREEKS ADJACENT TO DSCR

DSCR ADJACENT CREEKS
STORM SEWER DRAINAGE OUTFALLS
AND CREEK SAMPLING LOCATIONS

PREPARED BY: THP
CHECKED BY: HEF

MACTEC

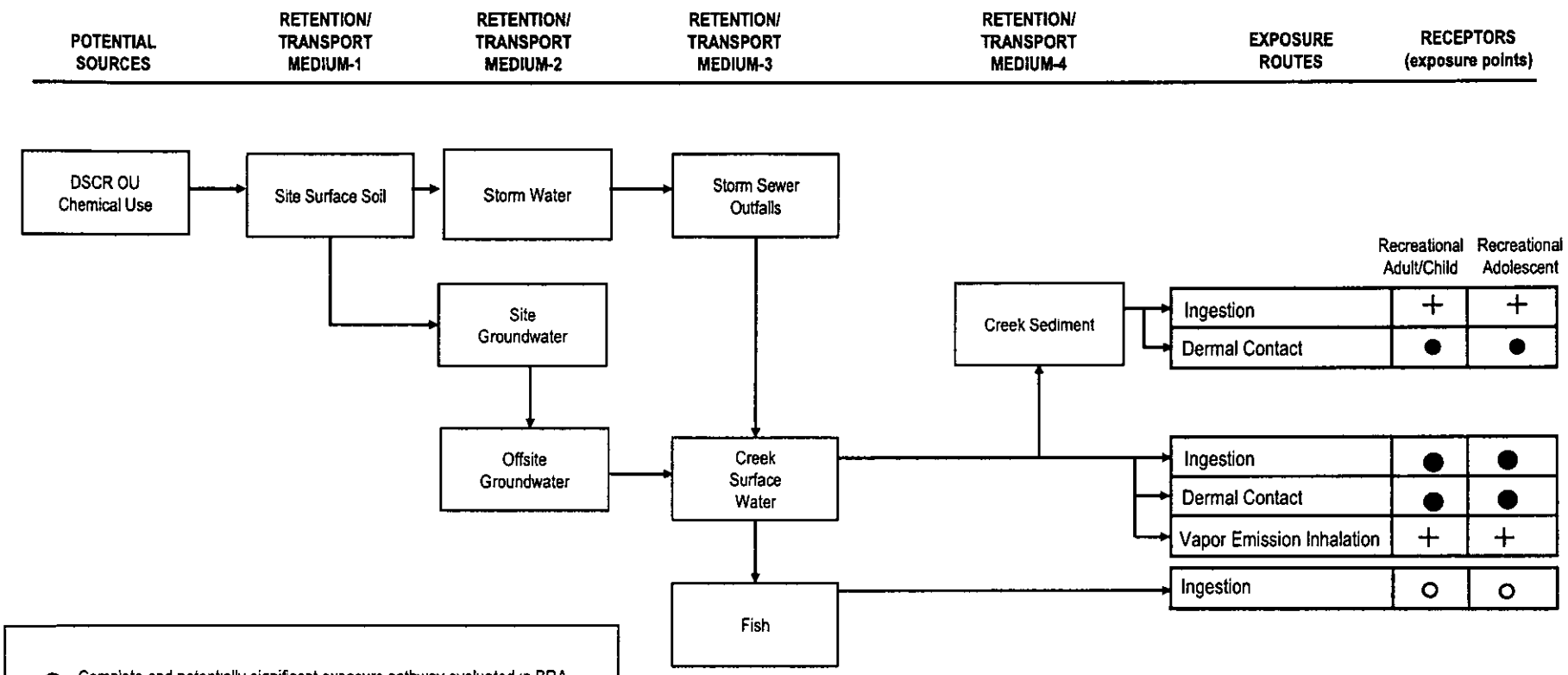
FIGURE NUMBER: 1-1

FIGURE 2-1

CONCEPTUAL SITE MODEL

HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS

Defense Supply Center Richmond
Richmond, Virginia



PREPARED/DATE: DAJ 1/5/05
CHECKED/DATE: LMS 4/17/06

APPENDIX A

RISK ASSESSMENT DATASETS

(on CD)

APPENDIX A – LIST OF TABLES

Table

APPENDIX A – ACRONYMS

ANM	Analytical method
EXM	Extraction method
FD1	Field duplicate
FLDFLT	Field filtered
J	Estimated; based on QC data
JB	Estimated; possibly biased high or false positive based on blank contamination
JH	Estimated; possibly biased high based upon QC data
JL	Estimated; possibly biased low based upon QC data
JQ	Estimated; value is between reporting limit and detection limit
LAB DL	Method detection limit
LL	Lower limit
µg/L	Microgram per liter
mg/L	Milligram per liter
NS1	Normal sample
PARVAL	Analytical result
Parvq(=)	Analyte detected above its reporting limit
Parvq(ND)	Analyte not detected
Parvq(TR)	Trace analyte detected
R	Unusable
REP LIMIT	Analytical reporting limit
UJ	Undetected; Reported Limit is imprecise
UL	Undetected; Data biased low – Reported Limit is higher than indicted
WS	Surface water

Detection limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	TR	3 0000	JQ	10	1 300	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	TR	2 1000	JQ	10	1 300	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000	UJ	10	1 300	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000	UJ	10	1 100	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000	UJ	10	1.100	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000		10	0 510	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1.300	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000	UJ	10	0 510	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0.0000		10	0 510	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 5330		0 2	0 057	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 4960		0 2	0 057	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 4140		0.2	0 099	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.3690		0 2	0 057	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.3600		0 2	0 099	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.3150		0 2	0 057	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3130		0 2	0 099	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3090		0 2	0 099	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3060		0 2	0 099	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 2840		0 2	0 099	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 2450		0.2	0 057	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 2170		0 2	0 057	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0665	JQ	0 2	0 003	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0597	JQ	0 2	0 003	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0.0562	JQ	0 2	0 003	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0403	JQ	0.2	0 001	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0378	JQ	0 04	0 003	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0351	JQ	0 04	0 003	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0344	JQ	0 04	0 003	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0344	JQ	0 2	0 001	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0339	JQ	0.2	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0332	JQ	0.2	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0330	JQ	0 04	0 003	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0319	JQ	0 2	0 001	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0318	JQ	0.2	0 001	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0310	JQ	0 04	0 003	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0306	JQ	0 04	0 003	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	0.700	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 034	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	0.700	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	0 700	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 039	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	1.100	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0.039	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0.0000		0.2	0 039	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	TR	0 0350	JQ	0 2	0 034	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 130	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 130	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 130	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 130	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0.0000		10	1 100	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 130	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0.2	0.130	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0.2	0 034	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 034	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0 2	0 034	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0 0000		0.2	0 034	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	TR	0.0900	JQ	0 2	0.048	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0.2	0 160	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0.0000		0.2	0 160	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0.160	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 096	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 096	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0.2	0.096	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	TR	0 0520	JQ	0 2	0 014	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 150	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 150	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0.0000		0 2	0 150	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0.2	0 150	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1.900	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1.900	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0.2	0 150	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0.2	0 150	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1 900	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000	UJ	10	0.850	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1 900	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1 900	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 014	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	0 850	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	0 850	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 014	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0 0000		10	1 900	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 014	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 014	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0.0000		0 2	0 050	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 014	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 050	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0 0000		0 2	0 050	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	TR	2 0000		2	0 300	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	TR	2 0000		2	0 300	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	TR	2 0000		2	0.300	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0.0000		2	0 300	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	0 300	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	0 300	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	2 000	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0.0000		2	2 000	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	2 000	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	27 8000		5	0 250	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	24 5000		5	0 250	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	22 2000		5	0 250	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	8 0800		5	0 059	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7.9000		5	0 059	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	7 4400		5	0 059	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7 3100		5	0 059	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7 1400		1 1	0 032	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7 0400		1 1	0 032	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7 0200		1 1	0 032	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 8700		5	0 059	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 6200		1 1	0 032	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 5300		1.1	0 032	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 3500		5	0 059	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 2900		1 1	0 032	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	70.0000		10	5 300	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	17 4000		10	4 900	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	17.1000		10	4.900	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	15.7000		10	4.900	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	15 0000		10	5 300	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	14 4000		10	4 900	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	12 1000		10	4 900	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	12 0000		10	5 300	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	TR	7 2000	JQ	10	5 300	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	3 4000	JQ	10	3 000	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	5 300	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	5 300	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	E410 4	E410.4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	4 900	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	3 000	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	3 000	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 5700	JQ	1	0 300	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000	UJ	2	0 490	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0.0000		2	0 490	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0.130	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0.130	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	=	0 0038	JQ	0.01	0 002	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	=	0 0019	JQ	0 01	0.002	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0.0000		0.01	0 001	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0.01	0 002	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0.002	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0.01	0 001	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	TR	0 0710	JQ	0 2	0 042	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0.2	0 100	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0.100	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0.2	0 042	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0.0000		10	0 750	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0.2	0 042	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0.0000		10	0 750	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1.400	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0.0000		0.2	0.075	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	0 750	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 075	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0.2	0 075	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0010	JQ	0.03	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0009	JQ	0 03	0 001	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0.03	0 001	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000	UJ	0 01	0 001	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000	UJ	0 01	0 001	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000	UJ	0 01	0 001	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0 0024	JQ	0 01	0 001	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000	UL	0 01	0.002	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0.0000		0 01	0 004	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0 0000	UL	0 01	0.002	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0 0000	UL	0 01	0 002	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0.0000		0 01	0 004	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0.0000		10	1 000	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	TR	0 1100	JQ	0 2	0 046	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1 000	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1 000	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0.0000		10	1 000	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0.0000		0 2	0 090	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0.090	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0.0000		0.2	0.046	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	0 810	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	0 810	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 100	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0.0000		10	1 000	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	0 810	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1.000	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0.2	0 046	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	80 0000		5	1 000	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	74 0000		5	1.000	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	51 0000		5	1 000	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	38 0000		5	2 000	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	34 0000		5	2 000	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	25 3000	JQ	33	0 400	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	25 2000	JQ	33	0 400	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	25 0000	JQ	33	1 000	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	24 2000	JQ	33	1 000	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	24 1000	JQ	33	0 400	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	24 0000		5	2 000	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	24 0000		5	2 000	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	E130 2	NONE.	TOTAL	Hardness as CaCO3	=	24 0000		5	2 000	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	23.4000	JQ	33	1 000	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	22 0000		5	2 000	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	TR	0.0490	JQ	0.2	0 040	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0.2	0 160	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0.160	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0.2	0 160	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 160	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 040	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 040	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 040	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0.0000		0 2	0.072	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 040	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000	UJ	10	0 630	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	0 630	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	0 630	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		10	1 100	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 040	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 072	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0 0000		0 2	0 072	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1.0800		0 2	0 042	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.6990		0 2	0 022	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 6680		0 2	0 042	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 6210		0.2	0 022	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 5970		0 2	0 022	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.5740		0 2	0 042	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.5270		0 2	0.022	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.5170		0 2	0 022	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 4810		0.2	0 042	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.4640		0 2	0 042	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 4600		0 2	0.022	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 3090		0 2	0 088	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 2800		0 2	0 042	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	ND	0 0000		0 2	0 088	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	ND	0 0000		0 2	0 088	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0014	JQ	0 003	0 001	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0.002	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UJ	0 003	0 001	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UJ	0 003	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0.0000		0 003	0 002	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	4 9700	JQ	5	0 030	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	4 8100	JQ	5	0 030	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	4 7300	JQ	5	0 030	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 9300	JQ	5	0 035	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8900		0 2	0 005	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8800		0 2	0 005	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8700		0 2	0 005	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8600		0 2	0 005	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8100		0 2	0 005	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.7900		0 2	0 005	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.7300	JQ	5	0 035	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6700	JQ	5	0.035	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6200	JQ	5	0 035	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6000	JQ	5	0 035	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.5500	JQ	5	0 035	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0338		0.02	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0335		0 015	0 001	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0305		0 015	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0.0252		0 02	0 001	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0213		0 015	0 001	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0208		0 015	0 001	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0183	JQ	0.02	0 001	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0176		0 015	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0174	JQ	0 02	0 001	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0172	JQ	0 02	0 001	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0145	JQ	0 02	0.001	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0123	JQ	0 02	0 001	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0112	JQ	0 015	0 001	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0086	JQ	0 02	0 001	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0037	JQ	0 02	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0026	JQ	0 01	0 002	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0016	JQ	0 01	0 002	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.01	0 002	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0.0000		0 1	0 003	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0.0000		0.1	0 003	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0 002	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.01	0 002	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0 003	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0.002	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0.1	0 002	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	TR	0 0430	JQ	0.2	0 036	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0.0000		0 2	0 140	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 140	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 036	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	0 820	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 075	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0.0000		0 2	0 036	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0.0000		10	0 820	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	0 820	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0.0000		0 2	0 075	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 075	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	5 1600	JQ	5	0 041	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	4 8900	JQ	5	0 041	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	4 7100	JQ	5	0 041	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 6300	JQ	5	0 011	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 6100	JQ	5	0 011	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2.5500	JQ	5	0 011	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 2800	JQ	5	0 023	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 2300	JQ	5	0 023	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 2300	JQ	5	0 023	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 0000		5	0 011	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 0000		5	0 011	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 9700		5	0 011	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 7300	JQ	5	0 023	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.6200	JQ	5	0 023	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 5500	JQ	5	0 023	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	TR	0 0940	JQ	0 2	0 048	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0.0000		0 2	0 120	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0.2	0 120	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 120	µg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 120	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1.300	µg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 120	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0.0000		0 2	0.120	µg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 038	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0.048	µg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1.100	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0.0000		10	1.100	µg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0.0000		10	1.300	µg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000	UJ	10	1 100	µg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 038	µg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 038	µg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	29.5000		5	0 630	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	26.9000		5	0 630	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	24.9000		5	0 630	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	11 5000		5	0 360	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	10 5000		5	0 360	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	9 9100		5	0 360	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	9 8100		5	0 080	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	9 0900		5	0 080	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	8.3000		5	0 080	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 3800		5	0 080	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 3200		5	0 360	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 3000		5	0 080	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 3000		5	0 080	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 9900		5	0 360	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 5000		5	0 360	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0020	JQ	0 05	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0015	JQ	0 05	0 001	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0015	JQ	0 05	0 001	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0011	JQ	0 05	0 001	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0009	JQ	0 05	0 001	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0.001	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Falling Creek	BM-2-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0300		0 02	0 014	mg/L
Falling Creek	BM-1-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0299		0 02	0 014	mg/L
Falling Creek	BM-3-SW	11/13/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0296		0 02	0 014	mg/L
Falling Creek	BM-2-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0279		0.02	0 012	mg/L
Falling Creek	BM-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0239		0 02	0 014	mg/L
Falling Creek	BM-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0186	JQ	0 02	0 014	mg/L
Falling Creek	BM-3-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0159	JQ	0 02	0 012	mg/L
Falling Creek	BM-2-SW	11/15/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0.0145	JQ	0 02	0 012	mg/L
Falling Creek	BM-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	TR	0 0128	JQ	0 02	0 012	mg/L
Falling Creek	BM-1-SW	11/10/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	TR	0 0123	JQ	0 02	0.012	mg/L
Falling Creek	BM-1-SW	4/21/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0.0000		0 02	0.014	mg/L
Falling Creek	BM-2-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Falling Creek	BM-3-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0.0000		0 02	0 012	mg/L
Falling Creek	BM-1-SW	4/20/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0.0000		0 02	0 012	mg/L
Falling Creek	BM-1-SW	11/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1,1-Trichloroethane	=	1.1000				µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1,1-Trichloroethane	=	1.0000				µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1,1-Trichloroethane	=	0 6800	JQ	20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	TR	0 4700	JQ	1	0 150	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 330	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0.330	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 330	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000	UJ	1	0 330	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000	UJ	1	0 330	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0.0000		1	0 390	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0.0000		1	0 390	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 390	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1,1-Trichloroethane	ND	0 0000	UJ	1	0 330	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0.0000		1	0 150	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1	0 150	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1,1-Trichloroethane	ND	0 0000		1		µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1,1-Trichloroethane	ND	0 0000		20	0.330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	TR	0 1700	JQ	1	0 160	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethane	ND	0.0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethane	ND	0 0000		0 6		µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethane	ND	0 0000		0 6		µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1-Dichloroethane	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethane	ND	0 0000		0.6		µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1-Dichloroethane	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0.160	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethane	ND	0 0000		1	0 160	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	TR	0 2800	JQ	1	0 240	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0.0000		1	0 370	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,1-Dichloroethene	ND	0.0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethene	ND	0 0000		0 9		µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 240	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1-Dichloroethene	ND	0 0000		20	0.330	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,1-Dichloroethene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,1-Dichloroethene	ND	0 0000		1	0 240	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethene	ND	0 0000		0 9		µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,1-Dichloroethene	ND	0.0000		0 9		µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	TR	0 4200	JQ	1	0 400	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0.390	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UJ	10	1 800	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	1 800	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	1.800	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UL	10	1 800	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UJ	1	0.400	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UL	10	1 800	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UJ	1	0 400	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000	UJ	1	0 400	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	1.800	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0.0000		10	0 650	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 400	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0.0000		1	0.400	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 170	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0 170	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		20	3.300	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		7		µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		7		µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		20	3 300	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		10	0 650	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		1	0.170	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,2,4-Trichlorobenzene	ND	0 0000		7		µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	TR	2 6000	JQ	10	1 100	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	TR	2.4000	JQ	10	1 100	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	TR	1 8000	JQ	10	1 300	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000	UJ	10	0 510	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000	UJ	10	0 510	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		20	3 300	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		20	3 300	µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 029		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	=	0 8400	J	0 009		mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 7940		0.2	0 057	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 6960		0 2	0 099	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 6820		0 2	0 057	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.6710		0.2	0 057	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0.5560		0 2	0 057	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0 5320		0 2	0 057	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.5040		0 2	0 099	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 4940		0 2	0 099	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 4890		0.2	0 099	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0 4270		0 2	0 057	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.3410		0.2	0 099	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3320		0 2	0 099	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0.0000		0 02	0.004	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	TR	0 0029	JQ	0 005	0 003	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0.0000	UL	0 005	0 003	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000	UL	0 005	0 003	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Arsenic	ND	0.0000		0 019		mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 003	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0.0000		0 005	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 003	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 003	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 005	0 004	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 005	0.004	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0 0000		0 002		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0.005	0 004	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0 0000		0 002		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0 0000		0 002		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0489	JQ	0 02	0 003	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0329	JQ	0 02	0 003	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Barium	=	0 0291	JQ	0 002		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0642	JQ	0.2	0 003	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0576	JQ	0.2	0 003	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0.0574	JQ	0 2	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0523	JQ	0.2	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0515	JQ	0.2	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0511	JQ	0 2	0 001	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0507	JQ	0 2	0 003	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0500	JQ	0 2	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0486	JQ	0 002		mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0462	JQ	0 2	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0460				mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0429	JQ	0 02	0 003	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0424		0 04	0 003	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0420				mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0420				mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0419		0 04	0 003	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0412		0 04	0 003	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0409		0 04	0 003	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0.0408		0 04	0 003	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0380	JQ	0 04	0 003	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0341	JQ	0 02	0 003	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Benzene	=	8.1000				µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Benzene	ND	0.0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 370	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 160	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 160	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Benzene	ND	0 0000		1	0 160	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Benzene	ND	0 0000		0 2		µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Benzene	ND	0 0000		20	0.330	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Benzene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	TR	17 0000	JQ	20	10 000	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	20	10 000	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	20	10 000	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	20	10 000	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		20	10 000	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		20	10 000	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	50	3 000	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	50	3 000	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000	UJ	50	3 000	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzoic acid	ND	0 0000	UJ	20	17 000	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzoic acid	ND	0 0000	UJ	20	17 000	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8270C	SW3520C	TOTAL	Benzoic acid	ND	0 0000		50	3 000	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzoic acid	ND	0 0000		27		µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzoic acid	ND	0 0000		27		µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzoic acid	ND	0 0000		27		µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Beryllium	ND	0 0000		0 0028		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Beryllium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Beryllium	ND	0 0000		0.02	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	=	0 0006	JQ	0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000	UL	0 003	0 001	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000	UL	0 003	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Beryllium	ND	0 0000		0.0028		mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000	UJ	0.003	0 001	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 003	0.001	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 003	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Beryllium	ND	0 0000		0 003	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Beryllium	ND	0 0000		0 001		mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Beryllium	ND	0 0000		0 001		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Beryllium	ND	0.0000		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Beryllium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Beryllium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Beryllium	ND	0 0000		0 001		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Calcium	=	6 2800		0 0031		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	5 5700		0 02	0 250	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	4 1400	JQ	0 02	0 250	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	8 6700		5	0.250	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	7 7000				mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	7 2000		5	0 059	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	6 6000				mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	6 4800		0 0031		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	6 4000				mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 2300		5	0 059	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	6 0700		5	0 250	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	5 2400		5	0 250	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	5 0200		5	0 059	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	4 9200	JQ	5	0 059	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	4 8700	JQ	5	0 059	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 6400	JQ	0 02	0 250	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	4 5800		1.1	0 032	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 2100	JQ	0 02	0 250	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	3 6200	JQ	5	0 059	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 5800		1 1	0 032	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 5100		1 1	0 032	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 4600		1 1	0 032	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 4500		1 1	0 032	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 4000		1 1	0 032	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	39.0000		10	5 300	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	30.7000		10	4 900	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	30 0000		10	5 300	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	28 0000		10	5 300	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	27 4000		10	4 900	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	27 0000		10	4 900	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	23 0000		10	5 300	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	21.0000		10	5 300	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	18 1000		10	4 900	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	18 0000		10	5 300	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	16 4000		10	4.900	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	14 6000		10	4 900	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	9 1000	JQ	10	3 000	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	6 4000	JQ	10	3 000	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	5.1000	JQ	10	3 000	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	TR	0 5600	JQ	1	0 350	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0.290	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0.290	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0.0000		1	0 350	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0.0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0.350	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0.0000		1	0.140	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 140	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0.0000		2		µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 140	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 7000	JQ	1	0 300	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 5200	JQ	1	0 300	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 4100	JQ	1	0 300	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0.300	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0 0000		5		µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0.0000		5		µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0 0000		5		µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Chromium	ND	0.0000		0 041		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	=	0 0110				mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 041		mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0.0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	=	3 2000		0.5	0.220	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	2 9000		20	0 170	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	=	2 8000		0.5	0 220	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	=	0 7300		0.5	0 220	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	TR	0 6000	JQ	1	0 310	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	TR	0 4200	JQ	0 5	0 350	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0.5	0 350	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		20	0 170	µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Cobalt	ND	0.0000		0 0066		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0017	JQ	0 03	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0016	JQ	0.03	0 001	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0015	JQ	0 03	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0 0014	JQ	0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0.0012	JQ	0.01	0.001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0.0066		mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Copper	ND	0 0000		0 0058		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0 02	0 004	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0 004	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	=	0 0092	JQ	0 01	0.004	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	=	0 0082	JQ	0 02	0 004	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0.0000		0 0058		mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000		0 01	0 002	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000		0 01	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000		0 01	0.002	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0 0000		0 005		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0 0000		0 005		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0.0000		0 005		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	E360.1	NONE	TOTAL	Dissolved Oxygen	=	10.1000		0.1		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	E360 1	NONE	TOTAL	Dissolved Oxygen	=	9.8000		0.1		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	E360.1	NONE	TOTAL	Dissolved Oxygen	=	9.7000		0.1		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Ethylbenzene	=	1.1000				µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0 420	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Ethylbenzene	ND	0 0000		1	0.420	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 410	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0 120	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Ethylbenzene	ND	0 0000		20	0.330	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Ethylbenzene	ND	0 0000		0.5		µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0 0000		1	0.120	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Ethylbenzene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Ethylbenzene	ND	0.0000		1	0.120	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	38 0000		5	2 000	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	34 0000		5	2 000	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	32 0000	J	5	2 000	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	30 0000		5	2 000	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	25 0000		5	1 000	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	24 0000		5	2 000	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	22 0000		5	2 000	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	18 0000	JQ	33	1 000	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	18.0000	J	5	1 000	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	14 7000	JQ	33	1 000	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	14 3000	JQ	33	1 000	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	14 1000	JQ	33	0 400	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	14 0000	JQ	33	0 400	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	13 8000	JQ	33	0 400	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	12 0000		5	1 000	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	1 5000		0 02	0 088	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Iron	=	1.4500		0 0045		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 8040		0 02	0 088	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	6 3700		0 0045		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	2 3200	JL	0 02	0 088	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 6900		0 2	0 022	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 5800		0 2	0 022	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 5700		0 2	0 022	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 5100		0 2	0 022	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	1 4300		0 02	0 088	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 4200		0.2	0 022	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 4100		0.2	0 022	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 1300		0 2	0 042	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	1 1000				mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 0600		0.2	0 042	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1.0400		0 2	0 042	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 0300		0 2	0 042	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	1 0000				mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 8870		0 2	0 042	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	0 8300				mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 8140		0 2	0 042	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 6290		0 2	0 088	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 4790		0 2	0 088	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 3940		0 2	0 088	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Lead	=	0 0079	J	0 015		mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0013	JQ	0 003	0 001	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0012	JQ	0 003	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000	UL	0 003	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0.0000	UJ	0 003	0.001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0.003	0 003	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0 0000		0 01		mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0.0000		0 01		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0 0000		0 01		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Magnesium	=	2 6600		0 0011		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 9200	JQ	0 02	0 030	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 5800	JQ	0 02	0 030	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	2 8900		0 0011		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	2 3800	JQ	5	0 030	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	2 0400	JQ	5	0 030	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	2 0000				mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 9600	JQ	5	0 030	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1 9000				mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1 9000				mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7900	JQ	5	0 035	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7000	JQ	5	0 035	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7000	JQ	5	0 035	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6700	JQ	5	0 035	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6400	JQ	5	0 035	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 6300	JQ	0 02	0 030	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 5900		0 2	0 005	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 5900	JQ	0 02	0 030	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 4100	JQ	5	0 035	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 4000		0 2	0 005	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 3700		0 2	0 005	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 3000		0 2	0 005	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 3000		0.2	0 005	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 2900		0 2	0 005	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0408		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0175	JQ	0 02	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Manganese	=	0 0044	JQ	0 045		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 2300	J	0 045		mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 1180		0 02	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0.0621		0 02	0 001	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0606		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0598		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0591		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0569		0 015	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0540				mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0494		0 015	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0491		0 015	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0477		0 02	0 001	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0442		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0410				mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0393		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0268		0.015	0 001	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0240		0 015	0 001	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0238		0 02	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0227		0 015	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0202		0 02	0 001	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0160				mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0126	JQ	0 02	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 0031		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	=	0 00007	JQ	0 02	0 000	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Mercury	ND	0 0000		0 0031		mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000	UL	0 001	0 000	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0.001	0 000	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000	UL	0 001	0 000	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0.0000		0 001	0 000	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0.0000	UL	0 001	0 000	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7470	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW7470	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7470	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L

TABLE A-1

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HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Methyl tert-butyl ether	=	15 0000				µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Methyl tert-butyl ether	=	3 0000				µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0 02	0 003	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0 02	0 003	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	TR	0 0071	JQ	0 05	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	=	0.0030	JQ	0 04	0 003	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	TR	0 0017	JQ	0 05	0.001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000	UJ	0 04	0 002	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000	UJ	0 04	0 002	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000		0 04	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000	UJ	0 05	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000		0 04	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000	UJ	0 04	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0 0000		0 04	0 002	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0 0000		0 04	0 003	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0 04	0 003	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0 0000		0 02	0 003	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	=	0 0023	JQ	0 02	0 002	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 00002		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0.02	0 002	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	=	0 0037	JQ	0 1	0 003	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	=	0 0033	JQ	0.1	0 003	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	=	0 0030	JQ	0 1	0 003	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0024	JQ	0 01	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0018	JQ	0 01	0 002	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 00002		mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0.003	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0 003	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0 002	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0.0000		0 018		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Potassium	=	3 7000		0 0078		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	2 2200	JQ	0 02	0 041	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 9500	JQ	0 02	0 041	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	3 5900		0 0078		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	3 4900	JQ	5	0 041	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	3 2700	JQ	5	0 041	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	3 2000				mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	3.1200	JQ	5	0 041	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	3.1000				mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	3 0000				mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 2100	JQ	5	0 011	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2.1100	JQ	5	0 011	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 0700	JQ	5	0 011	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2.0200	JQ	5	0.023	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 0200	JQ	5	0 023	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 9900	JQ	5	0 023	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1.9300	JQ	0 02	0 041	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1.9000	JQ	0 02	0 041	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 6900	JQ	5	0 023	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 6800	JQ	5	0 011	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.6500	JQ	5	0 011	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 6300	JQ	5	0 011	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.5600	JQ	5	0 023	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 4600	JQ	5	0 023	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 19		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0.005	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	TR	0 0028	JQ	0.005	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 001	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UL	0 005	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Selenium	ND	0 0000		0 19		mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0 005	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0 005	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0.0000		0 005	0 005	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0 005	0 001	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0.0000		0 02	0 005	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0 0000		0 001		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0 0000		0 001		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 005	0.005	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0.0000		0 001		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Silver	=	0 0250	J	0 0012		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Silver	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Silver	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000	UL	0 01	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Silver	ND	0 0000		0 0012		mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000	UJ	0 01	0 001	mg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0.0000	UL	0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000	UJ	0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0.001	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000	UJ	0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0.001	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000	UJ	0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Silver	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Silver	ND	0 0000		0 01	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Silver	ND	0 0000		0 004		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Silver	ND	0 0000		0 004		mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Silver	ND	0 0000		0 01	0.002	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Silver	ND	0.0000		0 01	0 002	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Silver	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Silver	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Silver	ND	0 0000		0 004		mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Sodium	=	15 1000		0 0047		mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	11.5000		0 02	0 630	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	7 8600		0 02	0 630	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	14 6000		5	0 630	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	14 3000		0 0047		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	12 5000		5	0 630	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	10 1000		5	0 630	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	9 7600		0 02	0 630	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	8 0500		0 02	0 630	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 7300		5	0 360	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 6900		5	0 360	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 5900		5	0 360	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 3900		5	0 080	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 9100		5	0 360	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 8200		5	0 080	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 7500		5	0 360	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5.7000		5	0 080	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 6800		5	0 360	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 6700		5	0 080	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5.6500		5	0 080	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	5.4000				mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 3400		5	0 080	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	5 3000				mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	5.0000				mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	TR	0 9000	JQ	1	0.330	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0.330	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0.0000		1	0 350	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 150	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0.150	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 150	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	=	1 4000				µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	=	1 3000				µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 4300	JQ	20	0.330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	TR	0.3600	JQ	1	0 230	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0.0000		1	0.350	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0.420	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0.420	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 230	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 230	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 091		mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	TR	0 00196	JQ	0 002	0.002	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Thallium	ND	0.0000		0 091		mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0.0000		0 002	0 002	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0.0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0.0000		0 02	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Toluene	=	1 8000				µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Toluene	ND	0 0000		1	0 380	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Toluene	ND	0 0000		1	0 380	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Toluene	ND	0 0000		1	0 380	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0.0000		1	0.390	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0.0000		1	0.390	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 390	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Toluene	ND	0.0000		20	0.330	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Toluene	ND	0 0000		1		µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 180	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Toluene	ND	0 0000		1	0 180	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Toluene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	=	4 4000				µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	2.3000		20	0 330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	=	1.9000		1	0 140	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	=	1.1000				µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0 8800	JQ	1	0 140	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0.7000	JQ	1	0 420	µg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	TR	0 5200	JQ	1	0 340	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0 5000	JQ	1	0 140	µg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	TR	0 3600	JQ	1	0 340	µg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	ND	0 0000		1	0 340	µg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	ND	0 0000		1	0.340	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000	UL	1	0 420	µg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	ND	0.0000		1	0 340	µg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	ND	0 0000		1	0 340	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000	UL	1	0 420	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000	UL	1	0 420	µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000		1	0 420	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	ND	0 0000		20	0 330	µg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 0012		mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0.0021	JQ	0 05	0 001	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0020	JQ	0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0019	JQ	0 05	0 001	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0019	JQ	0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0017	JQ	0 05	0 001	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0016	JQ	0 01	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0.0015	JQ	0 05	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0014	JQ	0 01	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0014	JQ	0 05	0 001	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0010	JQ	0 01	0 001	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0008	JQ	0 05	0 001	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 0012		mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0.0000		0 007		mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Xylenes, Total	=	7 6000				µg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Xylenes, Total	=	4 8000				µg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 440	µg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 440	µg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0.0000		1	0 440	µg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 440	µg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 440	µg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 440	µg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0.330	µg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0.330	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Xylenes, Total	ND	0 0000		20	0 530	µg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Xylenes, Total	ND	0 0000		20	0 530	µg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW8020	-	TOTAL	Xylenes, Total	ND	0.0000		1		µg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW8260B	SW5030	TOTAL	Xylenes, Total	ND	0 0000		1	0 330	µg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	=	0 0158	JQ	0 02	0 012	mg/L
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	=	0 0125	JQ	0.02	0 012	mg/L
Kingsland Creek	KGC-2-BG	10/12/1997	WS	NS1	SW6010	FLDFLT	FLDFLT	Zinc	ND	0 0000		0 0056		mg/L
Kingsland Creek	KGC-2-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0508		0 02	0 014	mg/L
Kingsland Creek	KGC-3-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0.0492		0 02	0 012	mg/L
Kingsland Creek	KGC-2-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0411		0 02	0 014	mg/L
Kingsland Creek	KGC-2-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0406		0 02	0 012	mg/L
Kingsland Creek	SP-14-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0.0361		0 02	0 014	mg/L
Kingsland Creek	KGC-3-SW	11/14/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0314		0 02	0 014	mg/L
Kingsland Creek	SP-14-SW	4/24/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0258		0 02	0 014	mg/L
Kingsland Creek	KGC-3-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0205		0 02	0 012	mg/L
Kingsland Creek	KGC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0190				mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0160				mg/L
Kingsland Creek	KGC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0160				mg/L
Kingsland Creek	KGC-3-SW	4/23/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0155	JQ	0 02	0 014	mg/L
Kingsland Creek	SP-14-SW	11/27/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0141	JQ	0 02	0 012	mg/L
Kingsland Creek	SP-14-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	KGC-2-SW	11/13/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	KGC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	KGC-2-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	SP-14-SW	4/22/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-3-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
Kingsland Creek	KGC-2-SW	5/16/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	=	0.1900	JQ	20	0 170	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		6		µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 430	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 430	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 430	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	1 600	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		0 3		µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	1 600	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	1 600	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 380	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 380	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 170	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 170	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 380	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 380	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 380	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 170	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	1 600	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0.430	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0.0000		10	0 770	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	1 600	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000	UL	10	1 600	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 430	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1	0 430	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SW3520C	TOTAL	1,4-Dichlorobenzene	ND	0 0000		10	0 770	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	1,4-Dichlorobenzene	ND	0.0000		1	0 380	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		0 3		µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		0.3		µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		6		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,4-Dichlorobenzene	ND	0.0000		6		µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		6		µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	3 300	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0.0000		20	3 300	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000	UL	20	0.770	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0.0000		20	3 300	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000	UL	20	0 770	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 170	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0.0000	UL	20	0 770	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 170	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0.0000	UL	20	0 770	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		0 3		µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 170	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000	UL	20	0 770	µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0.330	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 170	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	1,4-Dichlorobenzene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	TR	1 0000	JQ	10	0.510	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	TR	0 6700	JQ	10	0 510	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000	UJ	10	1 300	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000	UJ	10	1 300	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0 0000		10	0 510	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0 0000		10	1 300	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		20	5 600	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		5		µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		5		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		5		µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Acetone	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Aluminum	=	0 4240		0.2	0 099	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Aluminum	=	0 3110		0.2	0 099	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0.0000		0 02	0 028	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0.02	0.028	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0.0000		0 02	0 028	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000	UJ	0 02	0 028	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0.028	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	4 2700		0 2	0 099	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	2 0100	J	0 02	0 028	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0 6570	JH	0 02	0 028	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 6460		0.2	0 057	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0 6140		0 2	0 057	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.5850		0 2	0 099	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 5240		0 2	0 099	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 4740		0 2	0 099	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3850		0.2	0 057	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0.3400		0.2	0 057	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0 3400		0 2	0.057	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 3380		0.2	0 099	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0.2930		0.2	0.028	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 2780		0.2	0 057	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0 0862	JQ	0 02	0 028	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0 0653	JQ	0 02	0 028	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0 0652	JQ	0.02	0 028	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	ND	0 0000		0 02	0.028	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Aluminum	ND	0 0000		0 11		mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	ND	0 0000		0 02	0 028	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Antimony	ND	0 0000	UL	0 005	0 003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Antimony	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	=	0 0036	J	0 005	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	=	0.0035	JQ	0 02	0 002	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	=	0 0023	J	0 005	0 002	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0.005	0 003	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000	UL	0 005	0 003	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Antimony	ND	0.0000		0 03		mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0.0000		0 005	0 003	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0.005	0 003	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000	UJ	0 005	0 003	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000	UJ	0 005	0 003	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000	UJ	0 005	0 002	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Antimony	ND	0 0000	UJ	0 005	0 003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Antimony	ND	0 0000		0 03		mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0.0000		0.02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Antimony	ND	0 0000		0 03		mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0.002	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Antimony	ND	0 0000		0 03		mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Antimony	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Arsenic	ND	0.0000	UJ	0 005	0 003	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Arsenic	ND	0.0000	UJ	0 005	0 003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0.0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	=	0 0124	J	0 02	0 004	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	=	0 0084		0 02	0 004	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	=	0 0026				mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000	UL	0 005	0 003	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000	UL	0 005	0 003	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0 0000		0 001		mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 005	0 004	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 005	0 004	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 005	0 004	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 002	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0.0000		0 005	0 003	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0.002	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Arsenic	ND	0 0000		0 005	0 003	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0.0000		0 002		mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7060	TOTAL	TOTAL	Arsenic	ND	0 0000		0 002		mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0.0000		0 02	0 004	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Arsenic	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0734	JQ	0 02	0 003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0707	JQ	0 02	0 003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0675	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0675	JQ	0 02	0 003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0662	JQ	0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0633	JQ	0 02	0 003	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0632	JQ	0 02	0 003	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Barium	=	0 0596		0 04	0 003	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0.0505	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Barium	=	0 0466		0 04	0 003	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0 0400	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Barium	=	0.0368	JQ	0 02	0.003	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0866		0 04	0 003	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0825	JH	0 04	0 003	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0.0746	JQ	0.02	0 003	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0711	JQ	0.2	0 003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0696	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0696	JQ	0 02	0 003	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0691	JQ	0.2	0 003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0677	JQ	0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0677	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0649	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0647		0 04	0 003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0639	JQ	0 02	0 003	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0620				mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0618	JQ	0 2	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0610		0 04	0 003	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0595	JQ	0 2	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0589	JQ	0 02	0 003	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0588		0 04	0 003	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0568		0 04	0 003	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0560				mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0555	JQ	0 2	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0550				mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Barium	=	0 0500				mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0497	JQ	0 2	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0492	JQ	0 02	0 003	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0444	JQ	0 02	0 003	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0421	JQ	0 2	0 003	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0214	JQ	0 2	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0136	JQ	0 2	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	TR	0 0510	JQ	0 2	0 048	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0.2	0 160	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0.0000		10	1 200	µg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0,0000		0 2	0 160	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzo(b)fluoranthene	ND	0,0000		10		µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 160	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 096	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1,200	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0,0000	UL	10	1 200	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 048	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 096	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10	0 940	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0.2	0 048	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0,0000		0 2	0 048	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0 0000		0 2	0 096	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000	UL	20	0 940	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10		µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000	UL	20	0 940	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0,0000		20	3 300	µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		10		µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000	UL	20	0 940	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000	UL	20	0 940	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Benzo(b)fluoranthene	ND	0,0000		10		µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		20	3,300	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000	UL	20	0 940	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Benzo(b)fluoranthene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	=	20.0000		2	1 500	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	=	3 3000	JQ	2	1 500	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	0 300	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	2 000	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SM5210B	SM5210B_P	TOTAL	Biochemical Oxygen Demand	ND	0 0000		4	3 000	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	2 000	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	2 000	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	0 300	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	E405 1	METHOD	TOTAL	Biochemical Oxygen Demand	ND	0 0000		2	0 300	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	=	0 0009	JQ	0 02	0 000	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Cadmium	ND	0 0000	UL	0 005	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Cadmium	ND	0.0000	UL	0 005	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0.000	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cadmium	ND	0.0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	=	0 0034	J	0 02	0 000	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	=	0 0004	JQ	0 002	0 000	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	=	0 0003	JQ	0 002	0 000	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	=	0 0003	JQ	0 002	0 000	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000	UL	0 005	0 001	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000	UL	0 005	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cadmium	ND	0 0000		0 005		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cadmium	ND	0 0000		0 005		mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000	UL	0 005	0 001	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 002	0 000	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000		0 002	0 000	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000		0 005	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000		0 005	0 001	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000		0 005	0 001	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0.002	0 000	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0.0000		0.002	0 000	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cadmium	ND	0 0000		0 002	0 000	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 002	0.000	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0.000	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0.02	0 000	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cadmium	ND	0 0000		0 005		mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cadmium	ND	0 0000		0 005		mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cadmium	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	20 4000		0 02	0 250	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	17.7000		0 02	0 250	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	13 0000		0 02	0 250	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Calcium	=	9 2100		1 1	0 032	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Calcium	=	8 0900		1 1	0 032	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	5 7500		0 02	0 250	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	5 3700		0 02	0 250	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	5.1600		0 02	0 250	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	4.9400	JQ	0 02	0 250	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	4 8800	JQ	0 02	0 250	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	4 8700	JQ	0 02	0 250	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Calcium	=	4 4300	JQ	0 02	0 250	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	20.8000		0.02	0 250	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	20 8000		0.02	0 250	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	20 4000		5	0 059	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	14 0000		0 02	0 250	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	8 9900		1.1	0 032	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	8 6000				mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	8 3700		1 1	0 032	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	7 7000				mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	7 6000				mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Calcium	=	7 1000				mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 8200		1 1	0 032	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 8000		5	0 059	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 7200		1 1	0 032	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 5900		5	0 059	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 4200		5	0 059	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 0700		5	0 059	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	5 7100		0 02	0 250	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	5 5300		1.1	0 032	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	5 2500		1.1	0 032	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	5 0300		0 02	0 250	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 9600	JQ	0 02	0 250	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 8800	JQ	0 02	0 250	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 8100	JQ	0.02	0 250	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4.7700	JQ	0 02	0 250	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 7600	JQ	5	0 250	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	4 7200	JQ	5	0 059	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 5400	JQ	0 02	0 250	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 5200	JQ	5	0 250	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	3 4700	JQ	5	0 250	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	55 0000		10	5 300	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	37.0000		10	5 300	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	25.0000		10	5.300	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	16.0000	J	10	5 300	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	13.7000		10	4 900	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	11.7000		10	4 900	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	11.0000		10	5.300	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	9 7000	JQ	10	4 900	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	8 2000	JQ	10	4 900	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	8.2000	JQ	10	4.900	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	5 5000	JQ	10	3 000	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	5.300	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	3 000	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	3 000	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	ND	0 0000		10	4 900	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	TR	0 4200	JQ	1	0 350	µg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	=	0 2000	JQ	20	0.140	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0.0000		1	0 290	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0.140	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0.290	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 140	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 140	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 140	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 140	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 140	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloroform	ND	0 0000		2		µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloroform	ND	0 0000		20	0 140	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 5200	JQ	1	0 300	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 3600	JQ	1	0 300	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 3500	JQ	1	0 300	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0.0000		5		µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0.490	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0.0000		2	0 130	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 490	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000	UJ	2	0 490	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000		2	0 130	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000	UJ	2	0 490	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0 0000	UJ	2	0 490	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000	UL	20	0 330	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0 0000		5		µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0.0000		5		µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0.0000		1		µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000	UL	20	0 130	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000	UL	20	0 130	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000	UL	20	0.130	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Chloromethane	ND	0 0000		5		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Chloromethane	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Chromium	ND	0.0000		0 01	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Chromium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	=	0 0026	JQ	0 02	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0.01	0 002	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0.01	0 001	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Chromium	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0.01	0 001	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Chromium	ND	0 0000		0 01		mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Chromium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	TR	0 1200		0.2	0 100	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	TR	0 0700	JQ	0 2	0 042	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	TR	0 0560	JQ	0.2	0 042	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Chrysene	ND	0 0000		3		µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0.0000		0.2	0 100	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 100	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0.0000		0.2	0.100	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 075	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0.2	0 042	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	1 400	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 075	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000	UL	10	1 400	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 075	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0 0000		0 2	0 042	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Chrysene	ND	0 0000		3		µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000	UL	20	0 750	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000	UL	20	0 750	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000	UL	20	0 750	µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0.0000	UL	20	0 750	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Chrysene	ND	0 0000		3		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Chrysene	ND	0 0000		3		µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000	UL	20	0 750	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Chrysene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	45.0000	J	20	0 280	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	11.0000		20	0 220	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	1 4000		20	0 170	µg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	TR	0 9200	JQ	1	0 310	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 9000		20	0 220	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	TR	0 8700	JQ	1	0 310	µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 7200		20	0 170	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	=	0 7100		0.5	0 350	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	TR	0 6400	JQ	1	0 310	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	TR	0 6200	JQ	1	0 310	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	=	0 5300		0.5	0 350	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 5200		20	0 220	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 4300	JQ	20	0 170	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 4200	JQ	20	0 220	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	TR	0 3800	JQ	0.5	0 220	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	=	0 2800	JQ	20	0 170	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0.0000		0 5	0 350	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1	0 310	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 350	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 220	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0.5	0 350	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		0 5	0 220	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		20	0 220	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0.0000		1		µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	cis-1,2-Dichloroethene	ND	0 0000		20	0.170	µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0033	JQ	0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0032	JQ	0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0026	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Cobalt	TR	0 0023	JQ	0 01	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Cobalt	TR	0 0021	JQ	0 01	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0020	JQ	0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0015	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	=	0 0014	JQ	0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0 0034	JQ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0 0033	JQ	0 01	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0032	JQ	0 02	0 001	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0031	JQ	0 03	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0030	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0030	JQ	0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0027	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0 0026	JQ	0 01	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0.0026	JQ	0.03	0.001	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0025	JQ	0 03	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0.0024	JQ	0 01	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0020	JQ	0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0018	JQ	0 03	0 001	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 0016	JQ	0 03	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	=	0 0014	JQ	0 02	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 03	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0.02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Cobalt	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Copper	ND	0 0000	UJ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Copper	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0.004	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0 02	0 004	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0.004	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0.02	0 004	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Copper	ND	0.0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	=	0 1170		0 02	0 004	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0.0239	J	0 01	0 002	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	=	0 0159		0 01	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	=	0 0119		0 02	0.004	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0 0095	JQ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0.0087	JQ	0 01	0 002	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0 0052	JQ	0 01	0 001	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0 0021	JQ	0 01	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0 0000		0 005		mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0 0000		0 005		mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0.0000		0 01	0 002	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 01	0 004	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0.02	0.004	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0.0000		0 005		mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0.004	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0 0000		0 02	0 004	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Copper	ND	0.0000		0 005		mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	=	0 2500	JQ	0 2	0 090	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	=	0 2100	JQ	0 2	0 046	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	TR	0.1800	JQ	0 2	0 046	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0.2	0 090	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1 000	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Fluoranthene	ND	0 0000		4		µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1.000	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1.000	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 090	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0.090	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	0 810	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	0 810	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0.0000		0 2	0.100	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 046	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0.0000		10	0 810	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0 100	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C.	TOTAL	Fluoranthene	ND	0 0000		10	1 000	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000	UL	10	1 000	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0 0000		10	1 000	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0 0000		0 2	0.100	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	0 810	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0.0000		20	0 810	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	0.810	µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Fluoranthene	ND	0 0000		4		µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0 0000		20	0 810	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Fluoranthene	ND	0.0000		20	0 810	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Fluoranthene	ND	0 0000		4		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Fluoranthene	ND	0 0000		4		µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	72 0000		5	2 000	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	38 0000		5	2 000	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	32.7000	JQ	33	1.000	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	30 5000	JQ	33	1 000	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	24 8000	JQ	33	1 000	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	24 0000		5	2.000	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	23 0000		5	2 000	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	22 4000	JQ	33	0 400	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	20 3000	JQ	33	0 400	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	20 0000		5	2.000	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	20.0000		5	2 000	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	19 7000	JQ	33	0 400	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	8.0000		5	1 000	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	4 0000	JQ	5	1.000	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	4 0000	JQ	5	1 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 6730		0 02	0 088	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 5700		0 02	0 088	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 3630		0 02	0 088	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 3440		0 02	0 088	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Iron	=	0 3240		0.2	0 022	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Iron	=	0.2010		0 2	0 022	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	=	0 1070	JQ	0 02	0 088	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	ND	0 0000		0 02	0 088	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	ND	0 0000		0 02	0 088	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	ND	0 0000		0 02	0 088	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	ND	0 0000		0 02	0 088	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Iron	ND	0.0000		0 02	0 088	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	22 8000	J	0 02	0 088	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	7 6800		0 02	0 088	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	3 8700		0 2	0 022	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 6800		0 2	0 022	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 5100		0 2	0 022	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	1 4800		0 02	0 088	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1.1700	J	0 2	0 042	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 1300		0 2	0 022	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 7850		0 2	0 042	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 7820		0.2	0 042	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 7160		0 2	0 022	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.7070		0.2	0 042	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 6970		0 02	0 088	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 6910		0 02	0 088	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 5620		0.2	0 042	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 5450		0.2	0.088	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0.5440		0.2	0 042	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 5060		0.02	0.088	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	0 4900				mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0.3860		0 02	0 088	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 3370		0 02	0 088	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	0.3300				mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 3280		0 02	0 088	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	0 3200				mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 2440		0 2	0 088	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Iron	=	0 2400				mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 1830	JQ	0 2	0 088	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 1750	JQ	0 02	0 088	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Lead	TR	0 0026	JQ	0 003	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Lead	ND	0 0000	UJ	0 003	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0.02	0 003	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0.003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0.02	0 003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	=	0 0358	J	0.02	0.003	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0137		0 003	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0119	JH	0 003	0 001	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0077	J	0 003	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0040		0 003	0 002	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0039		0 003	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0032		0 003	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	=	0 0032		0 02	0 003	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0023	JQ	0 003	0 002	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0020	JQ	0 003	0 001	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0020	JQ	0 003	0.002	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0014	JQ	0 003	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0 003	0 002	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0 0000		0.003	0 002	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 003	0 003	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0.0000		0 01		mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0.02	0 003	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7421	TOTAL	TOTAL	Lead	ND	0 0000		0 01		mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	2 2900	JQ	0 02	0 030	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Magnesium	=	2.2200		0 2	0 005	mg/L

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HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	2 2000	JQ	0 02	0 030	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Magnesium	=	2 0000		0 2	0 005	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 8000	JQ	0 02	0 030	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6400	JQ	0 02	0 030	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6300	JQ	0 02	0 030	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6300	JQ	0 02	0 030	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6200	JQ	0 02	0 030	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6200	JQ	0 02	0 030	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 6200	JQ	0 02	0 030	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Magnesium	=	1 5400	JQ	0 02	0 030	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	3 6200	JQ	5	0 035	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	2.4900		0.2	0 005	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	2 4800	JQ	0 02	0 030	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	2 3700	JQ	0 02	0 030	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	2.3300		0.2	0.005	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	2 2500	JQ	0 02	0 030	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1 9000				mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1 9000				mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1 9000				mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Magnesium	=	1.9000				mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 8800		0 2	0 005	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7800	JQ	5	0 035	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7100	JQ	5	0 035	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7100	JQ	5	0 035	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 6700	JQ	0 02	0 030	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 6600	JQ	5	0 030	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 6300	JQ	5	0 030	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 6300	JQ	0 02	0 030	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 6000		0 2	0 005	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 5900	JQ	0 02	0 030	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 5900	JQ	0 02	0 030	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 5800		0 2	0 005	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 5700	JQ	0 02	0 030	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 5600	JQ	0 02	0 030	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1.5300	JQ	0 02	0 030	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1 4500	JQ	5	0 030	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 3700		0.2	0 005	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 2900	JQ	5	0 035	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	0 7760	JQ	5	0 035	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0.2060		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 1570		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Manganese	=	0 1380		0 015	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0991		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0879		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0759		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Manganese	=	0 0752		0 015	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0639		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0.0615		0 02	0 001	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0.0439		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0337		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Manganese	=	0 0270		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 2610	J	0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 2190	JH	0 015	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 2180		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 1200	J	0 015	0 001	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 1120		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0929		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0921		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0873		0 015	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0815		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0760		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0750		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0712		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0694		0 015	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0670				mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0660				mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0639		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0631		0 02	0 001	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0628		0 015	0 001	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0532		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0510				mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0509		0 02	0 001	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0490		0 015	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0478		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0451		0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0435		0 02	0.001	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0197	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0136	JQ	0 02	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Manganese	=	0 0130				mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0076	JQ	0 02	0.001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0.0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0.0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0.0000		0 02	0 000	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW7470A	FLDFLT	FLDFLT	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	=	0 0001	JQ	0 001	0 000	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0.001	0 000	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW7470A	SW7470A_DIC	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000	UL	0 001	0 000	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000	UL	0 001	0 000	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0.0000	UL	0 001	0 000	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW7470A	SW7470A	TOTAL	Mercury	ND	0 0000		0 001	0 000	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0.0000		0 02	0 000	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0.0000		0.02	0 000	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW7470A	TOTAL	TOTAL	Mercury	ND	0 0000		0 02	0 000	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Mercury	ND	0 0000		0 0002		mg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methyl tert-butyl ether	=	0 6000	JQ			µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		0 6		µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		0 6		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		0.6		µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		0 6		µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methyl tert-butyl ether	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Methylene Chloride	TR	1 0000		1	0.300	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Methylene Chloride	TR	0 3500	JQ	1	0 300	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Methylene Chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methylene chloride	ND	0 0000		5		µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Methylene Chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Methylene Chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 340	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 290	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 340	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Methylene chloride	ND	0 0000		1	0 340	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0 0000		20	0 340	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methylene chloride	ND	0 0000		5		µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0 0000		20	0 340	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000	UJ	1		µg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.330	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		1		µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.340	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methylene chloride	ND	0.0000		5		µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.550	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.340	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.330	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.340	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.330	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Methylene chloride	ND	0.0000		5		µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.330	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000		20	0.330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000	UJ	1		µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000	UJ	1		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Methylene chloride	ND	0.0000	UJ	1		µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	=	0.0033	JQ	0.02	0.003	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	TR	0.0014	JQ	0.05	0.001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0.001	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0.001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0.001	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.04	0.002	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000		0.04	0.002	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.04	0.003	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.04	0.003	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0.001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000		0.04	0.002	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.04	0.002	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.05	0.001	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000	UJ	0.04	0.002	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.04	0.003	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Molybdenum	ND	0.0000		0.04	0.002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0.02	0.003	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0.0000		0 02	0 003	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Molybdenum	ND	0 0000		0 02	0 003	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	TR	0 4000	JQ	1	0 220	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 150	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	1 800	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0.0000		10	1.800	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0 0000		0.2	0 150	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0 0000		0.2	0 150	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	ND	0 0000	UJ	1	0 220	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	ND	0 0000	UJ	1	0 220	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0.0000		0.2	0 150	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0 0000	UJ	0 2	0 150	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 150	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	1.800	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Naphthalene	ND	0 0000		3		µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	1 800	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000	UL	10	1 800	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 069	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	1 800	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 420	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000	UJ	1	0 420	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 420	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Naphthalene	ND	0 0000		10	0 750	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 420	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0 2	0 069	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0.0000	UJ	1	0 420	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Naphthalene	ND	0 0000		0.2	0 069	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000	UJ	1	0 420	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Naphthalene	ND	0 0000		1	0 220	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000	UJ	20	0.220	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Naphthalene	ND	0.0000		3		µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Naphthalene	ND	0 0000		3		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	0 750	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Naphthalene	ND	0 0000		3		µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	0 750	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	0 750	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000	UJ	20	0 220	µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000	UJ	20	0 220	µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000	UJ	20	0 220	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	0 750	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000	UJ	20	0 220	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Naphthalene	ND	0 0000		20	0 750	µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Naphthalene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Nickel	ND	0.0000	UJ	0 01	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Nickel	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0.002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0046	JQ	0 01	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	=	0 0045	JQ	0 02	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0042	JQ	0 01	0 002	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0021	JQ	0 01	0 002	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 1	0 002	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0.0000		0 1	0 003	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0.1	0 002	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 1	0 003	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0.003	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0 01	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0 003	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0 0000		0.1	0 003	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0.1	0 002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Nickel	ND	0 0000		0 018		mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	TR	0 1400	JQ	0 2	0 140	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	TR	0 0370	JQ	0 2	0 036	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 140	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Phenanthrene	ND	0 0000		4		µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 140	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 140	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 140	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0.036	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0.2	0 075	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0.0000		0.2	0 075	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000	UL	10	1 200	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 036	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0.0000		0 2	0 036	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	1 200	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0 0000		0 2	0 075	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0.0000		10	0.820	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	0 820	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0 0000		10	0 820	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000	UL	20	0 820	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000	UL	20	0 820	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Phenanthrene	ND	0 0000		4		µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000	UL	20	0 820	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000	UL	20	0 820	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Phenanthrene	ND	0 0000		4		µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000	UL	20	0 820	µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Phenanthrene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Phenanthrene	ND	0 0000		4		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	4 1500	JQ	0 02	0 041	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	3 2500	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	2.4800	JQ	0 02	0 041	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Potassium	TR	2 3600	JQ	5	0 011	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Potassium	TR	2.2600	JQ	5	0 011	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1.8900	JQ	0 02	0 041	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 6100	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 6000	JQ	0 02	0 041	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 3900	JQ	0 02	0 041	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 3800	JQ	0 02	0 041	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 3700	JQ	0 02	0 041	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Potassium	=	1 3500	JQ	0 02	0 041	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	4 2500	JQ	0 02	0 041	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	3.3800	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	3 3200	JQ	0 02	0 041	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	3 0100	JQ	5	0 023	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 8300	JQ	5	0 011	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	2 4400	JQ	5	0 041	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 3700	JQ	5	0 011	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 3100	JQ	5	0 011	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 2100	JQ	5	0 011	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	2 2000				mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2 0900	JQ	5	0 023	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	2 0400	JQ	5	0 041	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	2 0000				mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	2.0000				mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1.9200	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Potassium	=	1.9000				mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 8800	JQ	5	0 023	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 8400	JQ	5	0 011	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 7800	JQ	5	0 011	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 7300	JQ	5	0 023	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 6800	JQ	5	0 023	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 6700	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 6500	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	1 6000	JQ	5	0 041	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 3800	JQ	5	0 023	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 3500	JQ	0 02	0 041	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 3300	JQ	0 02	0 041	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 3000	JQ	0 02	0 041	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	=	1 2800	JQ	0 02	0 041	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	=	0 3500		0 2	0 120	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	=	0 2300		0.2	0 048	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	TR	0 1900	JQ	0 2	0 048	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 120	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0.0000		0 2	0.120	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Pyrene	ND	0 0000		3		µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 120	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0.2	0 120	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0 0000		0.2	0 120	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0.2	0 048	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000	UJ	10	1 100	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0.0000		0 2	0 048	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000	UJ	10	1.100	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 048	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0.0000		0 2	0 038	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 038	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0 0000		0 2	0 038	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000	UL	10	1 300	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000		10	1 300	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0.0000		10	1 300	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0 0000	UJ	10	1 100	µg/L
No Name Creek	NNC-1-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Pyrene	ND	0 0000		3		µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000	UL	20	1 100	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000	UL	20	1 100	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Pyrene	ND	0 0000		3		µg/L
No Name Creek	NNC-3-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000		20	3 300	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8270	-	TOTAL	Pyrene	ND	0 0000		3		µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0.0000		20	3 300	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0.0000	UL	20	1.100	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0.0000	UL	20	1 100	µg/L
No Name Creek	NNC-5-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-4-SW-0501	5/16/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000		20	3.300	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8270C	-	TOTAL	Pyrene	ND	0 0000	UL	20	1.100	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Selenium	TR	0 0024	JQ	0 005	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Selenium	TR	0 0017	JQ	0 005	0 002	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0.005	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Selenium	ND	0.0000		0 02	0 005	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	=	0 0011				mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0.0000		0 005	0.001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0 0000	M2	0.001		mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 001	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0.005	0 005	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0 005	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0.005	0 001	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000	UJ	0 005	0 001	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0 0000		0 005	0 005	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0 0000	M2	0 001		mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0 0000		0 02	0 005	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7740	TOTAL	TOTAL	Selenium	ND	0 0000	M2	0 001		mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	8 1100		0 02	0 630	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	8 1100		0 02	0 630	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	7 8400		0.02	0 630	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Sodium	=	7 0500		5	0 080	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Sodium	=	6.9400		5	0 080	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6.4400		0 02	0 630	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6 3900		0 02	0 630	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6 3700		0 02	0 630	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6 1200		0 02	0 630	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6 0800		0 02	0 630	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	6 0400		0 02	0 630	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Sodium	=	5.9500		0 02	0 630	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	8 9500		5	0.360	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	8 5200		0 02	0 630	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	8 3900		0 02	0 630	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	8 2100		0 02	0.630	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	7 1000		5	0 630	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	7.0600		5	0 630	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	6 6000				mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 5200		5	0 080	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	6 4000				mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 3400		5	0 630	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 2900		5	0 080	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 2900		0 02	0 630	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 2300		0 02	0 630	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	6.2000				mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 1800		0 02	0 630	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 1400	J	5	0 080	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6.1300		5	0 360	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6.1100		0 02	0 630	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Sodium	=	6 1000				mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 0200		0 02	0 630	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	5 9700		0.02	0 630	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	5 9000		0 02	0 630	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 7000		5	0 360	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 6100		5	0.080	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 5600		5	0 360	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5.3500		5	0.080	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	TR	4 0100	JQ	5	0 080	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	1.6000	JQ	5	0 360	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	0 7640	JQ	5	0 360	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	=	120 0000		10	3 300	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	=	89 0000		10	3.300	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	=	6.1000		1	0 330	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Styrene	ND	0 0000		1	0 330	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 150	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0.150	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Styrene	ND	0 0000		1	0 150	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		1		µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0.0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0.0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0.0000		1		µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Styrene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	2 1000		20	0 230	µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	1 6000		20	0 330	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	=	1 4000		1	0 350	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	TR	1 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	TR	0 9900	JQ	1	0 350	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 9800	JQ	20	0 230	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	TR	0 9500	JQ	1	0 420	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	TR	0 8300	JQ	1	0 230	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 7900	JQ	20	0 230	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 7900	JQ	20	0 330	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	TR	0 6800	JQ	1	0 420	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	TR	0 5400	JQ	1	0 350	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 5400	JQ	20	0 330	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	TR	0 4700	JQ	1	0 420	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	=	0 4500	JQ			µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	ND	0.0000		1		µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0.0000		1	0 420	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 230	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 230	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Tetrachloroethene	ND	0 0000		1	0 350	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Tetrachloroethene	ND	0 0000		1	0 420	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 230	µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 230	µg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		20	0 550	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Tetrachloroethene	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	=	0 0020	UJ	0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	=	0 0019	JH	0 02	0 002	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW7841	SW3005A	FLDFLT	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW7841	SW3005A	FLDFLT	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000	UJ	0 02	0 002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0.0000	UJ	0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0.002	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW7841	FLDFLT	FLDFLT	Thallium	ND	0 0000	UJ	0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	=	0 0020	JH	0 02	0 002	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	=	0 0020	UJ	0 02	0 002	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	=	0.0017	JH	0 02	0 002	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000		0 002	0 002	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 002	0.002	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0.002	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0 0000	UL	0 002	0 002	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW7841	SW3005A	TOTAL	Thallium	ND	0 0000	UJ	0 002	0 002	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW7841	SW3020	TOTAL	Thallium	ND	0.0000		0 002	0.002	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0.0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000	UJ	0 02	0 002	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 003		mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0.0000		0 003		mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000		0 02	0 002	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW7841	TOTAL	TOTAL	Thallium	ND	0 0000	UJ	0 02	0 002	mg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	21 0000		20	0 550	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	4 6000		20	0 140	µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	4 1000		20	0 330	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	=	4 0000		1	0 420	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	=	4.0000		1	0 340	µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	=	3 2000				µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	=	3 1000		1	0 340	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	=	2 9000		1	0 340	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	=	2 7000		1	0 420	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	2 6000		20	0 140	µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	2 3000		20	0 330	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	2 1000		20	0 140	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	=	2 1000				µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	=	2.1000				µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	=	2 0000		1	0 340	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	=	2 0000		1	0 140	µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1.8000		20	0 140	µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1.7500				µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1 5000		20	0 330	µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1 3000		20	0 330	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1 0100				µg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	1.0100				µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	0 7800	JQ			µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0 7400	JQ	1	0 140	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0 5600	JL	1	0 420	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	0 4900	JQ			µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	TR	0 4400	JQ	1	0 420	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	TR	0 4400	JQ	1	0 340	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	0.3900	JQ	20	0 330	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Trichloroethene	=	0 2600	JQ	20	0 140	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Trichloroethene	ND	0 0000		0 6		µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Trichloroethene	ND	0 0000		1	0 340	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000	UL	1	0 420	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000	UL	1	0 420	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Trichloroethene	ND	0 0000		1	0 140	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Vanadium	ND	0.0000	UJ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Vanadium	ND	0 0000	UJ	0 01	0 001	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0.001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0072	JQ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0071	JQ	0 01	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	=	0 0046	JQ	0 02	0 001	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0026	JQ	0 05	0 001	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	=	0 0021	JQ	0 02	0 001	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0.0018	JQ	0 05	0 001	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0015	JQ	0.05	0 001	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0012	JQ	0 05	0 001	mg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0012	JQ	0.01	0 001	mg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 0010	JQ	0 01	0 001	mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0008	JQ	0 05	0 001	mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0008	JQ	0 05	0 001	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0 0000		0 01	0 001	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 05	0 001	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Vanadium	ND	0 0000		0 007		mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L

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SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0 0000		0 02	0 001	mg/L
No Name Creek	NNC-2-SW-0501	5/16/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	=	6 1000	J	20	0 550	µg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	=	4 4000		20	0 150	µg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Vinyl chloride	ND	0 0000		5		µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 360	µg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0.360	µg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 360	µg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 360	µg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 150	µg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 360	µg/L
No Name Creek	NNC-2-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-3-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	4/21/2004	WS	NS1	SW8260B	SW5030B	TOTAL	Vinyl chloride	ND	0 0000		1	0 300	µg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 150	µg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 150	µg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW8260B	SW5030	TOTAL	Vinyl chloride	ND	0 0000		2	0 360	µg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0.0000		20	0 330	µg/L
No Name Creek	NNC-5-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		1		µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Vinyl chloride	ND	0.0000		5		µg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0.0000		20	0 330	µg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		20	0.150	µg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0.0000		20	0 150	µg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Vinyl chloride	ND	0 0000		5		µg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW8260	-	TOTAL	Vinyl chloride	ND	0.0000		5		µg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000	UL	20	0 330	µg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-2-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		20	0 150	µg/L
No Name Creek	NNC-3-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		1		µg/L
No Name Creek	NNC-1-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		1		µg/L
No Name Creek	NNC-4-SW-1001	10/31/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		1		µg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW8260B	-	TOTAL	Vinyl chloride	ND	0 0000		20	0 330	µg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Zinc	=	0 1020	J	0 02	0 012	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	=	0 0160	JQ	0 02	0 012	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	=	0 0147	JQ	0 02	0 012	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	=	0 0127	JQ	0 02	0 012	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	FLDFLT	Zinc	ND	0 0000		0 02	0 012	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	ND	0 0000		0 02	0 012	mg/L

TABLE A-1

SURFACE WATER RISK ASSESSMENT DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	ND	0.0000		0 02	0 012	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	FLDFLT	FLDFLT	Zinc	ND	0 0000		0 02	0 012	mg/L
No Name Creek	NNC-3-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 2240	J	0 02	0 014	mg/L
No Name Creek	NNC-3-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0.1120	J	0 02	0 012	mg/L
No Name Creek	NNC-2-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0741	J	0 02	0 012	mg/L
No Name Creek	NNC-2-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0487		0 02	0 014	mg/L
No Name Creek	NNC-4-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0473		0 02	0 014	mg/L
No Name Creek	NNC-2-SW	11/12/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0.0472		0 02	0 012	mg/L
No Name Creek	NNC-4-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0452		0 02	0 012	mg/L
No Name Creek	NNC-1-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0448		0 02	0.012	mg/L
No Name Creek	NNC-3-SW	11/12/2002	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0.0420		0 02	0 014	mg/L
No Name Creek	NNC-4-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0340				mg/L
No Name Creek	NNC-4-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0327		0 02	0 014	mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0290				mg/L
No Name Creek	NNC-3-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0280				mg/L
No Name Creek	NNC-2-SW	4/22/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0261		0 02	0 014	mg/L
No Name Creek	NNC-1-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0239		0 02	0 012	mg/L
No Name Creek	NNC-4-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0219		0 02	0 012	mg/L
No Name Creek	NNC-4-SW	11/11/2003	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0214		0 02	0 012	mg/L
No Name Creek	NNC-3-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0179	JQ	0 02	0 012	mg/L
No Name Creek	NNC-2-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0163	JQ	0 02	0 012	mg/L
No Name Creek	NNC-2-SW	9/30/1992	WS	NS1	SW6010	TOTAL	TOTAL	Zinc	=	0 0160				mg/L
No Name Creek	NNC-3-SW	11/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0148	JQ	0 02	0 012	mg/L
No Name Creek	NNC-5-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0131	JQ	0 02	0 012	mg/L
No Name Creek	NNC-4-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0128	JQ	0 02	0.012	mg/L
No Name Creek	NNC-3-SW-0701	7/20/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0128	JQ	0 02	0 012	mg/L
No Name Creek	NNC-5-SW-0501	5/14/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0123	JQ	0 02	0 012	mg/L
No Name Creek	NNC-2-SW	11/13/2001	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	ND	0 0000		0 02	0 012	mg/L

PREPARED/DATE NTG 12/23/04
CHECKED/DATE DAJ 1/4/05

TABLE A-2

BM-4 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	TR	2.7		10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0		10	0 51	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0	UJ	10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0	UJ	10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0.565		0 2	0 057	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Aluminum	=	0 376		0.2	0 028	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 337		0.2	0 0988	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 291		0 2	0 057	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0482	JQ	0 2	0 003	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 043	JQ	0 2	0 00094	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0.0338	JQ	0 2	0 00094	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 033	JQ	0.04	0 00276	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0267	JQ	0 04	0 00276	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	=	0 24		0 2	0 039	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0		10	0 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0	UL	0 2	0 034	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0		0 2	0 13	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)anthracene	ND	0		0 2	0 13	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)anthracene	ND	0		0 2	0 034	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)anthracene	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)pyrene	=	0 36		0 2	0 043	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)pyrene	ND	0		10	2 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)pyrene	ND	0		10	2 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(a)pyrene	ND	0		10	0 73	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)pyrene	ND	0		0 2	0 19	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)pyrene	ND	0		0 2	0 049	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(a)pyrene	ND	0		0 2	0 19	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(a)pyrene	ND	0	UL	0 2	0.049	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	=	0.64		0 2	0 096	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0		10	1 2	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0		10	0 94	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0		0 2	0 16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0		0 2	0 048	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(b)fluoranthene	ND	0		10	1 2	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(b)fluoranthene	ND	0	UL	0 2	0 048	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(b)fluoranthene	ND	0		0 2	0 16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	=	0 32		0.2	0 05	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0		10	0 85	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0		10	1.9	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0		0 2	0 15	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(ghi)perylene	ND	0		10	1 9	µg/L

TABLE A-2

BM-4 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(ghi)perylene	ND	0		0 2	0 014	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(ghi)perylene	ND	0		0 2	0 15	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(k)fluoranthene	TR	0 17	JQ	0 2	0 043	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(k)fluoranthene	ND	0		0 2	0 043	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(k)fluoranthene	ND	0		0 2	0 16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Benzo(k)fluoranthene	ND	0	UL	0 2	0 043	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(k)fluoranthene	ND	0		10	1 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(k)fluoranthene	ND	0		10	0 84	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Benzo(k)fluoranthene	ND	0		10	1 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Benzo(k)fluoranthene	ND	0		0.2	0 16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	bis(2-Ethylhexyl)phthalate	TR	3.7	JQ	10	2 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	bis(2-Ethylhexyl)phthalate	ND	0		10	2.7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	bis(2-Ethylhexyl)phthalate	ND	0		10	2 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	bis(2-Ethylhexyl)phthalate	ND	0		10	2 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	bis(2-Ethylhexyl)phthalate	ND	0	UL	10	2 7	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	38.5		5	0.25	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	10.6		5	0 059	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	7 14		1 1	0 0318	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	6 62		1 1	0 0318	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 22		5	0 059	mg/L
Falling Creek	BM-4-SW	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	28		10	5 3	mg/L
Falling Creek	BM-4-SW	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	16.7		10	4 9	mg/L
Falling Creek	BM-4-SW	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	16 2		10	3	mg/L
Falling Creek	BM-4-SW	WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	14		10	5 3	mg/L
Falling Creek	BM-4-SW	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	7.5	JQ	10	4 9	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	TR	0 54	JQ	1	0 35	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Chloroform	ND	0		1	0 35	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030B	TOTAL	Chloroform	ND	0		1	0 29	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0.47	JQ	1	0 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0	UJ	2	0 49	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0		2	0 13	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0		2	0 49	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0		1	0.3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	=	0 44		0 2	0 075	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0	UL	0 2	0 042	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0		10	0 75	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0		0 2	0.1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0		10	1 4	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Chrysene	ND	0		10	1 4	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Chrysene	ND	0		0 2	0 042	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Chrysene	ND	0		0 2	0.1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0 001	JQ	0 03	0 00074	mg/L

TABLE A-2

BM-4 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0		0.03	0 00074	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0	UJ	0.01	0 00124	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0		0 01	0 00124	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0		0 03	0 0013	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	TR	0 0034	JQ	0 01	0 00112	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Copper	ND	0	UL	0 01	0 0017	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Copper	ND	0		0 01	0 0042	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	di-n-octyl phthalate	TR	1.7	JQ	10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	di-n-octyl phthalate	ND	0		10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	di-n-octyl phthalate	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	di-n-octyl phthalate	ND	0		10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	di-n-octyl phthalate	ND	0	UL	10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	=	0.7		0 2	0 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0		0 2	0.046	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Fluoranthene	ND	0	UL	0 2	0 046	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0		0 2	0 09	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Fluoranthene	ND	0		0 2	0 09	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0		10	1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0		10	1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Fluoranthene	ND	0		10	0.81	µg/L
Falling Creek	BM-4-SW	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	110		5	1	mg/L
Falling Creek	BM-4-SW	WS	NS1	E130.2	NONE	TOTAL	Hardness as CaCO3	=	38	J	5	2	mg/L
Falling Creek	BM-4-SW	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	25.3	JQ	33	1	mg/L
Falling Creek	BM-4-SW	WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	23 5	JQ	33	0 4	mg/L
Falling Creek	BM-4-SW	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	22		5	2	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	=	0 28		0 2	0 072	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	TR	0 052	JL	0 2	0.04	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		0 2	0.04	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		0 2	0 16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		0.2	0.16	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Indeno(1,2,3-cd)pyrene	ND	0		10	0 63	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 997		0.2	0 0218	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 604		0 2	0 0218	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 545		0 2	0 042	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 482		0 2	0 042	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 416		0 2	0 088	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	=	0 0028	JQ	0 003	0 0025	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 00152	JQ	0 003	0 00116	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	TR	0 0014	JQ	0 003	0 00116	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0		0.003	0 0016	mg/L

TABLE A-2

BM-4 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0		0 003	0 0016	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	6 13		5	0 03	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	2 13	JQ	5	0.035	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.82		0 2	0 00472	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 75	JQ	5	0 035	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1 7		0 2	0 00472	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0501		0 015	0 00104	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0309		0 02	0 00068	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0184		0 015	0 00104	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0169	JQ	0 02	0 00068	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0145	JQ	0 02	0 0009	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 00164	JQ	0 01	0 00156	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0		0 1	0 0029	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0		0 01	0 00156	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0		0 1	0 0029	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0		0 1	0 0022	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	=	0 23		0 2	0 075	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0		10	0 82	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0		0 2	0.14	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Phenanthrene	ND	0		0.2	0.14	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0	UL	0 2	0 036	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Phenanthrene	ND	0		0 2	0.036	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0		10	1 2	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Phenanthrene	ND	0		10	1 2	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	6 58		5	0 041	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2.35	JQ	5	0.023	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	2.31	JQ	5	0 0108	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 7		5	0 0108	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 39	JQ	5	0 023	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	=	2 1	JQ	10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	=	0.6		0 2	0 038	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0		10	1 3	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0	UL	0 2	0 048	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SIM	TOTAL	Pyrene	ND	0		0 2	0 048	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C	TOTAL	Pyrene	ND	0		10	1 1	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0		0 2	0 12	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW8270C	SW3520C-SIM	TOTAL	Pyrene	ND	0		0 2	0 12	µg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	TR	0 00148	JQ	0 005	0 00148	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0		0 005	0.0045	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0		0.005	0 0047	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0		0 005	0 00148	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0		0.005	0 0047	mg/L

TABLE A-2

BM-4 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	41 5		5	0.63	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	7 03		5	0 36	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6.21		5	0.08	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 96		5	0 36	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 93		5	0 08	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0.0014	JQ	0 01	0 00096	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	=	0 0013	JQ	0 05	0 00082	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0012	JQ	0 05	0 00067	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0.001	JQ	0 01	0 00096	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	ND	0		0 05	0 00067	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	=	0 0687		0 02	0 012	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0529		0 02	0 014	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	TR	0 0183	JQ	0 02	0 012	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 017	JQ	0 02	0 014	mg/L
Falling Creek	BM-4-SW	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	TR	0 015	JQ	0 02	0 012	mg/L

Notes: (a) Only detections are listed If constituent was not detected in the upstream sample, it is not listed
Background equivalent to or less than the sample quantitation limit

PREPARED/DATE NTG 12/23/04
CHECKED/DATE DAJ 1/4/05

TABLE A-3

KGC-1 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	LOGDATELAB	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20 00 PM	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	TR	2.1	JQ	10	1.1	µg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0		10	1 3	µg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW8260B	SW5030	TOTAL	Acetone	ND	0	UJ	10	0.51	µg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW8260B	SW5030B	TOTAL	Acetone	ND	0		10	1.3	µg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 552		0 2	0 057	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 535		0 2	0.0988	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	TR	0 509		0.2	0.057	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Aluminum	=	0 367		0 2	0 0988	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0496	JQ	0 2	0 00094	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20.00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Barium	=	0 0487	JQ	0.2	0 00094	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0351		0 04	0 00276	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Barium	TR	0 0329	JQ	0 04	0 00276	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Barium	=	0 0222	JQ	0 2	0 003	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	TR	6 08		5	0 059	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	4 82	JQ	5	0 059	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Calcium	=	4 63	JQ	5	0 25	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 11		1 1	0 0318	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Calcium	=	3 09	JH	1 1	0 0318	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	32		10	5 3	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SM 5220D	-	TOTAL	Chemical Oxygen Demand	=	31		10	5 3	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	17.7		10	4.9	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	E410.4	E410 4	TOTAL	Chemical Oxygen Demand	=	16		10	4 9	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	E410 4	E410 4	TOTAL	Chemical Oxygen Demand	=	6.1	JQ	10	3	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	TR	0 75	JQ	1	0 3	µg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0		2	0 13	µg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0		2	0 49	µg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW8260B	SW5030B	TOTAL	Chloromethane	ND	0		1	0.3	µg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW8260B	SW5030	TOTAL	Chloromethane	ND	0		2	0 49	µg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	TR	0 00128	JQ	0.01	0 00124	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	=	0.0011	JQ	0 03	0 00074	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Cobalt	ND	0		0 03	0 0013	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Cobalt	ND	0		0 01	0 00124	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111.40	WS	NS1	E360 1	NONE	TOTAL	Dissolved Oxygen	=	10 9		0 1		mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	31		5	2	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20.00 PM	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	21		5	2	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	12 9	JQ	33	1	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SM2340B	SW3005A	TOTAL	Hardness as CaCO3	TR	12 6	JQ	33	0 4	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	E130 2	NONE	TOTAL	Hardness as CaCO3	=	12		5	1	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 59		0 2	0 0218	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 54	JH	0 2	0 0218	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	1 04		0 2	0 042	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Iron	=	0 946		0 2	0 042	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/01	WS	NS1	SW6010B	TOTAL	TOTAL	Iron	=	0 566		0 2	0 088	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Lead	=	0 0158		0 003	0 00116	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0	UJ	0 003	0 00116	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0		0 003	0 0016	mg/L

TABLE A-3

KGC-1 (UPSTREAM) SURFACE WATER DATASET
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS (a)
Defense Supply Center Richmond
Richmond, Virginia

SITE	LOCATION	LOGDATENEW	LOGDATELAB	MATRIX	SACODE	ANMCODE	EXMCODE	FLDFLT	DESCRIPT	PARVQ	PARVAL	FLAG	REPLIMIT	LABDL	UNITS
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Lead	ND	0		0 003	0 0025	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210.20	WS	NS1	SW6010B	SW3005A	TOTAL	Lead	ND	0		0 003	0 0016	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Magnesium	=	1.68	JQ	5	0 03	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210:20	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.67	JQ	5	0 035	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20.00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.64	JQ	5	0 035	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.25		0 2	0 00472	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Magnesium	=	1.17		0 2	0 00472	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20:00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	TR	0 0688		0 02	0 00068	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0551		0 02	0 00068	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0543		0.015	0 00104	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Manganese	=	0 0223		0.015	0 00104	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW6010B	TOTAL	TOTAL	Manganese	=	0 0057	JQ	0 02	0 0009	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210:20	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	=	0 0033	JQ	0 1	0 0029	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	TR	0 0016	JQ	0.01	0 00156	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0		0 01	0 00156	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Nickel	ND	0		0 1	0 0029	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Nickel	ND	0		0.1	0 0022	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW6010B	TOTAL	TOTAL	Potassium	TR	3 08	JQ	5	0 041	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.93	JQ	5	0 0108	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.92	JQ	5	0 023	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1.52	JQ	5	0 023	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Potassium	TR	1 51	JQ	5	0 0108	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	TR	0 00188	JQ	0 005	0 00148	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20.00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0		0 005	0 0047	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0	UJ	0 005	0 00148	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Selenium	ND	0		0.005	0 0047	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111:40	WS	NS1	SW6010B	TOTAL	TOTAL	Selenium	ND	0		0 005	0 0045	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210.20	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	6 83		5	0 36	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW6010B	TOTAL	TOTAL	Sodium	=	6 6		5	0 63	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20 00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5.92		5	0 36	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 55	JL	5	0 08	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Sodium	=	5 29	JH	5	0 08	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 00196	JQ	0 01	0 00096	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0017	JQ	0 05	0 00067	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2 20.00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	=	0 0015	JQ	0 05	0 00067	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Vanadium	TR	0 00108	JQ	0 01	0 00096	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111 40	WS	NS1	SW6010B	TOTAL	TOTAL	Vanadium	ND	0		0 05	0 00082	mg/L
Kingsland Creek	KGC-1-SW	4/24/2003	4/24/2003 2:20.00 PM	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0356		0.02	0 014	mg/L
Kingsland Creek	KGC-1-SW	11/15/2002	11/15/0210 20	WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	=	0 0339		0 02	0 014	mg/L
Kingsland Creek	KGC-1-SW	11/28/2001	11/28/0111.40	WS	NS1	SW6010B	TOTAL	TOTAL	Zinc	ND	0		0 02	0 012	mg/L
Kingsland Creek	KGC-1-SW	11/13/2003		WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0		0.02	0 012	mg/L
Kingsland Creek	KGC-1-SW	4/22/2004		WS	NS1	SW6010B	SW3005A	TOTAL	Zinc	ND	0		0.02	0 012	mg/L

Notes: (a) Only detections are listed If constituent was not detected in the upstream sample, it is not listed.
Background equivalent to or less than the sample quantitation limit

PREPARED/DATE: NTG 12/23/04
CHECKED/DATE: DAJ 1/4/05

TABLE A-4

SURFACE WATER RISK ASSESSMENT DATASET SUMMARY
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	FLDFLT	units	CountOfPARVQ	CountofND	Min of Detects	Max of Detects	PercentDetect	PercentNonDetect
Falling Creek	Acetone	TOTAL	µg/L	11	9	2.10000	3 00000	18	82
Falling Creek	Aluminum	TOTAL	mg/L	12	0	0 21700	0 53300	100	0
Falling Creek	Barium	TOTAL	mg/L	15	0	0 03060	0 06650	100	0
Falling Creek	Benzo(a)anthracene	TOTAL	µg/L	24	23	0.03500	0 03500	4	96
Falling Creek	Benzo(b)fluoranthene	TOTAL	µg/L	24	23	0.09000	0.09000	4	96
Falling Creek	Benzo(ghi)perylene	TOTAL	µg/L	24	23	0 05200	0 05200	4	96
Falling Creek	Biochemical Oxygen Demand	TOTAL	mg/L	15	12	2 00000	2 00000	20	80
Falling Creek	Calcium	TOTAL	mg/L	15	0	6.29000	27.80000	100	0
Falling Creek	Chemical Oxygen Demand	TOTAL	mg/L	15	5	3.40000	70 00000	67	33
Falling Creek	Chloromethane	TOTAL	µg/L	13	12	0.57000	0 57000	8	92
Falling Creek	Chromium	TOTAL	mg/L	11	9	0.00190	0.00380	18	82
Falling Creek	Chrysene	TOTAL	µg/L	24	23	0.07100	0.07100	4	96
Falling Creek	Cobalt	TOTAL	mg/L	15	13	0.00090	0 00100	13	87
Falling Creek	Copper	TOTAL	mg/L	7	6	0.00244	0.00244	14	86
Falling Creek	Fluoranthene	TOTAL	µg/L	24	23	0.11000	0.11000	4	96
Falling Creek	Hardness as CaCO3	TOTAL	mg/L	15	0	22.00000	80.00000	100	0
Falling Creek	Indeno(1,2,3-cd)pyrene	TOTAL	µg/L	24	23	0.04900	0.04900	4	96
Falling Creek	Iron	TOTAL	mg/L	15	2	0.28000	1.08000	87	13
Falling Creek	Lead	TOTAL	mg/L	15	14	0.00136	0 00136	7	93
Falling Creek	Magnesium	TOTAL	mg/L	15	0	1.55000	4 97000	100	0
Falling Creek	Manganese	TOTAL	mg/L	15	0	0.00370	0 03380	100	0
Falling Creek	Nickel	TOTAL	mg/L	13	11	0.00156	0 00256	15	85
Falling Creek	Phenanthrene	TOTAL	µg/L	24	23	0.04300	0 04300	4	96
Falling Creek	Potassium	TOTAL	mg/L	15	0	1.55000	5 16000	100	0
Falling Creek	Pyrene	TOTAL	µg/L	24	23	0 09400	0 09400	4	96
Falling Creek	Sodium	TOTAL	mg/L	15	0	5 50000	29 50000	100	0
Falling Creek	Vanadium	TOTAL	mg/L	15	10	0 00093	0 00200	33	67
Falling Creek	Zinc	TOTAL	mg/L	15	5	0 01230	0 03000	67	33
Kingsland Creek	1,1,1-Trichloroethane	TOTAL	µg/L	20	16	0 47000	1 05000	20	80
Kingsland Creek	1,1-Dichloroethane	TOTAL	µg/L	20	19	0 17000	0 17000	5	95
Kingsland Creek	1,1-Dichloroethene	TOTAL	µg/L	20	19	0 28000	0 28000	5	95
Kingsland Creek	1,2,4-Trichlorobenzene	TOTAL	µg/L	37	36	0 42000	0 42000	3	97
Kingsland Creek	Acetone	TOTAL	µg/L	12	9	1 80000	2.60000	25	75
Kingsland Creek	Aluminum	FLDFLT	mg/L	1	1			0	100
Kingsland Creek	Aluminum	TOTAL	mg/L	16	3	0.33200	0.84000	81	19
Kingsland Creek	Arsenic	FLDFLT	mg/L	2	2			0	100
Kingsland Creek	Arsenic	TOTAL	mg/L	20	19	0.00292	0.00292	5	95
Kingsland Creek	Barium	FLDFLT	mg/L	3	0	0.02910	0.04890	100	0
Kingsland Creek	Barium	TOTAL	mg/L	21	0	0.03410	0.06420	100	0
Kingsland Creek	Benzene	TOTAL	µg/L	19	18	6.65000	6.65000	10	90
Kingsland Creek	Benzoic acid	TOTAL	µg/L	20	19	17.00000	17.00000	5	95

TABLE A-4

SURFACE WATER RISK ASSESSMENT DATASET SUMMARY
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	FLDFLT	units	CountOfPARVQ	CountofND	Min of Detects	Max of Detects	PercentDetect	PercentNonDetect
Kingsland Creek	Beryllium	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Beryllium	TOTAL	mg/L	20	19	0.00061	0.00061	5	95
Kingsland Creek	Calcium	FLDFLT	mg/L	3	0	4 14000	6 28000	100	0
Kingsland Creek	Calcium	TOTAL	mg/L	21	0	3 40000	8.67000	100	0
Kingsland Creek	Chemical Oxygen Demand	TOTAL	mg/L	15	0	5.10000	39.00000	100	0
Kingsland Creek	Chloroform	TOTAL	µg/L	20	19	0 56000	0 56000	5	95
Kingsland Creek	Chloromethane	TOTAL	µg/L	20	17	0 41000	0 70000	15	85
Kingsland Creek	Chromium	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Chromium	TOTAL	mg/L	17	16	0 00800	0.00800	6	94
Kingsland Creek	cis-1,2-Dichloroethene	TOTAL	µg/L	17	11	0 42000	3 20000	35	65
Kingsland Creek	Cobalt	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Cobalt	TOTAL	mg/L	18	13	0.00124	0.00170	28	72
Kingsland Creek	Copper	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Copper	TOTAL	mg/L	14	12	0.00820	0 00920	14	86
Kingsland Creek	Dissolved Oxygen	TOTAL	mg/L	3	0	9.70000	10.10000	100	0
Kingsland Creek	Ethylbenzene	TOTAL	µg/L	19	18	0.90000	0 90000	10	90
Kingsland Creek	Hardness as CaCO3	TOTAL	mg/L	15	0	12.00000	38.00000	100	0
Kingsland Creek	Iron	FLDFLT	mg/L	3	0	0.80400	1.50000	100	0
Kingsland Creek	Iron	TOTAL	mg/L	21	0	0.39400	6 37000	100	0
Kingsland Creek	Lead	FLDFLT	mg/L	2	2			0	100
Kingsland Creek	Lead	TOTAL	mg/L	21	18	0.00124	0 00790	14	86
Kingsland Creek	Magnesium	FLDFLT	mg/L	3	0	1.58000	2 66000	100	0
Kingsland Creek	Magnesium	TOTAL	mg/L	21	0	1.29000	2 89000	100	0
Kingsland Creek	Manganese	FLDFLT	mg/L	3	0	0.00440	0 04080	100	0
Kingsland Creek	Manganese	TOTAL	mg/L	21	0	0.01260	0 23000	100	0
Kingsland Creek	Mercury	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Mercury	TOTAL	mg/L	16	15	0.00007	0.00007	6	94
Kingsland Creek	Methyl tert-butyl ether	TOTAL	µg/L	2	0	3.00000	15.00000	100	0
Kingsland Creek	Molybdenum	FLDFLT	mg/L	2	2			0	100
Kingsland Creek	Molybdenum	TOTAL	mg/L	15	12	0.00172	0 00712	20	80
Kingsland Creek	Nickel	FLDFLT	mg/L	3	2	0.00230	0.00230	33	67
Kingsland Creek	Nickel	TOTAL	mg/L	20	15	0.00176	0 00370	25	75
Kingsland Creek	Potassium	FLDFLT	mg/L	3	0	1.95000	3 70000	100	0
Kingsland Creek	Potassium	TOTAL	mg/L	21	0	1.46000	3.59000	100	0
Kingsland Creek	Selenium	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Selenium	TOTAL	mg/L	21	20	0 00276	0.00276	5	95
Kingsland Creek	Silver	FLDFLT	mg/L	3	2	0.02500	0 02500	33	67
Kingsland Creek	Silver	TOTAL	mg/L	21	21			0	100
Kingsland Creek	Sodium	FLDFLT	mg/L	3	0	7.86000	15 10000	100	0
Kingsland Creek	Sodium	TOTAL	mg/L	21	0	5 15000	14.60000	100	0
Kingsland Creek	Styrene	TOTAL	µg/L	17	16	0 90000	0.90000	6	94

TABLE A-4

SURFACE WATER RISK ASSESSMENT DATASET SUMMARY
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	FLDFLT	units	CountOfPARVQ	CountofND	Min of Detects	Max of Detects	PercentDetect	PercentNonDetect
Kingsland Creek	Tetrachloroethene	TOTAL	µg/L	20	16	0.36000	1 35000	20	80
Kingsland Creek	Thallium	FLDFLT	mg/L	3	3			0	100
Kingsland Creek	Thallium	TOTAL	mg/L	21	20	0.00196	0.00196	5	95
Kingsland Creek	Toluene	TOTAL	µg/L	15	14	1.45000	1 45000	12	88
Kingsland Creek	Trichloroethene	TOTAL	µg/L	19	10	0.36000	4.25000	50	50
Kingsland Creek	Vanadium	FLDFLT	mg/L	1	1			0	100
Kingsland Creek	Vanadium	TOTAL	mg/L	19	8	0 00077	0.00210	58	42
Kingsland Creek	Xylenes, Total	TOTAL	µg/L	14	12	4 80000	7 60000	14	86
Kingsland Creek	Zinc	FLDFLT	mg/L	3	1	0 01250	0 01580	67	33
Kingsland Creek	Zinc	TOTAL	mg/L	20	7	0 01410	0 05080	65	35
No Name Creek	1,4-Dichlorobenzene	TOTAL	µg/L	64	63	0 19000	0.19000	2	98
No Name Creek	Acetone	TOTAL	µg/L	13	11	0.67000	1.00000	15	85
No Name Creek	Aluminum	FLDFLT	mg/L	12	10	0.31100	0 42400	17	83
No Name Creek	Aluminum	TOTAL	mg/L	26	9	0 06520	4 27000	65	35
No Name Creek	Antimony	FLDFLT	mg/L	12	12			0	100
No Name Creek	Antimony	TOTAL	mg/L	29	26	0.00230	0.00360	10	90
No Name Creek	Arsenic	FLDFLT	mg/L	12	12			0	100
No Name Creek	Arsenic	TOTAL	mg/L	25	22	0.00260	0.01240	12	88
No Name Creek	Barium	FLDFLT	mg/L	12	0	0.03680	0.07340	100	0
No Name Creek	Barium	TOTAL	mg/L	29	0	0.01360	0.08660	100	0
No Name Creek	Benzo(b)fluoranthene	TOTAL	µg/L	38	37	0.05100	0.05100	3	97
No Name Creek	Biochemical Oxygen Demand	TOTAL	mg/L	12	10	3.30000	20 00000	17	83
No Name Creek	Cadmium	FLDFLT	mg/L	12	11	0.00086	0.00086	8	92
No Name Creek	Cadmium	TOTAL	mg/L	29	25	0 00031	0 00340	14	86
No Name Creek	Calcium	FLDFLT	mg/L	12	0	4 43000	20 40000	100	0
No Name Creek	Calcium	TOTAL	mg/L	29	0	3 47000	20 80000	100	0
No Name Creek	Chemical Oxygen Demand	TOTAL	mg/L	15	4	5 50000	55 00000	73	27
No Name Creek	Chloroform	TOTAL	µg/L	35	33	0 20000	0 42000	6	94
No Name Creek	Chloromethane	TOTAL	µg/L	33	30	0.35000	0 52000	9	91
No Name Creek	Chromium	FLDFLT	mg/L	12	12			0	100
No Name Creek	Chromium	TOTAL	mg/L	24	23	0 00260	0.00260	4	96
No Name Creek	Chrysene	TOTAL	µg/L	38	35	0 05600	0 12000	8	92
No Name Creek	cis-1,2-Dichloroethene	TOTAL	µg/L	31	15	0 28000	45 00000	52	48
No Name Creek	Cobalt	FLDFLT	mg/L	12	4	0 00140	0 00330	67	33
No Name Creek	Cobalt	TOTAL	mg/L	26	11	0.00140	0 00344	58	42
No Name Creek	Copper	FLDFLT	mg/L	12	12			0	100
No Name Creek	Copper	TOTAL	mg/L	26	18	0 00212	0.11700	31	69
No Name Creek	Fluoranthene	TOTAL	µg/L	38	35	0 18000	0 25000	8	92
No Name Creek	Hardness as CaCO3	TOTAL	mg/L	15	0	4 00000	72 00000	100	0
No Name Creek	Iron	FLDFLT	mg/L	12	5	0 10700	0 67300	58	42
No Name Creek	Iron	TOTAL	mg/L	28	0	0.17500	22.80000	100	0

TABLE A-4

SURFACE WATER RISK ASSESSMENT DATASET SUMMARY
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	FLDFLT	units	CountOfPARVQ	CountofND	Min of Detects	Max of Detects	PercentDetect	PercentNonDetect
No Name Creek	Lead	FLDFLT	mg/L	12	11	0.00260	0 00260	8	92
No Name Creek	Lead	TOTAL	mg/L	29	17	0.00140	0 03580	41	59
No Name Creek	Magnesium	FLDFLT	mg/L	12	0	1.54000	2 29000	100	0
No Name Creek	Magnesium	TOTAL	mg/L	29	0	0.77600	3 62000	100	0
No Name Creek	Manganese	FLDFLT	mg/L	12	0	0.02700	0 20600	100	0
No Name Creek	Manganese	TOTAL	mg/L	29	0	0.00760	0 26100	100	0
No Name Creek	Mercury	FLDFLT	mg/L	10	10			0	100
No Name Creek	Mercury	TOTAL	mg/L	28	27	0.00012	0 00012	4	96
No Name Creek	Methyl tert-butyl ether	TOTAL	µg/L	9	8	0.60000	0 60000	11	89
No Name Creek	Methylene Chloride	TOTAL	µg/L	32	30	0.35000	1 00000	6	94
No Name Creek	Molybdenum	FLDFLT	mg/L	10	10			0	100
No Name Creek	Molybdenum	TOTAL	mg/L	25	23	0.00136	0 00330	8	92
No Name Creek	Naphthalene	TOTAL	µg/L	64	63	0 40000	0 40000	2	98
No Name Creek	Nickel	FLDFLT	mg/L	12	12			0	100
No Name Creek	Nickel	TOTAL	mg/L	27	23	0.00208	0 00464	15	85
No Name Creek	Phenanthrene	TOTAL	µg/L	38	36	0 03700	0.14000	5	95
No Name Creek	Potassium	FLDFLT	mg/L	12	0	1 35000	4 15000	100	0
No Name Creek	Potassium	TOTAL	mg/L	29	0	1.28000	4.25000	100	0
No Name Creek	Pyrene	TOTAL	µg/L	38	35	0 19000	0 35000	8	92
No Name Creek	Selenium	FLDFLT	mg/L	12	10	0 00170	0 00240	17	83
No Name Creek	Selenium	TOTAL	mg/L	29	28	0.00110	0.00110	3	97
No Name Creek	Sodium	FLDFLT	mg/L	12	0	5.95000	8.11000	100	0
No Name Creek	Sodium	TOTAL	mg/L	29	0	0.76400	8.95000	100	0
No Name Creek	Styrene	TOTAL	µg/L	31	28	6.10000	120 00000	10	90
No Name Creek	Tetrachloroethene	TOTAL	µg/L	35	20	0.45000	2.10000	43	57
No Name Creek	Thallium	FLDFLT	mg/L	12	10	0.00190	0.00200	17	83
No Name Creek	Thallium	TOTAL	mg/L	29	26	0.00170	0.00200	10	90
No Name Creek	Trichloroethene	TOTAL	µg/L	35	5	0.26000	21.00000	86	14
No Name Creek	Vanadium	FLDFLT	mg/L	12	12			0	100
No Name Creek	Vanadium	TOTAL	mg/L	29	17	0.00082	0.00724	41	59
No Name Creek	Vinyl chloride	TOTAL	µg/L	35	33	4.40000	6.10000	6	94
No Name Creek	Zinc	FLDFLT	mg/L	8	4	0.01270	0.10200	50	50
No Name Creek	Zinc	TOTAL	mg/L	26	1	0.01230	0.22400	96	4

PREPARED/DATE: NTG 12/23/04
CHECKED/DATE: DAJ 1/4/05

TABLE A-5

DATA SUMMARY FOR BM-4
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	MATRIX	UNITS	Count OfPARVQ	Count of ND	Min of Detects	Max of Detects	Percent Detect	Percent Non Detect
Falling Creek	Acetone	TOTAL	µg/L	4	3	2.700	2.700	25	75
Falling Creek	Aluminum	TOTAL	mg/L	4	0	0.291	0.565	100	0
Falling Creek	Barium	TOTAL	mg/L	5	0	0.027	0.048	100	0
Falling Creek	Benzo(a)anthracene	TOTAL	µg/L	8	7	0.240	0.240	12	88
Falling Creek	Benzo(a)pyrene	TOTAL	µg/L	8	7	0.360	0.360	12	88
Falling Creek	Benzo(b)fluoranthene	TOTAL	µg/L	8	7	0.640	0.640	12	88
Falling Creek	Benzo(ghi)perylene	TOTAL	µg/L	7	6	0.320	0.320	14	86
Falling Creek	Benzo(k)fluoranthene	TOTAL	µg/L	8	7	0.170	0.170	12	88
Falling Creek	bis(2-Ethylhexyl)phthalate	TOTAL	µg/L	5	4	3.700	3.700	20	80
Falling Creek	Calcium	TOTAL	mg/L	5	0	6.220	38.500	100	0
Falling Creek	Chemical Oxygen Demand	TOTAL	mg/L	5	0	7.500	28.000	100	0
Falling Creek	Chloroform	TOTAL	µg/L	3	2	0 540	0.540	33	67
Falling Creek	Chloromethane	TOTAL	µg/L	5	4	0.470	0.470	20	80
Falling Creek	Chrysene	TOTAL	µg/L	8	7	0.440	0.440	12	88
Falling Creek	Cobalt	TOTAL	mg/L	5	4	0.001	0.001	20	80
Falling Creek	Copper	TOTAL	mg/L	3	2	0.003	0.003	33	67
Falling Creek	di-n-octyl phthalate	TOTAL	µg/L	5	4	1.700	1.700	20	80
Falling Creek	Fluoranthene	TOTAL	µg/L	8	7	0.700	0.700	12	88
Falling Creek	Hardness as CaCO3	TOTAL	mg/L	5	0	22.000	110.000	100	0
Falling Creek	Indeno(1,2,3-cd)pyrene	TOTAL	µg/L	8	6	0 052	0.280	25	75
Falling Creek	Iron	TOTAL	mg/L	5	0	0.416	0.997	100	0
Falling Creek	Lead	TOTAL	mg/L	5	2	0.001	0.003	60	40
Falling Creek	Magnesium	TOTAL	mg/L	5	0	1.700	6.130	100	0
Falling Creek	Manganese	TOTAL	mg/L	5	0	0.014	0.050	100	0
Falling Creek	Nickel	TOTAL	mg/L	5	4	0.002	0.002	20	80
Falling Creek	Phenanthrene	TOTAL	µg/L	8	7	0.230	0.230	12	88
Falling Creek	Potassium	TOTAL	mg/L	5	0	1.390	6.580	100	0
Falling Creek	Pyrene	TOTAL	µg/L	8	6	0.600	2.100	25	75
Falling Creek	Selenium	TOTAL	mg/L	5	4	0.001	0.001	20	80
Falling Creek	Sodium	TOTAL	mg/L	5	0	5.930	41.500	100	0
Falling Creek	Vanadium	TOTAL	mg/L	5	1	0.001	0.001	80	20
Falling Creek	Zinc	TOTAL	mg/L	5	0	0.015	0.069	100	0

PREPARED/DATE: NTG 12/23/04
CHECKED/DATE: DAJ 1/4/05

TABLE A-6

DATA SUMMARY FOR KGC-1
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

SITE	DESCRIPT	FLDFLT	units	CountOf PARVQ	Countof ND	Min of Detects	Max of Detects	PercentDetect	Percent NonDetect
Kingsland Creek	Acetone	TOTAL	µg/L	4	3	2.100	2.100	25	75
Kingsland Creek	Aluminum	TOTAL	mg/L	4	0	0.367	0.552	100	0
Kingsland Creek	Barium	TOTAL	mg/L	5	0	0.022	0.050	100	0
Kingsland Creek	Calcium	TOTAL	mg/L	5	0	3.090	6.080	100	0
Kingsland Creek	Chemical Oxygen Demand	TOTAL	mg/L	5	0	6.100	32.000	100	0
Kingsland Creek	Chloromethane	TOTAL	µg/L	5	4	0.750	0.750	20	80
Kingsland Creek	Cobalt	TOTAL	mg/L	4	2	0.001	0.001	50	50
Kingsland Creek	Dissolved Oxygen	TOTAL	mg/L	1	0	10.900	10.900	100	0
Kingsland Creek	Hardness as CaCO3	TOTAL	mg/L	5	0	12.000	31.000	100	0
Kingsland Creek	Iron	TOTAL	mg/L	5	0	0.566	1.590	100	0
Kingsland Creek	Lead	TOTAL	mg/L	5	4	0.016	0.016	20	80
Kingsland Creek	Magnesium	TOTAL	mg/L	5	0	1.170	1.680	100	0
Kingsland Creek	Manganese	TOTAL	mg/L	5	0	0.006	0.069	100	0
Kingsland Creek	Nickel	TOTAL	mg/L	5	3	0.002	0.003	40	60
Kingsland Creek	Potassium	TOTAL	mg/L	5	0	1.510	3.080	100	0
Kingsland Creek	Selenium	TOTAL	mg/L	5	4	0.002	0.002	20	80
Kingsland Creek	Sodium	TOTAL	mg/L	5	0	5.290	6.830	100	0
Kingsland Creek	Vanadium	TOTAL	mg/L	5	1	0.001	0.002	80	20
Kingsland Creek	Zinc	TOTAL	mg/L	5	3	0.034	0.036	40	60

PREPARED/DATE: NTG 12/23/04
CHECKED/DATE: DAJ 1/4/05

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location:	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-2-SD	KGC-2-SD
Sample Date:	11/28/2001	11/15/2002	4/24/2003	11/13/2003	4/22/2004	11/27/2001	11/14/2002
Arsenic - SW846 7060A (Total) mg/Kg							
Arsenic	<0 58	0 42 JB	0 63	<1.23	<1 19	5 8	1 2 JB
Mercury (Total) - SW846 7471A mg/Kg							
Mercury	0 015 JB	<0 14 UL	<0 13	0 0051 JQ	0 0078 JB	0 013 JB	<0 14 UL
Metals (Total) - SW846 6010B mg/Kg							
Aluminum	318 J	524 JH	393 JH	666	927	534	567 J
Antimony	<11 5	0 45 JL	<12 6	<6 1 UL	<6.41	1.1 JQ	<13.6
Barium	4.5 JQ	6.7 JQ	4 JQ	9.65	6.33 JQ	5.3 JQ	21 7 J
Beryllium	0 055 JQ	0 1 JQ	0 12 JQ	0.104 JQ	0.205 JB	0.12 JQ	0.15 JQ
Calcium	145 JQ	151 JQ	103 JQ	241	355	96 3 JQ	90 8 JQ
Chromium	0 48 JQ	0.55 JQ	0.75 JQ	0 872 JQ	2 24	4.1 JQ	1.1 JQ
Cobalt	0 38 JQ	0.93 JQ	0 64 JQ	0 976 JQ	1 08 JQ	1.1 JQ	0 68 JQ
Copper	0.72 JQ	0.56 JQ	<2 5 UL	0 604 JQ	0 731 JQ	14 4	1 JQ
Iron	1030	975 J	932	1400 JL	1020	8340	1440 J
Lead	1 5	1 4	1.1	0.878	1 55	6 2	3 1 J
Magnesium	72 5 JQ	54 4 JQ	57 6 JQ	130 JQ	67 7 JQ	64 9 JQ	93 2 JQ
Manganese	9 9	33 9	23 6	33 3	71 9	27 5	20 8
Molybdenum	0 21 JQ	<30 9	0 69 JQ	0 488 JB	<5.13	1 4 JQ	<29 9
Nickel	<4 6	0.58 JQ	<5 1	0 634 JQ	1 17 JQ	4 4 JQ	0.79 JQ
Potassium	45 JQ	60 3 JQ	51.1 JB	97 5 JQ	73 1 JQ	64 7 JQ	87 3 JQ
Selenium	<0 58	<0.7	<0 63	<0 615 UJ	<0 646 UJ	<0 61	<0 68
Silver	<1 2	<1 4	<1 3	<1 22 UJ	<1.28 UJ	<1 2	<1 4
Sodium	<576	<703	<632	127 JH	165 JQ	<608	<679
Vanadium	1 JQ	1.3 JQ	2 6 JQ	1 57	4 13	2 5 JQ	1 5 JQ
Zinc	2 2 J	6.8	3.3	4.5	3 48	32 4	6
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L							
Nitrogen, Ammonia (as N)	0 1 JB	0 6	0 1 JB	<0 1	<0 2	0 5	0 1 JQ
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg							
4,4'-DDD	<0 00098	<0 0048	<0 0021	<0 00407	<0 00213	<0 001	<0 0046
4,4'-DDE	<0 00098	<0 0048	<0 0021	<0.00407	<0 00213	<0 001	<0 0046 UJ
4,4'-DDT	<0.0015	<0 0048 UL	<0 0021	<0 00407	<0.00213	<0 0016	<0 0046 UJ
alpha-Chlordane	<0 00098	<0 0048	<0 0021	<0 00407	<0 00213	0 0012	<0 0046 UJ
Endrin ketone	<0 00098	<0 0048	<0 0021	<0 00407	<0 00213	<0 001	<0 0046 UJ
gamma-Chlordane	<0.00098	<0 0048	<0 0021	<0 00407 UJ	<0 00213	0 0014	<0 0046 UJ

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type: Sample Location: Sample Date	Sample KGC-1-SD 11/28/2001	Sample KGC-1-SD 11/15/2002	Sample KGC-1-SD 4/24/2003	Sample KGC-1-SD 11/13/2003	Sample KGC-1-SD 4/22/2004	Sample KGC-2-SD 11/27/2001	Sample KGC-2-SD 11/14/2002
Percent Solids - D2216, E160.3 %							
Percent Solids	86 7	71 1	79 2	82	78	82 3	73 6
pH - EPA 150.1, SW9040B MOD pH Units							
pH	6 2	5 8 J	5.7	NA	NA	5 8	6 4
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg							
Not Detected							
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level mg/kg							
Acenaphthene	<0 0077	<0 0094 UL	<0 0084	<0.081 UL	<0.017	0 0065 JQ	0 014 J
Acenaphthylene	<0 0077	<0 0094 UL	<0 0084	<0 081 UL	<0.017	0 0033 JQ	<0 0091
Anthracene	<0 0077	<0 0094	<0 0084	<0 081 UL	<0 017	0 02	0 047 J
Benzo(a)anthracene	<0 0077	0 0038 JQ	<0.0084	<0 081 UL	<0 017	0 084	0 091 J
Benzo(a)pyrene	<0 0077	0.0047 JL	<0 0084	<0 081 UL	<0 017	0 1	0 077 J
Benzo(b)fluoranthene	<0 0077	0.0074 JL	<0 0084	<0 081 UL	<0 017	0 095	0 078 J
Benzo(ghi)perylene	<0 0077	0.0034 JQ	<0.0084	0.041 JQ	<0 017	0 049	0 037 J
Benzo(k)fluoranthene	<0 0077	0 0041 JQ	<0.0084	<0 081 UL	<0 017	0 053	0 044 J
Chrysene	<0 0077	0 0069 JQ	<0 0084	<0 081 UL	<0 017	0 095	0 087 J
Dibenzo(a,h)anthracene	<0 0077	<0 0094	<0.0084	<0 081 UL	<0 017	0 016	0.011 J
Fluoranthene	<0 0077	0.013	<0.0084	<0 081 UL	<0.017	0.2	0 22 J
Fluorene	<0 0077	<0.0094	<0 0084	<0 081 UL	<0 017	0 0075 JQ	0 019 J
Indeno(1,2,3-cd)pyrene	<0 0077	0.0036 JQ	<0 0084	<0 081 UL	<0 017	0 05	0 039 J
Naphthalene	<0 0077	<0.0094 UL	<0 0084	<0.081 UL	<0 017	<0 0081	0.0016 JQ
Phenanthrene	<0 0077	0 0078 JQ	<0 0084	<0 081 UL	<0 017	0 11	0 17 J
Pyrene	<0 0077	0 01	<0 0084	<0 081 UL	<0 017	0 17	0 16 J
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg							
Benzo(a)anthracene	NA	<0 46	NA	<0 41	<0 85	NA	NA
Benzo(a)pyrene	NA	<0 46	NA	<0 41	<0 85	NA	NA
Benzo(b)fluoranthene	NA	<0 46	NA	<0 41	<0 85	NA	NA
Benzoic acid	<0.98	<2 4 UL	0 57 R	<0 81 UJ	<1.7	<1	<2.3 UJ
Chrysene	NA	<0 46	NA	<0 41	<0 85	NA	NA
Fluoranthene	NA	<0 46	NA	<0 41	<0 85	NA	NA
Thallium (Total) - SW846 7841 mg/Kg							
Thallium	<1 2	<1.4	0 19 JH	<0 616	<0 594	<1 2	<1 4 UL
Total Organic Carbon - SW846 9060 mg/kg							

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type.	Sample	Sample	Sample	Sample	Sample	Sample	Sample
	Sample Location.	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-1-SD	KGC-2-SD	KGC-2-SD
	Sample Date	11/28/2001	11/15/2002	4/24/2003	11/13/2003	4/22/2004	11/27/2001	11/14/2002
Total Organic Carbon		3 JQ	3 JH	<13	NA	NA	<12	2 JH
Total Organic Carbon - WB TOC %								
Total Organic Carbon		NA	NA	NA	0 33	0 19	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg								
1,1,1-Trichloroethane		<0 0058	<0 007	<0.0063	<0 0061	<0.0063	<0 0061	<0.0068
1,1-Dichloroethane		<0 0058	<0 007	<0 0063	<0 0061	<0 0063	<0 0061	<0 0068
1,1-Dichloroethene		<0 0058	<0 007	<0 0063	<0 0061	<0 0063	<0 0061	<0 0068
1,2,4-Trichlorobenzene		<0 0058	<0 007	<0 0063 UJ	<0 0061 UJ	<0 0063	<0 0061	<0 0068
1,2-Dichlorobenzene		<0 0058	<0 007	<0 0063	<0.0061	<0.0063	<0.0061	0 0021 JQ
1,4-Dichlorobenzene		<0 0058	<0 007	<0 0063	<0 0061	<0 0063	<0 0061	<0 0068
Acetone		<0 023 UJ	<0 028 UL	<0 025 UJ	<0 012	0 0081 JQ	<0 024	<0 027 UJ
Carbon disulfide		<0 0058	<0 007	<0 0063	<0.0061	0 0034 JQ	<0 0061	<0 0068
Chloroform		<0 0058	<0 007	<0 0063	<0 0061	<0 0063	<0 0061	<0 0068
cis-1,2-Dichloroethene		<0 0029	<0 0035	<0 0032	<0 0061	<0.0063	<0 003	0 0018 JQ
Dichlorodifluoromethane		<0 0058	<0.007	<0 0063 UJ	<0 0061 UJ	<0.0063	<0 0061	<0 0068
Methylene chloride		<0 0058	0.0054 JB	<0.0063	<0 0061 UJ	0 0032 JB	<0 0061	0 0043 JB
Tetrachloroethene		<0 0058	<0 007	<0 0063	<0 0061	<0 0063	<0 0061	0 0011 JQ
trans-1,2-Dichloroethene		<0 0029	<0.0035	<0.0032	<0 0061	<0.0063	<0 003	<0 0034
Trichloroethene		<0 0058	<0 007	<0 0063	<0.0061	<0 0063	<0 0061	0 0018 JQ

Notes:

J	Estimated, based on QC data
JB	Estimated; possibly biased high or false positive based on blank contamination
JQ	Estimated, Value is between reporting limit and detection limit
NA	Not Analyzed
UJ	Undetected, Reported Detection Limit is imprecise
UL	Undetected, Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type / Sample Location / Sample Date:	Duplicate KGC-2-SD 11/14/2002	Sample KGC-2-SD 4/23/2003	Sample KGC-2-SD 11/13/2003	Sample KGC-2-SD 4/22/2004	Sample KGC-3-SD 11/27/2001	Duplicate KGC-3-SD 11/27/2001	Sample KGC-3-SD 11/14/2002
Arsenic - SW846 7060A (Total) mg/Kg							
Arsenic	1 JB	0 55 JQ	0 543 JQ	<1 22	0.79 J	0 58 J	1 7
Mercury (Total) - SW846 7471A mg/Kg							
Mercury	<0.13 UL	<0 14	<0.12	0 0077 JB	<0 12	0.01 JB	<0 13 UL
Metals (Total) - SW846 6010B mg/Kg							
Aluminum	413 J	769	513	907	270	262	691
Antimony	<13.4	<13 8	<6 1	<6 06	<12 2	<11.3	<13 4
Barium	3 9 JQ	4.5 JQ	12.3	5 08 JQ	2 1 JQ	1 6 JQ	7 3
Beryllium	0 097 JQ	0 12 JQ	0.0488 JQ	0 145 JB	<1.2	<1 1	0.14 JQ
Calcium	80 2 JQ	109 JQ	174	102 JQ	52 8 JQ	<563	101 JQ
Chromium	1 1 JQ	0 67 JQ	0 933 JQ	1 35	0 59 JQ	0 51 JQ	3 1 JQ
Cobalt	0.77 JQ	0.32 JQ	0.896 JQ	0 606 JQ	0 44 JQ	0 34 JQ	1 5 JQ
Copper	0 61 JQ	<2 8 UL	0.543 JQ	0 63 JQ	1 JQ	0 84 JQ	5 1
Iron	994 J	948	980	1080	1110 J	749 J	3640
Lead	2 1 J	1 9	0 38 JQ	1 57	1.8	2 2	4 5
Magnesium	66 6 JQ	101 JQ	221	76.3 JQ	52 5 JQ	33 JQ	95 5 JQ
Manganese	20 5	10.8	22.1	14	14.5	13.5	69 1
Molybdenum	<29 5	<30.5	0 185 JQ	<4.85	0.42 JB	<24 8	0 55 JQ
Nickel	0.76 JQ	<5.5	0.47 JQ	0.673 JQ	<4.9	0.42 JQ	2.3 JQ
Potassium	60 6 JQ	76 3 JQ	211 JQ	88 7 JQ	51 6 JQ	44 5 JQ	94 5 JQ
Selenium	<0 67	<0.69	<0 615 UJ	<0 611 UJ	<0.61	<0 56	<0.67
Silver	<1.3	<1.4	<1 22 UJ	<1 21 UJ	<1 2	<1 1	0.14 JQ
Sodium	<670	<692	103 JH	141 JQ	<609	<563	<669
Vanadium	1 2 JQ	1 4 JQ	1 9	2 02	1.1 JQ	1.5 JQ	2.6 JQ
Zinc	6 1	5.7	3.9	3.25	2.3 JQ	1 9 JQ	10 4
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L							
Nitrogen, Ammonia (as N)	0 1 JQ	0.3 JB	<0.1	<0 2	0.1 JB	0 1 JB	0 1 JQ
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg							
4,4'-DDD	<0 023	<0 0024	<0.00407	<0.00203	<0 001	<0 00096	<0 0045
4,4'-DDE	<0 023 UJ	0 00091 JQ	<0.00407	<0.00203	<0 001	<0 00096	0 002 JQ
4,4'-DDT	<0 023 UJ	<0.0024	<0.00407	<0.00203	<0.0016	<0 0015	<0 0045 UJ
alpha-Chlordane	<0 023 UJ	0 0015 JQ	<0 00407	<0.00203	<0 001	<0 00096	<0 0045 UJ
Endrin ketone	<0 023 UJ	<0.0024	<0.00407	<0 00203	<0 001	<0 00096	<0 0045 UJ
gamma-Chlordane	<0.023 UJ	0 00066 JQ	<0 00407	<0 00203	<0 001	0 00072 JQ	<0 0045 UJ

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type Sample Location Sample Date	Duplicate KGC-2-SD 11/14/2002	Sample KGC-2-SD 4/23/2003	Sample KGC-2-SD 11/13/2003	Sample KGC-2-SD 4/22/2004	Sample KGC-3-SD 11/27/2001	Duplicate KGC-3-SD 11/27/2001	Sample KGC-3-SD 11/14/2002
Percent Solids - D2216, E160.3 %							
Percent Solids	74 6	72.2	82	82	82.2	88 8	74 8
pH - EPA 150.1, SW9040B MOD pH Units							
pH	6 4	5 6	NA	NA	4 8	4 8	5 4
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg							
Not Detected							
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level							
Acenaphthene	0 0016 JQ	<0.0092	<0 081 UL	<0 016	<0 0081	<0 0075	<0.0089
Acenaphthylene	0 0015 JQ	<0 0092	<0 081 UL	<0 016	<0 0081	<0 0075	<0 0089
Anthracene	0 0028 JQ	<0 0092	<0 081 UL	<0 016	<0 0081	0 0086	0 0028 JQ
Benzo(a)anthracene	0 011 J	0 0027 JQ	<0 081 UL	<0 016	<0 0081 UJ	0 015 J	0 017
Benzo(a)pyrene	0 011 J	0 0021 JQ	<0.081 UL	<0 016	<0 0081 UJ	0 017 J	0 022
Benzo(b)fluoranthene	0 014 J	0 003 JQ	<0 081 UL	<0 016	0 0028 JQ	0 023 J	0 022
Benzo(ghi)perylene	0 0081 JQ	0 0019 JQ	0 082 JL	<0 016	<0 0081	0 011	0 011
Benzo(k)fluoranthene	0 006 JQ	0.0017 JQ	<0.081 UL	<0 016	<0 0081	0.012	0.012
Chrysene	0 012 J	0 0029 JQ	<0 081 UL	<0 016	0 0023 JQ	0 02 J	0 017
Dibenzo(a,h)anthracene	0.002 JQ	<0 0092	<0 081 UL	<0 016	<0 0081	<0 0075	0.0031 JQ
Fluoranthene	0 026 J	0 0036 JQ	<0.081 UL	<0.016	0 0029 JQ	0 032 J	0 017
Fluorene	0 0018 JQ	<0.0092	<0.081 UL	<0 016	<0 0081	<0 0075	<0 0089
Indeno(1,2,3-cd)pyrene	0.0067 JQ	0 0019 JQ	<0 081 UL	<0 016	<0 0081	0 01	0 01
Naphthalene	<0 0089	<0.0092	<0 081 UL	<0 016	<0.0081	<0 0075	<0 0089
Phenanthrene	0 0096 J	0 0015 JQ	<0 081 UL	<0 016	<0.0081	0 011	0 0067 JQ
Pyrene	0 024 J	0 0045 JQ	0 044 JQ	<0 016	0 0021 JQ	0 022 J	0 017
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg							
Benzo(a)anthracene	NA	NA	0 086 JQ	<0 81	NA	NA	NA
Benzo(a)pyrene	NA	NA	0 098 JQ	<0.81	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	0.083 JQ	<0.81	NA	NA	NA
Benzoic acid	<2.3 UJ	<2 4 R	<0.81 UJ	<1.6	<1	<0.96	<2 3 UJ
Chrysene	NA	NA	0.09 JQ	<0 81	NA	NA	NA
Fluoranthene	NA	NA	0 09 JQ	<0.81	NA	NA	NA
Thallium (Total) - SW846 7841 mg/Kg							
Thallium	<1 3	0.17 JQ	<0 61	<0 61	0 18 JB	0 1 JB	<1 3
Total Organic Carbon - SW846 9060 mg/kg							

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type: Sample Location: Sample Date	Duplicate KGC-2-SD 11/14/2002	Sample KGC-2-SD 4/23/2003	Sample KGC-2-SD 11/13/2003	Sample KGC-2-SD 4/22/2004	Sample KGC-3-SD 11/27/2001	Duplicate KGC-3-SD 11/27/2001	Sample KGC-3-SD 11/14/2002
Total Organic Carbon	2 JH	<14	NA	NA	<12	<11	2 JH
Total Organic Carbon - WB TOC %							
Total Organic Carbon	NA	NA	0.2	0.16	NA	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg							
1,1,1-Trichloroethane	<0 0067	0.022	<0.0061	<0.0059	<0 0061	<0.0056	<0 0067
1,1-Dichloroethane	<0 0067	0 014	<0.0061	<0.0059	<0 0061	<0 0056	<0 0067
1,1-Dichloroethene	<0 0067	0 015	<0.0061	<0.0059	<0 0061	<0.0056	<0 0067
1,2,4-Trichlorobenzene	<0 0067	<0 0069 UJ	<0 0061 UJ	<0.0059	<0.0061	<0.0056	<0 0067
1,2-Dichlorobenzene	0.0014 JQ	0.0057 JQ	<0.0061	<0.0059	<0.0061	<0.0056	<0 0067
1,4-Dichlorobenzene	<0 0067	0 0015 JQ	<0 0061	<0 0059	<0 0061	<0 0056	<0 0067
Acetone	<0 027 UJ	<0 028 UJ	<0.012	0 0094 JQ	<0.024	<0.023	<0 027 UJ
Carbon disulfide	<0 0067	<0 0069	<0 0061	<0 0059	<0 0061	<0.0056	<0 0067
Chloroform	<0 0067	0 00089 JQ	<0 0061	<0 0059	<0 0061	<0 0056	<0 0067
cis-1,2-Dichloroethene	0 0015 JQ	0 18	<0 0061	<0 0059	<0.003	<0 0028	<0 0033
Dichlorodifluoromethane	<0 0067	<0 0069 UJ	0 0029 JQ	<0 0059	<0 0061	<0 0056	<0 0067
Methylene chloride	0.0025 JB	<0 0069	<0 0061 UJ	<0 0059	<0 0061	<0 0056	0 0029 JB
Tetrachloroethene	0 0012 JQ	0 032	<0.0061	<0 0059	<0 0061	<0.0056	<0 0067
trans-1,2-Dichloroethene	<0 0033	0 00096 JQ	<0 0061	<0 0059	<0 003	<0.0028	<0 0033
Trichloroethene	0 0024 JQ	0 13	<0 0061	<0.0059	<0 0061	<0.0056	<0 0067

Estimated, based on QC data
Estimated, possibly biased high or false
positive based on blank contamination
Estimated, Value is between reporting limit and detection limit
Not Analyzed
Undetected, Reported Detection Limit is imprecise
Undetected; Data biased low - Reported
Detection Limit is higher than indicated
Reporting Limit in parenthesis

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location	KGC-3-SD	KGC-3-SD	KGC-3-SD	SP-14-SD	SP-14-SD	SP-14-SD	SP-14-SD	SP-14-SD
Sample Date	4/23/2003	11/12/2003	4/21/2004	11/27/2001	11/14/2002	4/24/2003	11/13/2003	4/22/2004
Arsenic - SW846 7060A (Total) mg/Kg								
Arsenic	1.3	0 467	<1.18	0 6	0 93 JB	<0 63	0.947	<1 18
Mercury (Total) - SW846 7471A mg/Kg								
Mercury	<0.12	0 0096 JQ	0 0075 JB	0 017 JB	0.04 JQ	<0 13	0 067 JQ	0 0077 JB
Metals (Total) - SW846 6010B mg/Kg								
Aluminum	499	520 JH	405	589	665	286	558	575
Antimony	<12 4	<6 33	<6 12	<11 7	<12 8	<12 5	<6 17	<6 29
Barium	3.3 JQ	3 41 JQ	3 91 JQ	7.4	7.1	2 8 JQ	6 14 JQ	7 2
Beryllium	0.12 JQ	0 0696 JQ	0.141 JB	0.057 JQ	0 1 JQ	0.1 JQ	0.0679 JQ	0.189 JB
Calcium	45 7 JQ	73.4 JQ	98 6 JQ	145 JQ	190 JQ	63 2 JQ	175	160
Chromium	1.2 JQ	0 633 JQ	1 21 JQ	2 JQ	1 3 JQ	0 55 JQ	1 03 JQ	1 16 JQ
Cobalt	0 54 JQ	0.506 JQ	0 502 JQ	0 62 JQ	0 93 JQ	0 54 JQ	0 593 JQ	0.881 JQ
Copper	<2 5 UL	1 51 JQ	0 814 JQ	1.1 JQ	0 98 JQ	<2.5 UL	0 636 JQ	0 768 JQ
Iron	2700	1150 JL	880	1280	1710	858	1210	1410
Lead	14.8	2 03	1 72	2 5	3	1 2	0 652	3 63
Magnesium	95.1 JQ	122 JQ	83 5 JQ	248 JQ	217 JQ	35 5 JQ	124 JQ	101 JQ
Manganese	13	16	13 6	15 6	25 5	11 3	21 3	16 7
Molybdenum	<27.3	5 06 JQ	<4.9	<25 8	<28.2	<27.6	0 415 JQ	0 161 JQ
Nickel	0 41 JQ	<1 27	0.594 JQ	0 57 JQ	0 9 JQ	0.6 JQ	0 457 JQ	0 9 JQ
Potassium	90 9 JQ	120 JQ	97.6 JQ	217 JQ	169 JQ	44 1 JB	125 JQ	108 JQ
Selenium	<0.62	101 JQ	<0 617 UJ	<0 59	<0 64	<0 63	<0.622 UJ	0 413 JQ
Silver	<1 2	<1 27 UJ	<1 22 UJ	<1 2	<1.3	<1 3	<1 23 UJ	<1 26 UJ
Sodium	<621	144 JQ	130 JQ	<587	<641	<626	93 6 JH	134 JQ
Vanadium	2 JQ	2 2	1 59	2 1 JQ	2 3 JQ	1 1 JQ	1 79	2 16
Zinc	4 8	4.87	3.06	6.9	12.1	2 4 JQ	6	4 25
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L								
Nitrogen, Ammonia (as N)	0 1 JB	<0 1	3.14	0 1 JB	0 06 JQ	0 1 JB	<0 1	4 54
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg								
4,4'-DDD	0 0032 J	<0 00422	<0 00206	<0.002	0 0091 JQ	<0 0021	<0 00412 UL	<0 00211
4,4'-DDE	0 0024 J	<0 00422	<0 00206	<0 002	0 0036 JQ	<0 0021	<0.00412 UL	<0 00211
4,4'-DDT	0 0038 J	<0 00422	<0.00206	<0 0031	0 012 J	<0 0021	<0 00412 UL	<0 00211
alpha-Chlordane	<0 0021	<0 00422	<0 00206	0 0019 JQ	0 012 J	<0 0021	<0 00412 UL	<0 00211
Endrin ketone	0 0031 J	<0 00422 UJ	<0 00206	<0 002	<0.011 UJ	<0 0021	<0 00412 UL	<0 00211
gamma-Chlordane	0 0019 JQ	<0 00422	<0.00206	0.0023	0 0049 JQ	<0.0021	<0 00412 UL	<0 00211

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type. Sample Location Sample Date	Sample KGC-3-SD 4/23/2003	Sample KGC-3-SD 11/12/2003	Sample KGC-3-SD 4/21/2004	Sample SP-14-SD 11/27/2001	Sample SP-14-SD 11/14/2002	Sample SP-14-SD 4/24/2003	Sample SP-14-SD 11/13/2003	Sample SP-14-SD 4/22/2004
Percent Solids - D2216, E160.3 %								
Percent Solids	80 6	79	81	85 2	78	79 8	81	79
pH - EPA 150.1, SW9040B MOD pH Units								
pH	4.6	NA	NA	6 7	6 6	6.2	NA	NA
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg								
Not Detected								
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level								
Acenaphthene	<0 0083	<0 084 UL	<0 016	<0.0078	0.0042 JQ	0.0058 JQ	<0 082 UL	<0 017
Acenaphthylene	<0 0083	<0 084 UL	<0 016	<0 0078	0 0023 JQ	<0 0084	<0 082 UL	<0 017
Anthracene	<0 0083	<0 084 UL	<0 016	0 0072 JQ	0 014	0 0011 JQ	<0 082 UL	<0 017
Benzo(a)anthracene	0.0047 JQ	<0 084 UL	<0.016	0 11	0 056	0.021	0 053 JQ	<0 017
Benzo(a)pyrene	0 0045 JQ	<0.084 UL	<0 016	0 14	0 056	0 0043 JQ	0 052 JQ	<0 017
Benzo(b)fluoranthene	0 0071 JQ	<0.084 UL	<0 016	0.15	0 058	0.014	0 044 JQ	0 0082
Benzo(ghi)perylene	0 0041 JQ	<0 084 UL	<0 016	0 066	0 032	0 0035 JQ	0 1 JL	<0 017
Benzo(k)fluoranthene	0.003 JQ	<0.084 UL	<0 016	0.091	0 042	0.0064 JQ	0.053 JQ	<0 017
Chrysene	0 0049 JQ	<0.084 UL	<0.016	0.13	0.057	0.031	0 054 JQ	<0 017
Dibenzo(a,h)anthracene	<0.0083	<0 084 UL	<0.016	0.023	0 0088	<0 0084	<0.082 UL	<0.017
Fluoranthene	0 007 JQ	<0.084 UL	<0.016	0.19	0 11	0 14	0.11 JL	<0.017
Fluorene	<0.0083	<0 084 UL	<0.016	0.0022 JQ	0 0052 JQ	0 0016 JQ	<0 082 UL	<0 017
Indeno(1,2,3-cd)pyrene	0 0037 JQ	<0 084 UL	<0.016	0 061	0 03	0 0032 JQ	<0 082 UL	<0 017
Naphthalene	<0.0083	<0 084 UL	<0.016	<0 0078	0 0041 JQ	<0 0084	<0 082 UL	<0 017
Phenanthrene	0 0031 JQ	<0 084 UL	<0.016	0 057	0 065	0.0087	0.062 JQ	<0 017
Pyrene	0 0061 JQ	<0 084 UL	<0 016	0 14	0 1	0 14	0 098 JL	<0 017
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg								
Benzo(a)anthracene	NA	<0 42	<0 82	NA	NA	NA	<0 41	<0 84
Benzo(a)pyrene	NA	<0 42	<0 82	NA	NA	NA	<0 41	<0 84
Benzo(b)fluoranthene	NA	<0 42	<0 82	NA	NA	NA	<0 41	<0 84
Benzoic acid	<2 1 R	<0.84 UJ	<1 6	<1	<2 2 UJ	<2 1 R	<0 82 UJ	<1 7
Chrysene	NA	<0 42	<0 82	NA	NA	NA	<0.41	<0 84
Fluoranthene	NA	<0 42	<0 82	NA	NA	NA	<0 41	<0 84
Thallium (Total) - SW846 7841 mg/Kg								
Thallium	0 11 JH	<0 646	<0.588	<1 2	<1 3	0 15 JL	<0 599	<0 592
Total Organic Carbon - SW846 9060 mg/kg								

TABLE A-7

DETECTED CONSTITUENT SUMMARY TABLE - KINGSLAND CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location	KGC-3-SD	KGC-3-SD	KGC-3-SD	SP-14-SD	SP-14-SD	SP-14-SD	SP-14-SD	SP-14-SD
Sample Date	4/23/2003	11/12/2003	4/21/2004	11/27/2001	11/14/2002	4/24/2003	11/13/2003	4/22/2004
Total Organic Carbon	<12	NA	NA	<12	2 JH	<13	NA	NA
Total Organic Carbon - WB TOC %								
Total Organic Carbon	NA	0 22	0.11	NA	NA	NA	0.22	0 14
Volatile Organic Compounds - SW846 8260B mg/Kg								
1,1,1-Trichloroethane	<0.0062	<0 0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
1,1-Dichloroethane	<0 0062	<0 0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
1,1-Dichloroethene	<0 0062	<0 0063	<0.006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
1,2,4-Trichlorobenzene	0 00093 JQ	<0 0063 UJ	<0 006	<0 0059	<0 0064	<0 0063 UJ	<0 0062 UJ	<0 0062
1,2-Dichlorobenzene	<0 0062	<0 0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
1,4-Dichlorobenzene	<0 0062	<0 0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
Acetone	<0 025 UJ	<0 013 R	0.0081 JB	<0 023	<0 026 UJ	<0 025 UJ	<0 012	0.01 JQ
Carbon disulfide	<0 0062	<0 0063 R	<0 006 UJ	<0 0059	<0 0064	<0 0063	<0 0062	0 003 JQ
Chloroform	<0 0062	<0.0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
cis-1,2-Dichloroethene	<0 0031	<0 0063	<0.006	<0 0029	<0 0032	<0 0031	<0 0062	<0 0062
Dichlorodifluoromethane	<0.0062 UJ	<0 0063	<0 006	<0.0059	<0.0064	<0.0063 UJ	<0.0062 UJ	<0 0062
Methylene chloride	<0 0062	<0.0063	<0 006	<0.0059	0.0034 JB	<0 0063	<0.0062 UJ	0.0037 JB
Tetrachloroethene	<0 0062	<0.0063	<0 006	<0 0059	<0 0064	<0 0063	<0 0062	<0 0062
trans-1,2-Dichloroethene	<0 0031	<0 0063	<0.006	<0.0029	<0 0032	<0.0031	<0 0062	<0 0062
Trichloroethene	<0 0062	<0 0063	<0.006	<0 0059	<0 0064	<0 0063	<0.0062	<0 0062

Estimated; based on QC data
Estimated; possibly biased high or false
positive based on blank contamination
Estimated, Value is between reporting limit and detection limit
Not Analyzed
Undetected, Reported Detection Limit is imprecise
Undetected, Data biased low - Reported
Detection Limit is higher than indicated
Reporting Limit in parenthesis

PREPARED BY/DATE: RMB 3/30/05
CHECKED BY/DATE: EFC 3/31/05

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Duplicate	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location:	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-3-SD	NNC-3-SD
SampleDate	11/13/2001	11/13/2001	11/12/2002	4/22/2003	11/12/2003	4/21/2004	11/14/2001	11/12/2002
Arsenic - SW846 7060A (Total) mg/Kg								
Arsenic	8 9	9 9	7.4	4 3	3 39	3 57	3 2	4 4 J
Mercury (Total) - SW846 7471A mg/Kg								
Mercury	0.052 JB	0.74 J	0 027 JQ	0 019 JQ	0 023 JQ	0 011 JB	0 029 JB	<0 11 UL
Metals (Total) - SW846 6010B mg/Kg								
Aluminum	2500	2850	2080	2640	2010	1880	964	838 J
Antimony	<11 3 UJ	1 J	0 73 JQ	<11 3	<5 75	<6 16	<11 5 UJ	0 7 JQ
Barium	32 7 J	25 J	17 7	50 2	14 2	15.6	9 3	4 4 JQ
Beryllium	0 19 JB	0 27 JB	0 18 JQ	0 22 JQ	0 19 JQ	0 283 JB	0 12 JB	0 089 JQ
Cadmium	0 084 JQ	0 22 JQ	<1 3	<1.1	<0 115 UJ	<0 123 UJ	0 058 JQ	<1 1
Calcium	818	682 JQ	1230	1370	523	891	366 JQ	134 JQ
Chromium	12 8 JQ	12.6 JQ	8 2 JQ	9 JQ	9 82	41.7	3.5 JQ	5.7 JQ
Cobalt	3 4 JQ	2.4 JQ	2 7 JQ	4 9 JQ	2 91	3 08	1 8 JQ	0 8 JQ
Copper	10 7 J	14 1 J	7 5	10 6	9.49	9 31	5	3 1 J
Iron	10600	9960	6070	9550	9180	10600	3560	2490 J
Lead	42.3	65.9	30 4	13	23 9	198	8 2	8 4 J
Magnesium	975 J	731 J	668	1510	571	695	290 JQ	122 JQ
Manganese	81.6	73.5	87.8	73	70 9	65 1	58.4	20 J
Molybdenum	0.62 JQ	0.92 JQ	0.27 JQ	0 23 JQ	0.589 JB	0 404 JQ	<25 2	<25 2
Nickel	3 6 JQ	3.3 JQ	2 2 JQ	3.5 JQ	2.08	3 76	1 4 JQ	1 JQ
Potassium	890	598 JQ	608 JQ	1470	500 JQ	496 JQ	256 JQ	114 JQ
Selenium	0 84	0 71 JQ	<0.66	<0 56	0 92 JQ	0 611 JQ	<0 57	<0 57
Silver	<1.1	<1.5	<1.3	<1 1	<1 15 UJ	<1.23 UJ	<1 1	<1 1
Sodium	<564	<728	<657	<564	132 JQ	133 JQ	<574	<573
Vanadium	13.9	12.3	9	13 2	10.9	9 33	4.9 JQ	4 JQ
Zinc	29.7 J	63 3 J	20.4	19 5	21 3	45.7	14 4 JB	9.2 J
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L								
Nitrogen, Ammonia (as N)	0 4 J	0.8 J	0 09 JQ	0 2 JB	<0.1	4 2	0 3	0 03 JQ
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg								
4,4'-DDD	<0 048	<0 062	<0.045	0 0028 J	<0.00383	<0 00206	<0.002	<0 019
4,4'-DDE	<0 048	<0.062	<0.045 UJ	0 0017 JQ	<0 00383	0 00296	<0 002	<0 019 UJ
4,4'-DDT	<0 073	<0.095	<0.045 UJ	0 0033	0 00205 JQ	0 00665	0 0024	<0 019 UJ
Dieldrin	<0 085	<0 11	<0 045 UJ	<0 0019	<0 00383	<0.00206	<0 0034	<0 019 UJ
Endrin ketone	<0 048	<0 062	<0 045 UJ	0 0036 J	<0 00383 UJ	<0 00206	<0 002	<0.019 UJ
gamma-Chlordane	<0 048	<0 062	<0.045 UJ	0.0023 J	<0 00383	<0 00206	<0 002	<0 019 UJ

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type	Sample	Duplicate	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-2-SD	NNC-3-SD	NNC-3-SD
SampleDate:	11/13/2001	11/13/2001	11/12/2002	4/22/2003	11/12/2003	4/21/2004	11/14/2001	11/12/2002
Methoxychlor	<0.093	<0 12	<0 087	0 0025 JQ	<0 00383	<0.00206	<0.0038	<0.038
Percent Solids - D2216, E160.3 %								
Percent Solids	88.7	68.7	76.1	88 7	87	81	87 2	87.3
pH - EPA 150.1, SW9040B MOD pH Units								
pH	6 8	6 8	6	6 6	NA	NA	7 1	5 7
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level mg/kg								
1-Methylnaphthalene	NA	NA	NA	NA	<0 077 UL	0 014 JQ	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	<0 077 UL	0 026	NA	NA
Acenaphthene	0 069 JQ	0.84 J	0 097	0 034	<0 077 UL	0 17	<0 0077	0 0026 JQ
Acenaphthylene	<0 075 UJ	<0 49	<0 088	<0 0075	<0 077 UL	<0 016	<0 0077	0 0017 JQ
Anthracene	0 29 J	2.3 J	0.31	0 11	<0 077 UL	0 53	0 014	0 0056 JQ
Benzo(a)anthracene	1 5 J	9.9 J	1 1	0 17	0 16 JL	1 3 J	0 12	0 025 J
Benzo(a)pyrene	1 1 J	7 1 J	0 97	0 13	0 2 JL	1 1 J	0 13	0 032 J
Benzo(b)fluoranthene	1 3 J	9.7 J	1 2	0 13	0 27 JL	1.3 J	0 18	0 043 J
Benzo(ghi)perylene	0 43 J	2.3 J	0 53	0 047	0 096 JL	0 58 J	0.063	0 025 J
Benzo(k)fluoranthene	0 67 J	4 3 J	0 72	0 1	0 21 JL	0 9 J	0 086	0 031 J
Carbazole	NA	NA	NA	0 066	NA	NA	NA	NA
Chrysene	1 7 J	11 J	1 5	0 16	0 22 JL	1 2 J	0 15	0 038 J
Dibenzo(a,h)anthracene	0 13 J	0.82 J	0 14	0 02	0 062 JL	0 38 J	0 013	0 0055 JQ
Fluoranthene	3 3 J	22 J	3 1	0 44	0 37 JL	2 5	0 35	0 049 J
Fluorene	0 069 JQ	0 87 J	0.094	0.038	<0 077 UL	0 19	0 0014 JQ	0 0022 JQ
Indeno(1,2,3-cd)pyrene	0.45 J	2.5 J	0 46	0 052	0 12 JL	0 74 J	0 054	0.022 J
Naphthalene	0 043 JQ	0 36 JQ	0 039 JQ	0 024	<0 077 UL	0 046	<0 0077	0 0018 JQ
Phenanthrene	1.4 J	9 9 J	1.3	0 45	0 18 JL	1 3	0 11	0 023 J
Pyrene	2.6 J	17 J	2 2	0 3	0 4 JL	2.4 J	0 29	0 038 J
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg								
Anthracene	NA	NA	NA	NA	0 12 JQ	<0 82	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	0.53	0 66 JQ	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	0 43	0 48 JQ	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	0.42	0 51 JQ	NA	NA
Benzo(ghi)perylene	NA	NA	NA	NA	0.26 JQ	0 27 JQ	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	0.4	0 54 JQ	NA	NA
bis(2-Ethylhexyl)phthalate	<0 19 R	1.1	0 053	<0 37	<0 38	0 18 JB	<0 19	<0 38
Carbazole	NA	NA	0 18 JQ	NA	NA	NA	NA	<0 38
Chrysene	NA	NA	NA	NA	0.6	0 83	NA	NA

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type Sample Location. SampleDate	Sample NNC-2-SD 11/13/2001	Duplicate NNC-2-SD 11/13/2001	Sample NNC-2-SD 11/12/2002	Sample NNC-2-SD 4/22/2003	Sample NNC-2-SD 11/12/2003	Sample NNC-2-SD 4/21/2004	Sample NNC-3-SD 11/14/2001	Sample NNC-3-SD 11/12/2002
Dibenzo(a,h)anthracene		NA	NA	NA	NA	0.12 JQ	<0.82	NA	NA
Dibenzofuran		<0 19 R	0 6	<0 43	0 037 JQ	<0 38	<0 82	<0 19	<0 38
Fluoranthene		NA	NA	NA	NA	1 1	1 3	NA	NA
Fluorene		NA	NA	NA	NA	<0.38	<0 82	NA	NA
Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA	0.23 JQ	0 29 JQ	NA	NA
Phenanthrene		NA	NA	NA	NA	0.62	0 5 JQ	NA	NA
Pyrene		NA	NA	NA	NA	1	1	NA	NA
Thallium (Total) - SW846 7841 mg/Kg									
Thallium		0 51 JQ	0 39 JQ	0 18 JQ	0 23 JQ	<0 569	<0.599	0 18 JQ	<1 1
Total Organic Carbon - SW846 9060 mg/kg									
Total Organic Carbon		16 J	2 JQ	2 JH	<11	NA	NA	12	2 JH
Total Organic Carbon - WB TOC %									
Total Organic Carbon		NA	NA	NA	NA	<0 11	0 19	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg									
Acetone		0 0038 R	0 015 R	<0 026 UJ	<0 023 UJ	<0 011 R	0 0079 JB	<0 023	<0 023 UJ
Carbon disulfide		<0 0056	<0 0073	<0 0066	<0.0056	<0 0057 R	0 0019 JQ	<0 0057	<0 0057
Dichlorodifluoromethane		<0 0056	<0 0073	<0 0066	<0.0056 UJ	<0 0057	<0 0061	<0 0057	<0 0057
Methylene chloride		0 0017 JB	0 0026 JB	0 0034 JB	<0 0056 UJ	<0 0057	0 0021 JQ	0 0028 JB	0 0034 JB
Styrene		<0 0056	<0 0073	<0 0066	<0 0056	<0 0057	<0 0061	<0 0057	<0 0057
Tetrachloroethene		0 0014 JQ	<0 0073	<0 0066	<0.0056	<0 0057	<0 0061	<0.0057	<0 0057
Toluene		<0.0056	0.0016 JB	<0 0066	<0.0056	<0 0057	<0 0061	<0 0057	<0 0057
Trichloroethene		<0 0056	0 0033 JQ	<0 0066	<0 0056	<0.0057	<0 0061	<0 0057	<0 0057

Notes:

J	Estimated, based on QC data
JB	Estimated; possibly biased high or false positive based on blank contamination
JQ	Estimated; Value is between reporting limit and detection limit
NA	Not Analyzed
UL	Undetected, Reported Detection Limit is imprecise
UL	Undetected; Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample
Sample Location	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-4-SD
SampleDate	11/12/2002	4/22/2003	4/22/2003	11/11/2003	11/11/2003	4/21/2004	4/21/2004	11/13/2001
Arsenic - SW846 7060A (Total) mg/Kg								
Arsenic	8 1 J	7	5	5 41 J	11 J	2 9	3 08	1 5
Mercury (Total) - SW846 7471A mg/Kg								
Mercury	<0 12 UL	<0.13	<0 12	0 011 JQ	0.015 JQ	0 012 JB	0 045 JB	0 012 JB
Metals (Total) - SW846 6010B mg/Kg								
Aluminum	1250 J	1180	1050	1400	1560	1230 J	1640 J	775 JH
Antimony	2.4 JQ	0 3 JQ	<12	<6.17	<6 17	<6 01	<6 21	<12.5 UJ
Barium	5 3 JQ	6.6	7.7	7 49 J	10 1 J	14	13.7	2.9 JQ
Beryllium	0 15 JQ	0.16 JQ	0.13 JQ	0 0988 JQ	0 123 JQ	0.198 JB	0.236 JB	<1.3
Cadmium	0 023 JQ	<1 3	<1.2	<0.123 UL	<0 123 UL	<0.12 UJ	<0.124 UJ	<1 3
Calcium	160 JQ	206 JQ	160 JQ	329	299	355	292	123 JQ
Chromium	17.5 JQ	6 JQ	5 9 JQ	7 95	8 29	6 57	6 77	1.5 JQ
Cobalt	1.3 JQ	1.5 JQ	1.1 JQ	1 09 JQ	1 36	1 3	1 6	0 41 JQ
Copper	10 9 J	3 3	2.8	4 56	4 73	32 3 J	56 6 J	8 2 J
Iron	4220 J	4460 J	3210 J	5390	6940	4490 J	7220 J	1830
Lead	77 6 J	10.5	9.7	13 9	12.1	19	22.6	3
Magnesium	207 JQ	279 JQ	159 JQ	357	443	331	364	151 J
Manganese	26 3 J	51 7 J	30 2 J	36 8	42	32 3	34.4	10 1 J
Molybdenum	0.32 JQ	0 39 JQ	<26 4	0 296 JB	0 277 JB	0 212 JQ	0 249 JQ	<27.5
Nickel	1.5 JQ	1.5 JQ	1 1 JQ	1 9	2 38	3 23	3 87	0 43 JQ
Potassium	103 JQ	298 JQ	93 8 JQ	258 JQ	351 JQ	201 JQ	234 JQ	53 JQ
Selenium	<0 6	<0.65	<0 6	<0 622	<0 622	<0.606 UJ	0 338 JQ	<0 63
Silver	0 13 JQ	<1 3	<1 2	<1 23 UJ	<1 23 UJ	<1 2 UJ	<1 24 UJ	<1 3
Sodium	<602	<650	<599	143 JH	134 JH	146 JQ	145 JQ	<626
Vanadium	5 5 JQ	5 4 JQ	4 4 JQ	7 02	7 51	7 J	11 6 J	3 8 JQ
Zinc	22 7 J	14.4	12.4	11 9	15 3	22.4	37	4 5 JB
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L								
Nitrogen, Ammonia (as N)	0.1 JQ	0.2 JB	0 4 JB	<0.1	<0 1	4 9	4 54	0 09 JB
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg								
4,4'-DDD	<0 02	0 0053 J	0 006	<0 00412	<0 00412	<0.00201	<0 00208	<0 011
4,4'-DDE	<0.02 UJ	0 005 J	0 0023 J	<0 00412	<0 00412	<0.00201	<0 00208	<0 011
4,4'-DDT	<0.02 UJ	0 0034 J	0 0041 J	<0 00412	<0 00412	<0 00201	<0 00208	<0 016
Dieldrin	<0 02 UJ	0.0012 JQ	0 0011 JQ	<0 00412	<0 00412	<0 00201	<0 00208	<0 019
Endrin ketone	<0 02 UJ	0 0059 J	0 003 J	<0.00412 R	<0 00412 R	<0.00201	<0 00208	<0 011
gamma-Chlordane	<0 02 UJ	0 003 J	0.0022 J	<0.00412	<0 00412	<0 00201	<0 00208	<0 011

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample
Sample Location	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-4-SD
SampleDate	11/12/2002	4/22/2003	4/22/2003	11/11/2003	11/11/2003	4/21/2004	4/21/2004	11/13/2001
Methoxychlor	<0 04	0 0026 JQ	0.0067 J	<0 00412	<0 00412	<0 00201	<0 00208	<0 021
Percent Solids - D2216, E160 3 %								
Percent Solids	83.1	77	83 5	81	81	83	80	79 9
pH - EPA 150.1, SW9040B MOD pH Units								
pH	5.8	6.9	7.1	NA	5.8	NA	6 6	6 4
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level mg/kg								
1-Methylnaphthalene	NA	NA	NA	<0 082 UL	<0 082 UL	0 0068 JQ	<0 017	NA
2-Methylnaphthalene	NA	NA	NA	<0 082 UL	<0.082 UL	0 013 JQ	<0.017	NA
Acenaphthene	0 0094 J	0 0011 JQ	0 0027 JQ	<0 082 UL	<0.082 UL	0 046	0 01 JQ	0 0022 JQ
Acenaphthylene	<0 008	0 0011 JQ	0 0018 JQ	<0 082 UL	<0 082 UL	<0.016	<0.017	<0 0084
Anthracene	0.023 J	0 0039 JQ	0.045 J	0.069 JQ	<0.082 UL	0 11 J	0.03 J	0.014
Benzo(a)anthracene	0 1 J	0 042 J	0 68 J	0 22 JL	0 078 JQ	0 5 J	0 16 J	0 084
Benzo(a)pyrene	0 099 J	0 069 J	0 55 J	0 19 JL	0 11 JL	0 42 J	0 13 J	0 059
Benzo(b)fluoranthene	0.12 J	0 1 J	0 74 J	0 21 JL	0 12 JL	0 52 J	0 17 J	0 07
Benzo(ghi)perylene	0 067 J	0 046 J	0.19 J	0.088 JL	0 055 JQ	0 27 J	0.12 J	0.017
Benzo(k)fluoranthene	0 091 J	0 059 J	0.39 J	0.23 JL	0 12 JL	0 32 J	0.11 J	0 035
Carbazole	NA	0 0086 JQ	0.054 J	NA	NA	NA	NA	NA
Chrysene	0 14 J	0.09 J	0.87 J	0 24 JL	0 1 JL	0 4 J	0.15 J	0 095
Dibenzo(a,h)anthracene	0 019 J	0.012 J	0 073 J	0 071 JQ	<0 082 UL	0.17 J	0 061 J	0 0059 JQ
Fluoranthene	0 26 J	0 16 J	1 3 J	0 43 JL	0 11 JL	0 79 J	0 3 J	0 17
Fluorene	0 0061 JQ	0 0016 JQ	0 005 JQ	<0 082 UL	<0 082 UL	<0 8	0 012 JQ	0 0036 JQ
Indeno(1,2,3-cd)pyrene	0 059 J	0.043 J	0 2 J	0.11 JL	0.069 JQ	0 34 J	0 1 J	0 018
Naphthalene	0 0017 JQ	0 0011 JQ	0 0017 JQ	<0 082 UL	<0 082 UL	0 021	<0 017	<0 0084
Phenanthrene	0.12 J	0.054 J	0 28 J	0.3 JL	0 042 JQ	0 48 J	0 13 J	0 057
Pyrene	0 16 J	0 15 J	1 2 J	0.43 JL	0 13 JL	0 73 J	0 2 J	0 13
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg								
Anthracene	NA	NA	NA	<2 1 UL	<2 1 UL	0 23 JQ	<0 83	NA
Benzo(a)anthracene	NA	NA	NA	<2 1 UL	<2.1 UL	0.58 JQ	0 54 JQ	NA
Benzo(a)pyrene	NA	NA	NA	<2 1 UL	<2 1 UL	0 52 JQ	0 49 JQ	NA
Benzo(b)fluoranthene	NA	NA	NA	<2 1 UL	<2 1 UL	0.55 JQ	0 47 JQ	NA
Benzo(ghi)perylene	NA	NA	NA	<2 1 UL	<2 1 UL	0 31 JQ	0.3 JQ	NA
Benzo(k)fluoranthene	NA	NA	NA	<2 1 UL	<2 1 UL	0 4 JQ	0 47 JQ	NA
bis(2-Ethylhexyl)phthalate	<0 4	0 035 JQ	0 04 JQ	<2 1 UL	<2 1 UL	<0 8	<0 83	<0 21
Carbazole	<0 4	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	<2.1 UL	<2.1 UL	0 66 JQ	0 75 JQ	NA

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample	Duplicate	Sample
	Sample Location	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-3-SD	NNC-4-SD
	SampleDate	11/12/2002	4/22/2003	4/22/2003	11/11/2003	11/11/2003	4/21/2004	4/21/2004	11/13/2001
Dibenzo(a,h)anthracene		NA	NA	NA	<2.1 UL	<2 1 UL	<0 8	<0.83	NA
Dibenzofuran		<0 4	<0 43	<0 4	<2 1 UL	<2 1 UL	<0 8	<0 83	<0 21
Fluoranthene		NA	NA	NA	<2.1 UL	<2.1 UL	1 3	1 4	NA
Fluorene		NA	NA	NA	<2 1 UL	<2 1 UL	0 047 JQ	<0 83	NA
Indeno(1,2,3-cd)pyrene		NA	NA	NA	<2 1 UL	<2 1 UL	0 35 JQ	<0 83	NA
Phenanthrene		NA	NA	NA	<2.1 UL	<2 1 UL	0 94	0 45 JQ	NA
Pyrene		NA	NA	NA	<2.1 UL	<2 1 UL	0.97	1 1	NA
Thallium (Total) - SW846 7841 mg/Kg									
Thallium		<1.2	0 13 JH	<1 2 UL	<0.617	<0 605	<0 574	<0 584	0 15 JQ
Total Organic Carbon - SW846 9060 mg/kg									
Total Organic Carbon		1 JH	<13	<12	NA	NA	NA	NA	0 7 JQ
Total Organic Carbon - WB TOC %									
Total Organic Carbon		NA	NA	NA	0 22	0 16	0 44	0 43	NA
Volatile Organic Compounds - SW846 8260B mg/Kg									
Acetone		<0.024 UJ	<0 026 UJ	<0 024 UJ	<0.012 R	<0 012 R	0 01 JB	0 012 JB	0 0073 R
Carbon disulfide		<0.006	<0 0065	<0 006	<0 0062 R	<0 0062 R	0 0022 JQ	0 0019 JQ	<0 0063
Dichlorodifluoromethane		<0.006	<0 0065 UJ	<0.006 UJ	0 003 JQ	0.0037 JQ	<0 006	<0 006	<0 0063
Methylene chloride		0 0031 JB	<0 0065 UJ	<0.006 UJ	<0 0062 UJ	<0 0062 UJ	0 0036 JQ	0 0022 JQ	0 0019 JB
Styrene		<0 006	<0 0065	<0.006	<0.0062	<0.0062	0 003 JQ	0 0013 JQ	<0 0063
Tetrachloroethene		<0 006	<0.0065	<0.006	<0 0062	<0 0062	<0.006	<0 006	<0 0063
Toluene		<0 006	<0 0065	<0.006	<0 0062	<0.0062	<0 006	<0.006	0 00066 JB
Trichloroethene		<0 006	<0 0065	<0 006	<0 0062	<0 0062	0 002 JQ	<0 006	<0 0063

Notes:

J	Estimated, based on QC data
JB	Estimated, possibly biased high or false positive based on blank contamination
JQ	Estimated; Value is between reporting limit and detection limit
NA	Not Analyzed
UL	Undetected, Reported Detection Limit is imprecise
UL	Undetected, Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type Sample Location SampleDate:	Sample NNC-4-SD 11/12/2002	Sample NNC-4-SD 4/22/2003	Sample NNC-4-SD 11/11/2003	Sample NNC-4-SD 4/21/2004
Arsenic - SW846 7060A (Total) mg/Kg				
Arsenic	5.4	2.5	4 72	3.4
Mercury (Total) - SW846 7471A mg/Kg				
Mercury	<0.13 UL	<0 14	0 017 JQ	0 024 JB
Metals (Total) - SW846 6010B mg/Kg				
Aluminum	1800	1720	1910	8070
Antimony	0 83 JQ	<13 5	<6 58	<6 24
Barium	14 7	16	13.2	31 4
Beryllium	0 26 JQ	0.15 JQ	0.105 JQ	0.418
Cadmium	0 067 JQ	<1 4	<0 132 UL	<0 125 UJ
Calcium	212 JQ	266 JQ	255	444
Chromium	13 9 JQ	3.5 JQ	5.54	24 2
Cobalt	1 9 JQ	1 1 JQ	1 11 JQ	1 54
Copper	6 4	1.9 JQ	3 2	4 73
Iron	7540	3120	3740	12200
Lead	17 7	8 3	15.2	32.2
Magnesium	366 JQ	414 JQ	245	390
Manganese	42.9	25.1	35.2	30 7
Molybdenum	0 26 JQ	<29 7	0 253 JB	0 379 JQ
Nickel	3.4 JQ	1.2 JQ	1.22 JQ	8 41
Potassium	314 JQ	351 JQ	239 JQ	386 JQ
Selenium	<0 63	<0 68	<0 663	0 619 JQ
Silver	<1.3	<1 4	<1 32 UJ	<1.25 UJ
Sodium	<634	<675	133 JH	165 JQ
Vanadium	9 3	7 6	8 82	37.4
Zinc	40 4	16 3	19.6	19.6
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L				
Nitrogen, Ammonia (as N)	0.6	0.4 JB	<0.1	3 5
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg				
4,4'-DDD	<0 043	0.00084 JQ	<0 00439	<0 00208
4,4'-DDE	<0 043 UJ	0 00095 JQ	<0 00439	<0 00208
4,4'-DDT	<0 043 UJ	<0.0023	<0 00439	<0 00208
Dieldrin	<0 043 UJ	0 00068 JQ	<0 00439	<0 00208
Endrin ketone	<0 043 UJ	<0 0023	<0 00439 R	<0.00208
gamma-Chlordane	<0.043 UJ	0 0021 JQ	<0 00439	<0 00208

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type. Sample Location: SampleDate:	Sample NNC-4-SD 11/12/2002	Sample NNC-4-SD 4/22/2003	Sample NNC-4-SD 11/11/2003	Sample NNC-4-SD 4/21/2004
Methoxychlor	<0.084	<0.0045	<0.00439	<0.00208
Percent Solids - D2216, E160.3 %				
Percent Solids	78.9	74 1	76	80
pH - EPA 150.1, SW9040B MOD pH Units				
pH	5.9	5 9	NA	NA
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level mg/kg				
1-Methylnaphthalene	NA	NA	<0.088 UL	<0 017
2-Methylnaphthalene	NA	NA	<0 088 UL	0.011 JQ
Acenaphthene	2 8	0 0017 JQ	<0 088 UL	0 028
Acenaphthylene	<0 68	<0 009	<0 088 UL	<0 017
Anthracene	4 4	0 0068 JQ	0 067 JQ	0 062
Benzo(a)anthracene	10	0 037	0 22 JL	0 23
Benzo(a)pyrene	9 5	0 035	0 22 JL	0 17
Benzo(b)fluoranthene	11	0 049	0 21 JL	0 19
Benzo(ghi)perylene	5.3	0 019	0.14 JL	0 12
Benzo(k)fluoranthene	6 5	0 028	0 27 JL	0 13
Carbazole	NA	0 0047 JQ	NA	NA
Chrysene	12	0 048	0 25 JL	0 17
Dibenzo(a,h)anthracene	1 5	0 0055 JQ	0 076 JQ	0 082
Fluoranthene	26	0 073	0 49 JL	0 39
Fluorene	1 5	0 0018 JQ	<0 088 UL	0 035
Indeno(1,2,3-cd)pyrene	4 8	0 018	0.14 JL	0 13 JQ
Naphthalene	0.86	<0.009	<0.088 UL	0 013
Phenanthrene	19	0 03	0.31 JL	0 27
Pyrene	26	0.079 J	0.52 JL	0.32
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg				
Anthracene	NA	NA	<2 2 UL	<0.83
Benzo(a)anthracene	NA	NA	<2 2 UL	0 19 JQ
Benzo(a)pyrene	NA	NA	<2 2 UL	0 17 JQ
Benzo(b)fluoranthene	NA	NA	<2 2 UL	0 18 JQ
Benzo(ghi)perylene	NA	NA	<2 2 UL	<0 83
Benzo(k)fluoranthene	NA	NA	<2 2 UL	0 19 JQ
bis(2-Ethylhexyl)phthalate	<0 42	0 027 JQ	<2 2 UL	<0.83
Carbazole	<0 42	NA	NA	NA
Chrysene	NA	NA	<2.2 UL	0 26 JQ

TABLE A-8

DETECTED CONSTITUENT SUMMARY TABLE - NO NAME CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample
Sample Location	NNC-4-SD	NNC-4-SD	NNC-4-SD	NNC-4-SD
SampleDate	11/12/2002	4/22/2003	11/11/2003	4/21/2004
Dibenzo(a,h)anthracene	NA	NA	<2 2 UL	<0.83
Dibenzofuran	<0 42	<0 45	<2 2 UL	<0.83
Fluoranthene	NA	NA	<2 2 UL	0 26 JQ
Fluorene	NA	NA	<2.2 UL	<0.83
Indeno(1,2,3-cd)pyrene	NA	NA	<2.2 UL	<0.83
Phenanthrene	NA	NA	<2 2 UL	<0.83
Pyrene	NA	NA	<2 2 UL	0 22 JQ
Thallium (Total) - SW846 7841 mg/Kg				
Thallium	<1.3	<1.4	<0 651	<0 613
Total Organic Carbon - SW846 9060 mg/kg				
Total Organic Carbon	2 JH	<14	NA	NA
Total Organic Carbon - WB TOC %				
Total Organic Carbon	NA	NA	0 28	0 3
Volatile Organic Compounds - SW846 8260B mg/Kg				
Acetone	<0 025 UJ	<0 027 UJ	<0 013 R	0 0072 JB
Carbon disulfide	<0 0063	<0 0068	<0 0066 R	0 0031 JQ
Dichlorodifluoromethane	<0 0063	<0 0068 UJ	0 0026 JQ	<0 0062
Methylene chloride	0 0024 JB	<0 0068 UJ	<0 0066 UJ	<0 0062
Styrene	<0 0063	<0 0068	<0 0066	<0 0062
Tetrachloroethene	<0 0063	<0 0068	<0 0066	<0.0062
Toluene	<0 0063	<0 0068	<0 0066	<0.0062
Trichloroethene	<0 0063	<0 0068	<0 0066	<0.0062

Notes:

J	Estimated; based on QC data
JB	Estimated; possibly biased high or false positive based on blank contamination
JQ	Estimated; Value is between reporting limit and detection limit
NA	Not Analyzed
UL	Undetected; Reported Detection Limit is imprecise
UL	Undetected; Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

PREPARED BY/DATE RMB 3/30/05
CHECKED BY/DATE EFC 3/31/05

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type	Sample	Sample	Sample	Sample	Sample	Sample	Duplicate
Sample Location	BM-1-SD	BM-1-SD	BM-1-SD	BM-1-SD	BM-1-SD	BM-2-SD	BM-2-SD
Sample Date	11/16/2001	11/13/2002	4/21/2003	11/10/2003	4/20/2004	11/15/2001	11/15/2001
Arsenic - SW846 7060A (Total) mg/Kg							
Arsenic	0 82	1 5 JB	0 64	<1 23	1 02 JQ	0 76	<0 64
Mercury (Total) - SW846 7471A mg/Kg							
Mercury	<0.12	<0 13 UL	<0.12	0 004 JQ	0.014 JQ	0.037 JB	<0 13
Metals (Total) - SW846 6010B mg/Kg							
Aluminum	1200	1310	692	1900	3000	1390 J	2090 J
Antimony	<12 4 UJ	0 49 JQ	<12 1	<6.1	<6 33 UL	<12.5 UJ	<12 8 UJ
Barium	6.6	8.1	5.2 JQ	11.1 JQ	21.7	10 4 J	13.7 J
Beryllium	0.15 JB	0 18 JQ	0 1 JQ	0 116 JB	0.335 JB	0.099 JB	0 14 JB
Calcium	167 JQ	149 JQ	102 JQ	199	397	163 JQ	126 JQ
Chromium	1.2 JQ	3 6 JQ	1 2 JQ	4 3	5 73	3 1 JQ	8 9 JQ
Cobalt	1.8 JQ	0 85 JQ	0.57 JQ	1 46	2 41	0 81 JQ	1 3 JQ
Copper	0 84 JQ	1 3 JQ	0.24 JQ	1 84 JB	3 44	1 4 JQ	3.7
Iron	2790	3280	1150	3820	5320	2660 J	3730 J
Lead	1 6	2 5	1 5	3 24 JB	5 49	3 8 J	20 6 J
Magnesium	399 JQ	353 JQ	227 JQ	726	1010	373 JQ	846
Manganese	61.7	36 5	25 4	69 7	109 J	29 3 J	54.4 J
Molybdenum	<27.3	0 54 JQ	<26 7	0 595 JB	0 476 JQ	0.26 JQ	<28 2
Nickel	0.6 JQ	1 3 JQ	0 36 JQ	1 84	3 19	1 2 JQ	1 7 JQ
Potassium	497 JQ	405 JQ	229 JQ	896	1070	393 JQ	996
Selenium	0 45 JQ	<0.63	<0 61	<0 615 UJ	0 415 JQ	<0 62	<0 64
Sodium	<620	<627	<607	122 JH	144 JQ	<623	<642
Vanadium	3 9 JQ	12	2.6 JQ	7 59	10 6	5 JQ	9 1
Zinc	7.6 JB	10 7	5.6	10.9	5 49	8 8 JB	11 1 JB
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L							
Nitrogen, Ammonia (as N)	0.1 JB	0 1 JQ	0 04 JB	<0 1	2 22	0 1 JB	0 2 JB
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg							
4,4'-DDD	<0 0053	<0 011	<0 0021	<0 00407	<0 00211	<0 0053	<0 0055
4,4'-DDE	<0 0053	<0 011 UJ	0 00075 JQ	<0 00407	<0 00211	<0 0053	<0 0055
alpha-Chlordane	<0 0053	<0 011 UJ	<0 0021	<0.00407	<0 00211	<0 0053	<0 0055
Endrin aldehyde	<0 0093	<0 011	<0 0021	<0 00407	<0 00211	<0 0093	<0 0096
Endrin ketone	<0 0053	<0 011 UJ	<0.0021	<0.00407	<0 00211	<0.0053	<0 0055
gamma-Chlordane	<0.0053	<0 011 UJ	0 0014 JQ	<0.00407	<0 00211	<0 0053	<0 0055
Percent Solids - D2216, E160.3 %							

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type Sample Location Sample Date	Sample BM-1-SD 11/16/2001	Sample BM-1-SD 11/13/2002	Sample BM-1-SD 4/21/2003	Sample BM-1-SD 11/10/2003	Sample BM-1-SD 4/20/2004	Sample BM-2-SD 11/15/2001	Duplicate BM-2-SD 11/15/2001
Percent Solids	80 6	79.8	82 4	82	79	80.3	77.9
pH - EPA 150.1, SW9040B MOD pH Units							
pH	6 5	6 8	6 6	NA	NA	5 5	5
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg							
PCB-1248	<0.02	<0.041	<0 04	<0.02	<0 042 UJ	<0 021	<0 021
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level mg/kg							
1-Methylnaphthalene	NA	NA	NA	<0 081 UL	0 0056 JQ	NA	NA
2-Methylnaphthalene	NA	NA	NA	<0 081 UL	0 011	NA	NA
Acenaphthene	<0 0083	0.0021 JQ	0.0038 JQ	<0 081 UL	0 038	0 024 J	0 012 J
Acenaphthylene	<0 0083	<0 0084	<0 0081	<0 081 UL	<0 017	<0 0083	<0 0086
Anthracene	0 013	0 0071 JQ	0.025	<0 081 UL	0.28	0.11	0.066
Benzo(a)anthracene	0 055	0 05	0.1	0 11 JL	1 4	0.61	0 39
Benzo(a)pyrene	0 06	0.065	0 12	0.14 JL	1 2	0.68	0 44
Benzo(b)fluoranthene	0 076	0 094	0 14	0.19 JL	1 4	0.97	0 64
Benzo(ghi)perylene	0 025	0 047	0.062	0.061 JL	0.61	0.3	0 2
Benzo(k)fluoranthene	0 036	0 064	0.087	0.14 JL	0.88	0.45	0 31
Carbazole	NA	NA	0 024	NA	NA	NA	
Chrysene	0 063	0 085	0 15	0.16 JL	1	0.77	0.49
Dibenzo(a,h)anthracene	0.0069 JQ	0.013	0 021	0.049 JL	0.35	0 087	0.047
Fluoranthene	0 15	0 17	0 31	0 26 JL	3 1	1 9	1 1
Fluorene	0.0029 JQ	0 0028 JQ	0.0061 JQ	<0 081 UL	0 077	0 033	0 02
Indeno(1,2,3-cd)pyrene	0 025	0 045	0 061	0 094 JL	0.74	0.28	0 2
Naphthalene	<0 0083	<0.0084	<0 0081	<0.081 UL	<0 017	<0 0083	<0 0086
Phenanthrene	0 07	0 072	0.15	0 11 JL	1 4	0.72	0 53
Pyrene	0 11	0 097	0.21	0 25 JL	1 9	1 3	0 76
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg							
Anthracene	NA	NA	NA	<0 41 UL	<0 84	NA	NA
Benzo(a)anthracene	NA	NA	NA	0 25 JL	0 24 JQ	NA	NA
Benzo(a)pyrene	NA	NA	NA	0 29 JL	0 3 JQ	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	0.26 JL	0 33 JQ	NA	NA
Benzo(ghi)perylene	NA	NA	NA	0.21 JL	0 23 JQ	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	0 27 JL	0 27 JQ	NA	NA
bis(2-Ethylhexyl)phthalate	<0 2	<0 41	<0 4	<0 41 UL	<0.84 UJ	<0 21	<0 21
Carbazole	NA	0 06 JQ	NA	NA	NA	NA	NA

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type	Sample	Sample	Sample	Sample	Sample	Sample	Duplicate
	Sample Location	BM-1-SD	BM-1-SD	BM-1-SD	BM-1-SD	BM-1-SD	BM-2-SD	BM-2-SD
	Sample Date:	11/16/2001	11/13/2002	4/21/2003	11/10/2003	4/20/2004	11/15/2001	11/15/2001
Chrysene		NA	NA	NA	0 31 JL	0.4 JQ	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	0 085 JL	<0 84	NA	NA
Fluoranthene		NA	NA	NA	0 7 JL	0 69 JQ	NA	NA
Indeno(1,2,3-cd)pyrene		NA	NA	NA	0 19 JL	0.22 JQ	NA	NA
Phenanthrene		NA	NA	NA	0 31 JL	0.25 JQ	NA	NA
Pyrene		NA	NA	NA	0.52 JL	0.54 JQ	NA	NA
Thallium (Total) - SW846 7841 mg/Kg								
Thallium		<1 2	0 16 JQ	0 13 JQ	<0.616	<0 621	0 2 JQ	0 13 JQ
Total Organic Carbon - SW846 9060 mg/kg								
Total Organic Carbon		6 JQ	2 JH	<12	NA	NA	43 J	10 JQ
Total Organic Carbon - WB TOC %								
Total Organic Carbon		NA	NA	NA	0 15	0.38	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg								
Acetone		0 0048 JB	<0 025 UJ	<0 024 UJ	<0.012	0 0058 JQ	0 0061 JB	0 0062 JB
Dichlorodifluoromethane		<0.0062	<0 0063	<0 0061 UJ	0 0034 JQ	<0 0062	<0 0062	<0 0064
Methylene chloride		0.0029 JB	0.0026 JB	<0 0061 UJ	<0.0061	0.0045 JB	0.0042 JB	0 0043 JB
p-Isopropyltoluene		<0.0062	<0.0063	<0 0061	<0 0061	<0 0062	<0.0062	<0 0064
Toluene		<0.0062	<0 0063	<0 0061	<0 0061	<0 0062	<0 0062	<0 0064

Notes:

J	Estimated, based on QC data
JB	Estimated, possibly biased high or false positive based on blank contamination
JQ	Estimated, Value is between reporting limit and detection limit
NA	Not Analyzed
UJ	Undetected, Reported Detection Limit is imprecise
UL	Undetected, Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location:	BM-2-SD	BM-2-SD	BM-2-SD	BM-2-SD	BM-3-SD	BM-3-SD	BM-3-SD
Sample Date:	11/13/2002	4/22/2003	11/10/2003	4/20/2004	11/15/2001	11/13/2002	4/23/2003
Arsenic - SW846 7060A (Total) mg/Kg							
Arsenic	1 JB	0 86	0.954 JQ	<1.19	<0 62	2 7	0 65
Mercury (Total) - SW846 7471A mg/Kg							
Mercury	<0.13 UL	<0.13	0.0057 JQ	0 0067 JQ	0 011 JB	<0 12 UL	<0.12
Metals (Total) - SW846 6010B mg/Kg							
Aluminum	1750	1790	2320	2110	492	1050	973
Antimony	0 59 JQ	<12.7	<6.1	<6.21	<12.5 UJ	0 7 JQ	<12.3
Barium	13 3	23	11.9 JQ	12 8	3 2 JQ	4 JQ	5 9 JQ
Beryllium	0 18 JQ	0.21 JQ	0.116 JB	0.292 JB	0.083 JB	0 11 JQ	0 11 JQ
Calcium	236 JQ	223 JQ	314	340	138 JQ	144 JQ	138 JQ
Chromium	3.1 JQ	3 8 JQ	4 76	3 16	1 2 JQ	4.1 JQ	1 4 JQ
Cobalt	1 6 JQ	1 3 JQ	1.54	2 25	0 24 JB	0 42 JB	0 49 JQ
Copper	2 6 JQ	1 8 JQ	2 34 JB	4 49	0 6 JQ	1 4 JQ	1 JQ
Iron	3110	3260	4460	3940	1050	4140	1810
Lead	3.4	3.5	5 24 JB	2 72	3 8	3	3.8
Magnesium	647 JQ	584 JQ	764	717	143 JQ	98 3 JQ	271 JQ
Manganese	63 3	50 7	62 2	83 9	10.5	14.5	15 7
Molybdenum	0 29 JQ	<27.9	0 38 JB	0 815 JQ	<27 5	0 42 JQ	<27
Nickel	2 JQ	1.7 JQ	2.15	2.49	0 45 JQ	0 91 JQ	0 58 JQ
Potassium	730 JQ	615 JQ	822	728	127 JQ	87.1 JQ	92 1 JQ
Selenium	<0 66	<0 63	<0.615 UJ	0 239 JQ	0.42 JQ	<0 62	<0 61
Sodium	<664	<633	131 JH	134 JQ	<625	<623	<614
Vanadium	6 JQ	6 JQ	7 16	7 9	2 5 JQ	7 9	3 1 JQ
Zinc	12.1	11.9	13.2	11 8	4 2 JB	15.5	5 4
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L							
Nitrogen, Ammonia (as N)	0 05 JQ	0 2 JB	<0 1	4 38	0.1 JB	0 1 JQ	0 08 JB
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg							
4,4'-DDD	<0 045	<0 011	<0 00407	<0.00208	<0.011	<0 042 UJ	0 0023 JH
4,4'-DDE	<0 045 UJ	<0.011	<0 00407	<0 00208	<0.011	<0 042 UJ	0 0012 JH
alpha-Chlordane	<0 045 UJ	<0 011	0 00734	<0.00208	<0 011	<0 042 UJ	0 0013 JH
Endrin aldehyde	<0.045	<0 011 UJ	<0 00407	<0.00208	<0 019	<0 042	0 0042 JH
Endrin ketone	<0 045 UJ	0 011 J	<0 00407	<0 00208	<0.011	<0 042 UJ	<0 0042
gamma-Chlordane	<0 045 UJ	<0 011	<0.00407	<0.00208	<0.011	<0 042 UJ	0 00065 JH
Percent Solids - D2216, E160.3 %							

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type / Sample Location: / Sample Date:	Sample BM-2-SD 11/13/2002	Sample BM-2-SD 4/22/2003	Sample BM-2-SD 11/10/2003	Sample BM-2-SD 4/20/2004	Sample BM-3-SD 11/15/2001	Sample BM-3-SD 11/13/2002	Sample BM-3-SD 4/23/2003
Percent Solids	75 3	79	82	80	80	80 3	81 4
pH - EPA 150.1, SW9040B MOD pH Units							
pH	6 9	6 9	NA	NA	6 4	6 7	5.5
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg							
PCB-1248	<0.044	<0 042	<0 02	<0.021	<0 021	<0.041	<0 041
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level n							
1-Methylnaphthalene	NA	NA	<0.081 UL	<0.017	NA	NA	NA
2-Methylnaphthalene	NA	NA	<0.081 UL	<0.017	NA	NA	NA
Acenaphthene	0 097	0 0014 JQ	<0.081 UL	<0 017	0 004 JQ	0 095 JQ	0 02
Acenaphthylene	<0 044	<0 0084	<0 081 UL	<0 017	<0 0083	<0 17	0 001 JL
Anthracene	0 16	0 0078 JQ	<0.081 UL	0 014 JQ	0 016	0 48	0 069
Benzo(a)anthracene	0.49	0 061	0 22 JL	0 14	0 1	1 7	0 57 JL
Benzo(a)pyrene	0 6	0 079	0 32 JL	0 13	0 13	2	0 58
Benzo(b)fluoranthene	0 72	0.1	0 63 JL	0 17	0 16	2 4	0 68
Benzo(ghi)perylene	0 41	0 047	0 23 JL	0.092	0 06	1 3	0.4
Benzo(k)fluoranthene	0 4	0 063	0 34 JL	0 12	0 08	1 4	0 4
Carbazole	NA	0 01	NA	NA	NA	NA	0 13
Chrysene	0.68	0.092	0 33 JL	0 14	0 15	2 3	0 68 JL
Dibenzo(a,h)anthracene	0.11	0 014	0.097 JL	0 044	0 017	0 34	0 11
Fluoranthene	1 5	0 15	0 53 JL	0 33	0 33	5	1 4 JL
Fluorene	0 087	0 0025 JQ	<0 081 UL	<0.017	0 0058 JQ	0 12 JQ	0 027 JL
Indeno(1,2,3-cd)pyrene	0.37	0.049	0 21 JL	0 11	0.062	1 2	0 38
Naphthalene	0.0081 JQ	<0.0084	<0 081 UL	<0 017	<0 0083	<0 17	0 0013 JQ
Phenanthrene	1 1	0 066	0 26 JL	0 13	0 15	2 3	0 63 JL
Pyrene	0 98	0.14	0 5 JL	0 2	0.23	3	1 2 JL
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg							
Anthracene	NA	NA	<0.41 UL	<0.83	NA	NA	NA
Benzo(a)anthracene	NA	NA	0 3 JL	<0.83	NA	NA	NA
Benzo(a)pyrene	NA	NA	0 36 JL	<0.83	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	0.36 JL	<0.83	NA	NA	NA
Benzo(ghi)perylene	NA	NA	0 3 JL	<0.83	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	0 35 JL	0.19 JQ	NA	NA	NA
bis(2-Ethylhexyl)phthalate	<0.44	<0.42	<0.41 UL	<0 83 UJ	<0 21	<0 41	0 032 JQ
Carbazole	<0 44	NA	NA	NA	NA	0 13 JQ	NA

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type Sample Location Sample Date	Sample BM-2-SD 11/13/2002	Sample BM-2-SD 4/22/2003	Sample BM-2-SD 11/10/2003	Sample BM-2-SD 4/20/2004	Sample BM-3-SD 11/15/2001	Sample BM-3-SD 11/13/2002	Sample BM-3-SD 4/23/2003
Chrysene		NA	NA	0 43 JL	0.19 JQ	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	0 11 JL	<0.83	NA	NA	NA
Fluoranthene		NA	NA	0 89 JL	0.35 JQ	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NA	NA	0 27 JL	<0.83	NA	NA	NA
Phenanthrene		NA	NA	0 45 JL	<0.83	NA	NA	NA
Pyrene		NA	NA	0 72 JL	0.25 JQ	NA	NA	NA
Thallium (Total) - SW846 7841 mg/Kg								
Thallium		0.24 JQ	0 18 JQ	<0 592	<0.595	<1.2	<1.2	0 14 JQ
Total Organic Carbon - SW846 9060 mg/kg								
Total Organic Carbon		2 JH	<13	NA	NA	7 JQ	2 JH	8 JQ
Total Organic Carbon - WB TOC %								
Total Organic Carbon		NA	NA	0 28	0.2	NA	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg								
Acetone		<0 027 UJ	<0 025 UJ	<0 012	0 0064 JQ	0 0061 JB	<0 025 UJ	<0 025 UJ
Dichlorodifluoromethane		<0 0066	<0 0063 UJ	0 003 JQ	0 0012 JQ	<0 0062	<0 0062	<0 0061 UJ
Methylene chloride		0 0025 JB	<0 0063 UJ	<0 0061	<0 0061	0 004 JB	0 003 JB	<0 0061 UJ
p-Isopropyltoluene		<0 0066	<0 0063	<0 0061	<0 0061	<0 0062	<0 0062	<0 0061
Toluene		<0 0066	<0 0063	<0 0061	<0 0061	<0 0062	<0 0062	<0 0061

Notes:

J	Estimated, based on QC data
JB	Estimated, possibly biased high or false positive based on blank contamination
JQ	Estimated; Value is between reporting limit and detection limit
NA	Not Analyzed
UJ	Undetected, Reported Detection Limit is imprecise
UL	Undetected, Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type:	Sample	Sample	Sample	Sample	Duplicate	Sample	Duplicate
	Sample Location:	BM-3-SD	BM-3-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD
	Sample Date:	11/11/2003	4/20/2004	11/15/2001	11/13/2002	11/13/2002	4/23/2003	4/23/2003
Arsenic - SW846 7060A (Total) mg/Kg								
Arsenic		0.852 JQ	<1 18	<0 68	0 38 JB	0 44 JB	<0.66	NA
Mercury (Total) - SW846 7471A mg/Kg								
Mercury		0.0064 JQ	0 011 JQ	0 031 JB	<0 13 UL	<0.13 UL	<0.13	NA
Metals (Total) - SW846 6010B mg/Kg								
Aluminum		1040	560	345	2490 J	678 J	829	NA
Antimony		<6.17	<6.01	<13.6 UJ	0.56 JQ	0 4 JQ	<13.2	NA
Barium		4.96 JQ	3 44 JQ	2 5 JQ	14 J	4 2 JQ	5 1 JQ	NA
Beryllium		0.0617 JQ	0.138 JB	<1.4	0 24 JQ	<1 3	0 12 JQ	NA
Calcium		108 JQ	71.2 JQ	110 JQ	1060 J	168 JQ	253 JQ	NA
Chromium		2 36	2.09	0 67 JQ	3.2 JQ	1 3 JQ	1 3 JQ	NA
Cobalt		0 284 JQ	0 343 JQ	0.26 JB	0 8 JQ	0 53 JB	0.62 JQ	NA
Copper		1.25 JQ	0 854 JQ	<2 7	1.6 JQ	2 JQ	2 7	NA
Iron		2800	1390	450	2040 J	1150 J	1210	NA
Lead		3 72 JB	7.45	1 6	7.8 J	3 1 J	4.5	NA
Magnesium		87 8 JQ	57 4 JQ	81.6 JQ	401 JQ	238 JQ	229 JQ	NA
Manganese		11.9	8 06	6 8	29 1 J	20 1 J	17 7	NA
Molybdenum		0 296 JB	0 173 JB	<30	0 41 JQ	<28 1	<29	NA
Nickel		0.71 JQ	0 878 JQ	<5 4	1 5 JQ	0.75 JQ	0 64 JQ	NA
Potassium		99 2 JQ	63 4 JQ	63.5 JB	554 JQ	155 JQ	122 JQ	NA
Selenium		<0 622	<0 606 UJ	0.6 JQ	<0 65	<0 64	<0.66	NA
Sodium		143 JH	112 JQ	<681	130 JQ	<638	<658	NA
Vanadium		5.04	3 08	1 4 JQ	6 5 J	2 9 JQ	3 8 JQ	NA
Zinc		5.82	3 47	5 6 JB	18 8 J	12 1 J	10 5	NA
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L								
Nitrogen, Ammonia (as N)		<0.1	8	0 8	0.6 J	0 1 JQ	0 9	NA
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg								
4,4'-DDD		<0 00412	<0 00201	<0 012	<0 022 UJ	<0 022 UJ	0 0023 JH	NA
4,4'-DDE		<0.00412	<0 00201	<0.012	<0 022 UJ	<0 022 UJ	0 0022 JH	NA
alpha-Chlordane		<0.00412	<0 00201	<0 012	<0 022 UJ	<0 022 UJ	0 0039 JH	NA
Endrin aldehyde		<0 00412	<0 00201	<0 02	<0 022	<0.022	0 0042 JH	NA
Endrin ketone		<0.00412 R	<0 00201	<0 012	<0 022 UJ	<0 022 UJ	<0 0045	NA
gamma-Chlordane		<0 00412	<0 00201	<0 012	<0.022 UJ	<0 022 UJ	0 0028 JH	NA
Percent Solids - D2216, E160.3 %								

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Duplicate	Sample	Duplicate
Sample Location	BM-3-SD	BM-3-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD
Sample Date:	11/11/2003	4/20/2004	11/15/2001	11/13/2002	11/13/2002	4/23/2003	4/23/2003
Percent Solids	81	83	73.4	77.4	78 3	76	NA
pH - EPA 150.1, SW9040B MOD pH Units							
pH	NA	NA	6 9	6 7	6 8	6 8	NA
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg							
PCB-1248	<0 021	<0.02	0.0091	0 018 JQ	0.023 JQ	0 024 JQ	0.018 JQ
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level n							
1-Methylnaphthalene	<0 082 UL	<0 016	NA	NA	NA	NA	NA
2-Methylnaphthalene	<0 082 UL	<0.016	NA	NA	NA	NA	NA
Acenaphthene	<0 082 UL	<0.016	0 0098	0 0083 JQ	0.0053 JQ	0.0073 JQ	NA
Acenaphthylene	<0.082 UL	<0.016	<0 0091	<0.043	<0 0085	<0 0088 UL	NA
Anthracene	0 065 JQ	0.02	0 068	0.14 J	0.03 J	0 039	NA
Benzo(a)anthracene	0 52 JL	0 2	0.51	0.79 J	0 2 J	0 4 JL	NA
Benzo(a)pyrene	0 61 JL	0 21	0 6	0.78 J	0.23 J	0 36	NA
Benzo(b)fluoranthene	0.73 JL	0.29	0.75	0.98 J	0.33 J	0 45	NA
Benzo(ghi)perylene	0.29 JL	0.14	0.27	0 46 J	0.19 J	0 23	NA
Benzo(k)fluoranthene	0.77 JL	0.19	0.44	0 55 J	0.2 J	0 31	NA
Carbazole	NA	NA	NA	NA	NA	0 06	NA
Chrysene	0.76 JL	0 21	0.68	0.98 J	0 31 J	0.47 JL	NA
Dibenzo(a,h)anthracene	0 2 JL	0 091	0 08	0 15 J	0 051 J	0 071	NA
Fluoranthene	1 2 JL	0 48	1 3	2 J	0 65 J	0 89 JL	NA
Fluorene	<0 082 UL	0 0077 JQ	0 02	0 023 JQ	0.0082 JQ	0 01 JL	NA
Indeno(1,2,3-cd)pyrene	0 41 JL	0 16 JQ	0 26	0.44 J	0 17 J	0 22	NA
Naphthalene	<0 082 UL	<0.016	0 0038 JQ	<0.043	<0 0085	<0 0088	NA
Phenanthrene	0 56 JL	0 17	0 61	0 73 J	0 23 J	0 33 JL	NA
Pyrene	1 1 JL	0 33	0 99	1 1 J	0 35 J	0.79 JL	NA
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg							
Anthracene	<2.1 UL	<0 8	NA	NA	NA	NA	NA
Benzo(a)anthracene	0 71 JQ	0.19 JQ	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.79 JQ	0 25 JQ	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.77 JQ	0 24 JQ	NA	NA	NA	NA	NA
Benzo(ghi)perylene	0.57 JQ	0 17 JQ	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	0 75 JQ	0 27 JQ	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	<2 1 UL	<0 8 UJ	<0 22	0 047 JQ	0 051 JQ	0 03 JQ	NA
Carbazole	NA	NA	NA	0 16 JQ	0 06 JQ	NA	NA

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type:	Sample	Sample	Sample	Sample	Duplicate	Sample	Duplicate
	Sample Location	BM-3-SD	BM-3-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD
	Sample Date:	11/11/2003	4/20/2004	11/15/2001	11/13/2002	11/13/2002	4/23/2003	4/23/2003
Chrysene		0.95 JQ	0 35 JQ	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		<2 1 UL	<0 8	NA	NA	NA	NA	NA
Fluoranthene		1 9 JQ	0 61 JQ	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		0 53 JQ	0.19 JQ	NA	NA	NA	NA	NA
Phenanthrene		0.71 JQ	0 19 JQ	NA	NA	NA	NA	NA
Pyrene		1 4 JQ	0.44 JQ	NA	NA	NA	NA	NA
Thallium (Total) - SW846 7841 mg/Kg								
Thallium		<0 605	<0.591	<1 4	<1 3	<1.3	<1 3	NA
Total Organic Carbon - SW846 9060 mg/kg								
Total Organic Carbon		NA	NA	16	3 JH	3 JH	18	NA
Total Organic Carbon - WB TOC %								
Total Organic Carbon		0 16	0 16	NA	NA	NA	NA	NA
Volatile Organic Compounds - SW846 8260B mg/Kg								
Acetone		<0 012 R	0 0029 JQ	0 0067 JB	<0.026 UJ	<0.026 UJ	<0.026 UJ	NA
Dichlorodifluoromethane		0.0028 JQ	0.00083 JQ	<0.0068	<0.0065	<0.0064	<0 0066 UJ	NA
Methylene chloride		<0 0062 UJ	<0.006	0 0038 JB	0 0029 JB	0.003 JB	<0.0066 UJ	NA
p-Isopropyltoluene		<0.0062	<0.006	<0.0068	<0 0065	<0.0064	<0 0066	NA
Toluene		<0.0062	<0.006	<0.0068	<0 0065	<0.0064	<0 0066	NA

Notes:

J	Estimated, based on QC data
JB	Estimated, possibly biased high or false positive based on blank contamination
JQ	Estimated, Value is between reporting limit and detection limit
NA	Not Analyzed
UJ	Undetected, Reported Detection Limit is imprecise
UL	Undetected, Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type Sample Location: Sample Date	Sample BM-4-SD 11/11/2003	Duplicate BM-4-SD 11/11/2003	Sample BM-4-SD 4/20/2004	Duplicate BM-4-SD 4/20/2004
Arsenic - SW846 7060A (Total) mg/Kg				
Arsenic	<1 37	NA	<1 28	<1 13
Mercury (Total) - SW846 7471A mg/Kg				
Mercury	0.0097 JQ	NA	0 017 JQ	0 012 JQ
Metals (Total) - SW846 6010B mg/Kg				
Aluminum	972	NA	786	873
Antimony	<6 85	NA	<6 4	<6.15
Barium	6 51 JQ	NA	6.99	8 11
Beryllium	0.0411 JQ	NA	0.147 JB	0.148 JB
Calcium	269	NA	301	255
Chromium	1 82	NA	2 76	2 18
Cobalt	0 671 JQ	NA	0 761 JQ	0.646 JQ
Copper	1 59 JQ	NA	1 65 JQ	2 26 JQ
Iron	1440	NA	1400	1310
Lead	4 35 JB	NA	7 25	7 16
Magnesium	289	NA	260 J	193 J
Manganese	23 1	NA	18 7	15 6
Molybdenum	0 186 JB	NA	<5 12	0 148 JB
Nickel	0 856 JQ	NA	1.44	1 68
Potassium	204 JQ	NA	112 JQ	115 JQ
Selenium	<0 69	NA	<0.645 UJ	<0 62 UJ
Sodium	144 JH	NA	137 JQ	126 JQ
Vanadium	4.95	NA	5 14	4 42
Zinc	12 5	NA	14 6	15.5
Nitrogen, Ammonia (as N) - EPA 350.2, 350.3 mg/L				
Nitrogen, Ammonia (as N)	<0.1	NA	5 82	NA
Organochlorine Pesticides - SW846 8080, 8081A mg/Kg				
4,4'-DDD	<0 00457	NA	<0 00214	<0 00206 UJ
4,4'-DDE	<0.00457	NA	<0 00214	<0.00206 UJ
alpha-Chlordane	0.00884	NA	0 00457 J	<0.00206 UJ
Endrin aldehyde	<0 00457	NA	<0 00214	<0.00206 UJ
Endrin ketone	<0 00457 R	NA	<0 00214	<0 00206 UJ
gamma-Chlordane	0 00619	NA	0 0097 J	<0 00206 UJ
Percent Solids - D2216, E160.3 %				

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Sample Type. Sample Location. Sample Date	Sample BM-4-SD 11/11/2003	Duplicate BM-4-SD 11/11/2003	Sample BM-4-SD 4/20/2004	Duplicate BM-4-SD 4/20/2004
Percent Solids	73	81	78	81
pH - EPA 150.1, SW9040B MOD pH Units				
pH	NA	NA	NA	NA
Polychlorinated Biphenyls (PCBs) - SW846 8082 mg/Kg				
PCB-1248	<0.023	<0.021	<0 021	<0 041 UJ
Polycyclic Aromatic Hydrocarbons - SW846 8270C Low Level n				
1-Methylnaphthalene	<0 091 UL	NA	<0.017	<0 016 UJ
2-Methylnaphthalene	<0 091	NA	<0.017	<0 016 UJ
Acenaphthene	<0 091 UL	NA	<0.017	0 031 J
Acenaphthylene	<0.091 UL	NA	<0 017	<0.016 UJ
Anthracene	0.064 JQ	NA	0 035 J	0 2 J
Benzo(a)anthracene	0 47 JL	NA	0.27 J	1 2 J
Benzo(a)pyrene	0 56 JL	NA	0 27 J	0 98 J
Benzo(b)fluoranthene	0 74 JL	NA	0 43 J	0 97 J
Benzo(ghi)perylene	0 26 JL	NA	0.2 J	0 59 J
Benzo(k)fluoranthene	0 67 JL	NA	0 23 J	0 74 J
Carbazole	NA	NA	NA	NA
Chrysene	0 68 JL	NA	0 28 J	0 99 J
Dibenzo(a,h)anthracene	0.19 JL	NA	0 13 J	0 37 J
Fluoranthene	1 JL	NA	0 61 J	2 J
Fluorene	<0 091 UL	NA	0.012 JQ	0.069 J
Indeno(1,2,3-cd)pyrene	0 36 JL	NA	0 23 J	0.76 J
Naphthalene	<0 091 UL	NA	<0 017	<0 016 UJ
Phenanthrene	0 41 JL	NA	0.21 J	0.97 J
Pyrene	0 99 JL	NA	0.42 J	1 8 J
Semi-Volatile Organic Compounds - SW846 8270C mg/Kg				
Anthracene	<2 3 UL	NA	<0.85 UJ	1.7 J
Benzo(a)anthracene	0 64 JQ	NA	0.95	1.6
Benzo(a)pyrene	0 76 JQ	NA	1	1.4
Benzo(b)fluoranthene	0.75 JQ	NA	0.97	1.5
Benzo(ghi)perylene	0.57 JQ	NA	0 69 JQ	0 93
Benzo(k)fluoranthene	0.76 JQ	NA	1	1 4
bis(2-Ethylhexyl)phthalate	<2 3 UL	NA	<0 85	0 17 JQ
Carbazole	NA	NA	NA	NA

TABLE A-9

DETECTED CONSTITUENT SUMMARY TABLE - FALLING CREEK SEDIMENT DATA
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

	Sample Type	Sample	Duplicate	Sample	Duplicate
	Sample Location:	BM-4-SD	BM-4-SD	BM-4-SD	BM-4-SD
	Sample Date	11/11/2003	11/11/2003	4/20/2004	4/20/2004
Chrysene		0 91 JQ	NA	1.3	2
Dibenzo(a,h)anthracene		<2.3 UL	NA	0 28 JQ	0.19 JQ
Fluoranthene		1 6 JQ	NA	2 3	3.4
Indeno(1,2,3-cd)pyrene		0.52 JQ	NA	0.7 JQ	1
Phenanthrene		0 51 JQ	NA	0 9	1 6
Pyrene		1.2 JQ	NA	1 9	2 5
Thallium (Total) - SW846 7841 mg/Kg					
Thallium		<0 685	NA	<0 641	<0 566
Total Organic Carbon - SW846 9060 mg/kg					
Total Organic Carbon		NA	NA	NA	NA
Total Organic Carbon - WB TOC %					
Total Organic Carbon		0 37	NA	0 49	0 39
Volatile Organic Compounds - SW846 8260B mg/Kg					
Acetone		<0 014 R	NA	0 0085 JQ	NA
Dichlorodifluoromethane		0 0032 JQ	NA	<0 0062	NA
Methylene chloride		<0 0068 UJ	NA	<0 0062	NA
p-Isopropyltoluene		<0 0068	NA	0 0015 JQ	NA
Toluene		<0 0068	NA	0.0077 JB	NA

Notes:

J	Estimated; based on QC data
JB	Estimated, possibly biased high or false positive based on blank contamination
JQ	Estimated, Value is between reporting limit and detection limit
NA	Not Analyzed
UJ	Undetected, Reported Detection Limit is imprecise
UL	Undetected; Data biased low - Reported Detection Limit is higher than indicated
( )	Reporting Limit in parenthesis

PREPARED BY/DATE RMB 3/30/05
CHECKED BY/DATE EFC 3/31/05

APPENDIX B

STATISTICAL ANALYSIS OF COPC SURFACE WATER AND SEDIMENT DATASETS
95 PERCENT UPPER CONFIDENCE LIMITS OF ARITHMETIC MEANS

STATISTICAL ANALYSIS OF COPC SURFACE WATER

TABLE B-1

STATISTICAL ANALYSIS OF TOTAL ARSENIC SURFACE WATER DATA FOR KINGSLAND CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Arsenic-KC (ug/L)

Raw Statistics	
Number of Valid Samples	20
Number of Unique Samples	2
Minimum	2.5
Maximum	2.92
Mean	2.521
Median	2.5
Standard Deviation	0.093915
Variance	0.00882
Coefficient of Variation	0.037253
Skewness	4.472136

Gamma Statistics	
k hat	833.1222
k star (bias corrected)	708.1872
Theta hat	0.003026
Theta star	0.00356
nu hat	33324.89
nu star	28327.49
Approx.Chi Square Value (.05)	27937.03
Adjusted Level of Significance	0.038
Adjusted Chi Square Value	27906.49

Log-transformed Statistics	
Minimum of log data	0.916291
Maximum of log data	1.071584
Mean of log data	0.924055
Standard Deviation of log data	0.034725
Variance of log data	0.001206

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.235903
Shapiro-Wilk 5% Critical Value	0.905
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**2.557312**

Gamma Distribution Test	
A-D Test Statistic	7.225791
A-D 5% Critical Value	0.74047
K-S Test Statistic	0.540902
K-S 5% Critical Value	0.19336
Data do not follow gamma distribution at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	2.556234
Adjusted Gamma UCL	2.559032

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.235903
Shapiro-Wilk 5% Critical Value	0.905
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	N/A
95% Chebyshev (MVUE) UCL	2.606269
97.5% Chebyshev (MVUE) UCL	2.643194
99% Chebyshev (MVUE) UCL	2.715728

95% Non-parametric UCLs	
CLT UCL	2.555542
Adj-CLT UCL (Adjusted for skewness)	2.577981
Mod-t UCL (Adjusted for skewness)	2.560812
Jackknife UCL	2.557312
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	2.612537
97.5% Chebyshev (Mean, Sd) UCL	2.652145
99% Chebyshev (Mean, Sd) UCL	2.729947

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-2

STATISTICAL ANALYSIS OF TOTAL IRON SURFACE WATER DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Iron-KC (ug/L)

Raw Statistics	
Number of Valid Samples	21
Number of Unique Samples	21
Minimum	394
Maximum	6370
Mean	1413.952
Median	1100
Standard Deviation	1220.518
Variance	1489665
Coefficient of Variation	0.863196
Skewness	3.626287

Gamma Statistics	
k hat	2.792156
k star (bias corrected)	2.425023
Theta hat	506.4016
Theta star	583.0677
nu hat	117.2706
nu star	101.851
Approx.Chi Square Value (.05)	79.56133
Adjusted Level of Significance	0.0383
Adjusted Chi Square Value	78.04833

Log-transformed Statistics	
Minimum of log data	5.976351
Maximum of log data	8.759355
Mean of log data	7.064512
Standard Deviation of log data	0.57415
Variance of log data	0.329649

RECOMMENDATION
Data are lognormal (0.05)

Use H-UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.567595
Shapiro-Wilk 5% Critical Value	0.908
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1873.312

Gamma Distribution Test	
A-D Test Statistic	1.070446
A-D 5% Critical Value	0.750332
K-S Test Statistic	0.211509
K-S 5% Critical Value	0.191108
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1810.08
Adjusted Gamma UCL	1845.17

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.91619
Shapiro-Wilk 5% Critical Value	0.908
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	**1796.657**
95% Chebyshev (MVUE) UCL	2149.852
97.5% Chebyshev (MVUE) UCL	2488.586
99% Chebyshev (MVUE) UCL	3153.962

95% Non-parametric UCLs	
CLT UCL	1852.041
Adj-CLT UCL (Adjusted for skewness)	2077.24
Mod-t UCL (Adjusted for skewness)	1908.438
Jackknife UCL	1873.312
Standard Bootstrap UCL	1838.721
Bootstrap-t UCL	2520.964
Hall's Bootstrap UCL	3764.375
Percentile Bootstrap UCL	1896.857
BCA Bootstrap UCL	2153.238
95% Chebyshev (Mean, Sd) UCL	2574.897
97.5% Chebyshev (Mean, Sd) UCL	3077.238
99% Chebyshev (Mean, Sd) UCL	4063.991

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-3

STATISTICAL ANALYSIS OF TOTAL MANGANESE SURFACE WATER DATA FOR KINGSLAND CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File

Variable: Manganese-KC (ug/L)

Raw Statistics	
Number of Valid Samples	21
Number of Unique Samples	21
Minimum	12.6
Maximum	230
Mean	53.20476
Median	47.7
Standard Deviation	46.70862
Variance	2181.695
Coefficient of Variation	0.877903
Skewness	3.00581

Gamma Statistics	
k hat	2.290411
k star (bias corrected)	1.994956
Theta hat	23.22935
Theta star	26.66965
nu hat	96.19726
nu star	83.78813
Approx.Chi Square Value (.05)	63.68753
Adjusted Level of Significance	0.0383
Adjusted Chi Square Value	62.3414

Log-transformed Statistics	
Minimum of log data	2.533697
Maximum of log data	5.438079
Mean of log data	3.740241
Standard Deviation of log data	0.665209
Variance of log data	0.442503

RECOMMENDATION
Data are lognormal (0.05)

Use H-UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.650396
Shapiro-Wilk 5% Critical Value	0.908
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	70.78422

Gamma Distribution Test	
A-D Test Statistic	0.810076
A-D 5% Critical Value	0.752535
K-S Test Statistic	0.227715
K-S 5% Critical Value	0.191515
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	69.99686
Adjusted Gamma UCL	71.5083

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.943026
Shapiro-Wilk 5% Critical Value	0.908
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	**72.3662**
95% Chebyshev (MVUE) UCL	86.78486
97.5% Chebyshev (MVUE) UCL	101.8871
99% Chebyshev (MVUE) UCL	131.5525

95% Non-parametric UCLs	
CLT UCL	69.97019
Adj-CLT UCL (Adjusted for skewness)	77.11383
Mod-t UCL (Adjusted for skewness)	71.89849
Jackknife UCL	70.78422
Standard Bootstrap UCL	69.58075
Bootstrap-t UCL	91.1719
Hall's Bootstrap UCL	154.255
Percentile Bootstrap UCL	70.55714
BCA Bootstrap UCL	77.54286
95% Chebyshev (Mean, Sd) UCL	97.63352
97.5% Chebyshev (Mean, Sd) UCL	116.8579
99% Chebyshev (Mean, Sd) UCL	154.6204

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-4

STATISTICAL ANALYSIS OF TOTAL MERCURY SURFACE WATER DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Mercury-KC (ug/L)

Raw Statistics	
Number of Valid Samples	16
Number of Unique Samples	2
Minimum	0.07
Maximum	0.5
Mean	0.473125
Median	0.5
Standard Deviation	0.1075
Variance	0.011556
Coefficient of Variation	0.227213
Skewness	-4

Gamma Statistics	
k hat	7.55557
k star (bias corrected)	6.180567
Theta hat	0.062619
Theta star	0.07655
nu hat	241.7782
nu star	197.7781
Approx.Chi Square Value (.05)	166.2338
Adjusted Level of Significance	0.03348
Adjusted Chi Square Value	162.9431

Log-transformed Statistics	
Minimum of log data	-2.65926
Maximum of log data	-0.693147
Mean of log data	-0.816029
Standard Deviation of log data	0.491528
Variance of log data	0.2416

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.272673
Shapiro-Wilk 5% Critical Value	0.887
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**0.520238**

Gamma Distribution Test	
A-D Test Statistic	5.713325
A-D 5% Critical Value	0.740139
K-S Test Statistic	0.545592
K-S 5% Critical Value	0.215458
Data do not follow gamma distribution at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.562905
Adjusted Gamma UCL	0.574273

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.272673
Shapiro-Wilk 5% Critical Value	0.887
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.646902
95% Chebyshev (MVUE) UCL	0.768002
97.5% Chebyshev (MVUE) UCL	0.886199
99% Chebyshev (MVUE) UCL	1.118375

95% Non-parametric UCLs	
CLT UCL	0.51733
Adj-CLT UCL (Adjusted for skewness)	0.488614
Mod-t UCL (Adjusted for skewness)	0.515759
Jackknife UCL	0.520238
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	0.59027
97.5% Chebyshev (Mean, Sd) UCL	0.640959
99% Chebyshev (Mean, Sd) UCL	0.740528

Recommended UCL exceeds the maximum observation

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-5

STATISTICAL ANALYSIS OF TOTAL THALLIUM SURFACE WATER DATA FOR KINGSLAND CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Thallium-KC (ug/L)

Raw Statistics	
Number of Valid Samples	21
Number of Unique Samples	2
Minimum	1
Maximum	1.96
Mean	1.045714
Median	1
Standard Deviation	0.209489
Variance	0.043886
Coefficient of Variation	0.200331
Skewness	4.582576

Gamma Statistics	
k hat	39.6754
k star (bias corrected)	34.03923
Theta hat	0.026357
Theta star	0.030721
nu hat	1666.367
nu star	1429.648
Approx.Chi Square Value (.05)	1342.827
Adjusted Level of Significance	0.0383
Adjusted Chi Square Value	1336.378

Log-transformed Statistics	
Minimum of log data	0
Maximum of log data	0.672944
Mean of log data	0.032045
Standard Deviation of log data	0.146849
Variance of log data	0.021564

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.226353
Shapiro-Wilk 5% Critical Value	0.908
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**1.124559**

Gamma Distribution Test	
A-D Test Statistic	7.625493
A-D 5% Critical Value	0.741661
K-S Test Statistic	0.541909
K-S 5% Critical Value	0.189026
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.113325
Adjusted Gamma UCL	1.118697

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.226353
Shapiro-Wilk 5% Critical Value	0.908
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	1.105251
95% Chebyshev (MVUE) UCL	1.189441
97.5% Chebyshev (MVUE) UCL	1.252712
99% Chebyshev (MVUE) UCL	1.376997

95% Non-parametric UCLs	
CLT UCL	1.120908
Adj-CLT UCL (Adjusted for skewness)	1.169754
Mod-t UCL (Adjusted for skewness)	1.132178
Jackknife UCL	1.124559
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	1.244978
97.5% Chebyshev (Mean, Sd) UCL	1.3312
99% Chebyshev (Mean, Sd) UCL	1.500566

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-6

STATISTICAL ANALYSIS OF BENZENE SURFACE WATER DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Benzene-KC (ug/L)

Raw Statistics	
Number of Valid Samples	19
Number of Unique Samples	2
Minimum	0.5
Maximum	8.1
Mean	0.9
Median	0.5
Standard Deviation	1.74356
Variance	3.04
Coefficient of Variation	1.937288
Skewness	4.358899

Gamma Statistics	
k hat	1.274126
k star (bias corrected)	1.108036
Theta hat	0.706366
Theta star	0.812248
nu hat	48.4168
nu star	42.10538
Approx.Chi Square Value (.05)	28.22799
Adjusted Level of Significance	0.03687
Adjusted Chi Square Value	27.23544

Log-transformed Statistics	
Minimum of log data	-0.693147
Maximum of log data	2.091864
Mean of log data	-0.546568
Standard Deviation of log data	0.638925
Variance of log data	0.408226

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.244011
Shapiro-Wilk 5% Critical Value	0.901
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1.593625

Gamma Distribution Test	
A-D Test Statistic	7.060744
A-D 5% Critical Value	0.762492
K-S Test Statistic	0.563187
K-S 5% Critical Value	0.203081
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.342456
Adjusted Gamma UCL	1.39138

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.244011
Shapiro-Wilk 5% Critical Value	0.901
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.982899
95% Chebyshev (MVUE) UCL	1.173957
97.5% Chebyshev (MVUE) UCL	1.378539
99% Chebyshev (MVUE) UCL	1.780399

95% Non-parametric UCLs	
CLT UCL	1.557941
Adj-CLT UCL (Adjusted for skewness)	1.985347
Mod-t UCL (Adjusted for skewness)	1.660292
Jackknife UCL	1.593625
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	**2.64356**
97.5% Chebyshev (Mean, Sd) UCL	3.397999
99% Chebyshev (Mean, Sd) UCL	4.87995

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-7

STATISTICAL ANALYSIS OF CIS-1,2-DICHLOROETHENE SURFACE WATER DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: cis-1,2-DCE-KC (ug/L)

Raw Statistics	
Number of Valid Samples	17
Number of Unique Samples	7
Minimum	0.42
Maximum	3.2
Mean	0.95
Median	0.5
Standard Deviation	0.967174
Variance	0.935425
Coefficient of Variation	1.018078
Skewness	1.873741

Gamma Statistics	
k hat	1.786915
k star (bias corrected)	1.510793
Theta hat	0.531642
Theta star	0.628809
nu hat	60.75512
nu star	51.36696
Approx.Chi Square Value (.05)	35.90411
Adjusted Level of Significance	0.03461
Adjusted Chi Square Value	34.55106

Log-transformed Statistics	
Minimum of log data	-0.867501
Maximum of log data	1.163151
Mean of log data	-0.356481
Standard Deviation of log data	0.697488
Variance of log data	0.48649

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.528246
Shapiro-Wilk 5% Critical Value	0.892
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1.359539

Gamma Distribution Test	
A-D Test Statistic	3.867172
A-D 5% Critical Value	0.752085
K-S Test Statistic	0.401859
K-S 5% Critical Value	0.212207
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.359137
Adjusted Gamma UCL	1.412363

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.580006
Shapiro-Wilk 5% Critical Value	0.892
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	1.325298
95% Chebyshev (MVUE) UCL	1.563575
97.5% Chebyshev (MVUE) UCL	1.860324
99% Chebyshev (MVUE) UCL	2.443229

95% Non-parametric UCLs	
CLT UCL	1.33584
Adj-CLT UCL (Adjusted for skewness)	1.449746
Mod-t UCL (Adjusted for skewness)	1.377306
Jackknife UCL	1.359539
Standard Bootstrap UCL	1.318704
Bootstrap-t UCL	1.473561
Hall's Bootstrap UCL	1.204477
Percentile Bootstrap UCL	1.36
BCA Bootstrap UCL	1.415294
95% Chebyshev (Mean, Sd) UCL	**1.972485**
97.5% Chebyshev (Mean, Sd) UCL	2.414915
99% Chebyshev (Mean, Sd) UCL	3.283983

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-8

STATISTICAL ANALYSIS OF TETRACHLOROETHENE SURFACE WATER DATA FOR KINGSLAND CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: PCE-KC (ug/L)

Raw Statistics	
Number of Valid Samples	20
Number of Unique Samples	5
Minimum	0.36
Maximum	1.4
Mean	0.5745
Median	0.5
Standard Deviation	0.267886
Variance	0.071763
Coefficient of Variation	0.466294
Skewness	2.813518

Gamma Statistics	
k hat	8.024441
k star (bias corrected)	6.854108
Theta hat	0.071594
Theta star	0.083818
nu hat	320.9776
nu star	274.1643
Approx.Chi Square Value (.05)	236.8102
Adjusted Level of Significance	0.038
Adjusted Chi Square Value	234.0704

Log-transformed Statistics	
Minimum of log data	-1.021651
Maximum of log data	0.336472
Mean of log data	-0.617857
Standard Deviation of log data	0.323664
Variance of log data	0.104758

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.436753
Shapiro-Wilk 5% Critical Value	0.905
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**0.678077**

Gamma Distribution Test	
A-D Test Statistic	5.262892
A-D 5% Critical Value	0.743179
K-S Test Statistic	0.504586
K-S 5% Critical Value	0.194095
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.665121
Adjusted Gamma UCL	0.672906

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.500582
Shapiro-Wilk 5% Critical Value	0.905
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.652119
95% Chebyshev (MVUE) UCL	0.748131
97.5% Chebyshev (MVUE) UCL	0.826707
99% Chebyshev (MVUE) UCL	0.981055

95% Non-parametric UCLs	
CLT UCL	0.673029
Adj-CLT UCL (Adjusted for skewness)	0.713296
Mod-t UCL (Adjusted for skewness)	0.684358
Jackknife UCL	0.678077
Standard Bootstrap UCL	0.66994
Bootstrap-t UCL	1.239225
Hall's Bootstrap UCL	1.894035
Percentile Bootstrap UCL	0.675
BCA Bootstrap UCL	0.7165
95% Chebyshev (Mean, Sd) UCL	0.835603
97.5% Chebyshev (Mean, Sd) UCL	0.948582
99% Chebyshev (Mean, Sd) UCL	1.170509

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-9

STATISTICAL ANALYSIS OF TRICHLOROETHENE SURFACE WATER DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: TCE-KC (ug/L)

Raw Statistics	
Number of Valid Samples	19
Number of Unique Samples	9
Minimum	0.36
Maximum	4.4
Mean	0.929474
Median	0.5
Standard Deviation	0.985165
Variance	0.97055
Coefficient of Variation	1.059917
Skewness	2.867541

Gamma Statistics	
k hat	1.927874
k star (bias corrected)	1.658561
Theta hat	0.482124
Theta star	0.56041
nu hat	73.25921
nu star	63.0253
Approx.Chi Square Value (.05)	45.75975
Adjusted Level of Significance	0.03687
Adjusted Chi Square Value	44.47426

Log-transformed Statistics	
Minimum of log data	-1.021651
Maximum of log data	1.481605
Mean of log data	-0.35437
Standard Deviation of log data	0.659288
Variance of log data	0.434661

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.54864
Shapiro-Wilk 5% Critical Value	0.901
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1.321393

Gamma Distribution Test	
A-D Test Statistic	3.039166
A-D 5% Critical Value	0.752559
K-S Test Statistic	0.36988
K-S 5% Critical Value	0.201007
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.280172
Adjusted Gamma UCL	1.317174

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.699983
Shapiro-Wilk 5% Critical Value	0.901
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	1.22395
95% Chebyshev (MVUE) UCL	1.46057
97.5% Chebyshev (MVUE) UCL	1.720334
99% Chebyshev (MVUE) UCL	2.23059

95% Non-parametric UCLs	
CLT UCL	1.301231
Adj-CLT UCL (Adjusted for skewness)	1.460102
Mod-t UCL (Adjusted for skewness)	1.346174
Jackknife UCL	1.321393
Standard Bootstrap UCL	1.284695
Bootstrap-t UCL	1.885052
Hall's Bootstrap UCL	2.335254
Percentile Bootstrap UCL	1.338947
BCA Bootstrap UCL	1.458947
95% Chebyshev (Mean, Sd) UCL	**1.914638**
97.5% Chebyshev (Mean, Sd) UCL	2.34092
99% Chebyshev (Mean, Sd) UCL	3.178268

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-10

STATISTICAL ANALYSIS OF TOTAL ARSENIC SURFACE WATER DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: Arsenic-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	25
Number of Unique Samples	4
Minimum	1
Maximum	12.4
Mean	1.816
Median	1
Standard Deviation	2.666408
Variance	7.109733
Coefficient of Variation	1.468287
Skewness	3.48695

Gamma Statistics	
k hat	1.486689
k star (bias corrected)	1.334953
Theta hat	1.221506
Theta star	1.360348
nu hat	74.33444
nu star	66.74764
Approx.Chi Square Value (.05)	48.9426
Adjusted Level of Significance	0.0395
Adjusted Chi Square Value	47.90281

Log-transformed Statistics	
Minimum of log data	0
Maximum of log data	2.517696
Mean of log data	0.224058
Standard Deviation of log data	0.66226
Variance of log data	0.438588

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.352082
Shapiro-Wilk 5% Critical Value	0.918
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	2.728382

Gamma Distribution Test	
A-D Test Statistic	7.690217
A-D 5% Critical Value	0.761827
K-S Test Statistic	0.526088
K-S 5% Critical Value	0.17774
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	2.476651
Adjusted Gamma UCL	2.530409

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.386309
Shapiro-Wilk 5% Critical Value	0.918
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	2.073929
95% Chebyshev (MVUE) UCL	2.492853
97.5% Chebyshev (MVUE) UCL	2.904402
99% Chebyshev (MVUE) UCL	3.71281

95% Non-parametric UCLs	
CLT UCL	2.69317
Adj-CLT UCL (Adjusted for skewness)	3.090556
Mod-t UCL (Adjusted for skewness)	2.790366
Jackknife UCL	2.728382
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/R
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	**4.140521**
97.5% Chebyshev (Mean, Sd) UCL	5.146343
99% Chebyshev (Mean, Sd) UCL	7.122086

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-11

STATISTICAL ANALYSIS OF TOTAL IRON SURFACE WATER DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: Iron-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	28
Number of Unique Samples	28
Minimum	175
Maximum	22800
Mean	1817.429
Median	626.5
Standard Deviation	4374.268
Variance	19134218
Coefficient of Variation	2.406844
Skewness	4.477741

Gamma Statistics	
k hat	0.670879
k star (bias corrected)	0.622809
Theta hat	2709.026
Theta star	2918.117
nu hat	37.56922
nu star	34.87728
Approx.Chi Square Value (.05)	22.36448
Adjusted Level of Significance	0.0404
Adjusted Chi Square Value	21.74431

Log-transformed Statistics	
Minimum of log data	5.164786
Maximum of log data	10.03452
Mean of log data	6.598951
Standard Deviation of log data	1.091986
Variance of log data	1.192433

RECOMMENDATION
Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.376878
Shapiro-Wilk 5% Critical Value	0.924
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	3225.467

Gamma Distribution Test	
A-D Test Statistic	3.114097
A-D 5% Critical Value	0.792765
K-S Test Statistic	0.283464
K-S 5% Critical Value	0.172842
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	2834.269
Adjusted Gamma UCL	2915.105

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.881348
Shapiro-Wilk 5% Critical Value	0.924
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	2292.749
95% Chebyshev (MVUE) UCL	2643.571
97.5% Chebyshev (MVUE) UCL	3228.923
99% Chebyshev (MVUE) UCL	4378.734

95% Non-parametric UCLs	
CLT UCL	3177.161
Adj-CLT UCL (Adjusted for skewness)	3924.619
Mod-t UCL (Adjusted for skewness)	3342.055
Jackknife UCL	3225.467
Standard Bootstrap UCL	3157.043
Bootstrap-t UCL	8417.183
Hall's Bootstrap UCL	7733.376
Percentile Bootstrap UCL	3351.929
BCA Bootstrap UCL	4730.536
95% Chebyshev (Mean, Sd) UCL	5420.751
97.5% Chebyshev (Mean, Sd) UCL	6979.912
99% Chebyshev (Mean, Sd) UCL	**10042.58**

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-12

STATISTICAL ANALYSIS OF TOTAL MANGANESE SURFACE WATER DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: Manganese-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	29
Number of Unique Samples	29
Minimum	7.6
Maximum	261
Mean	79.05517
Median	66
Standard Deviation	59.83874
Variance	3580.675
Coefficient of Variation	0.756924
Skewness	1.824822

Gamma Statistics	
k hat	2.055021
k star (bias corrected)	1.865421
Theta hat	38.46928
Theta star	42.37926
nu hat	119.1912
nu star	108.1944
Approx.Chi Square Value (.05)	85.18306
Adjusted Level of Significance	0.0407
Adjusted Chi Square Value	83.96377

Log-transformed Statistics	
Minimum of log data	2.028148
Maximum of log data	5.56452
Mean of log data	4.107531
Standard Deviation of log data	0.791914
Variance of log data	0.627128

RECOMMENDATION
Assuming gamma distribution (0.05)

Use Approximate Gamma UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.7873
Shapiro-Wilk 5% Critical Value	0.926
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	97.95775

Gamma Distribution Test	
A-D Test Statistic	0.926552
A-D 5% Critical Value	0.75701
K-S Test Statistic	0.158417
K-S 5% Critical Value	0.164693
Data follow approximate gamma distibution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	**100.4112**
Adjusted Gamma UCL	101.8693

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.912552
Shapiro-Wilk 5% Critical Value	0.926
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	115.8723
95% Chebyshev (MVUE) UCL	139.8922
97.5% Chebyshev (MVUE) UCL	164.9215
99% Chebyshev (MVUE) UCL	214.0867

95% Non-parametric UCLs	
CLT UCL	97.33242
Adj-CLT UCL (Adjusted for skewness)	101.3557
Mod-t UCL (Adjusted for skewness)	98.58531
Jackknife UCL	97.95775
Standard Bootstrap UCL	96.97329
Bootstrap-t UCL	105.2237
Hall's Bootstrap UCL	107.4066
Percentile Bootstrap UCL	98.27931
BCA Bootstrap UCL	101.7828
95% Chebyshev (Mean, Sd) UCL	127.4903
97.5% Chebyshev (Mean, Sd) UCL	148.4482
99% Chebyshev (Mean, Sd) UCL	189.6159

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-13

STATISTICAL ANALYSIS OF TOTAL MERCURY SURFACE WATER DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Mercury-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	28
Number of Unique Samples	2
Minimum	0.1
Maximum	0.12
Mean	0.100714
Median	0.1
Standard Deviation	0.00378
Variance	1.43E-05
Coefficient of Variation	0.037528
Skewness	5.291503

Gamma Statistics	
k hat	825.2715
k star (bias corrected)	736.8733
Theta hat	0.000122
Theta star	0.000137
nu hat	46215.2
nu star	41264.91
Approx.Chi Square Value (.05)	40793.41
Adjusted Level of Significance	0.0404
Adjusted Chi Square Value	40764.56

Log-transformed Statistics	
Minimum of log data	-2.302585
Maximum of log data	-2.120264
Mean of log data	-2.296074
Standard Deviation of log data	0.034456
Variance of log data	0.001187

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.194253
Shapiro-Wilk 5% Critical Value	0.924
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**0.101931**

Gamma Distribution Test	
A-D Test Statistic	10.34714
A-D 5% Critical Value	0.74315
K-S Test Statistic	0.540789
K-S 5% Critical Value	0.16482
Data do not follow gamma distribution at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.101878
Adjusted Gamma UCL	0.10195

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.194253
Shapiro-Wilk 5% Critical Value	0.924
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	N/A
95% Chebyshev (MVUE) UCL	0.10357
97.5% Chebyshev (MVUE) UCL	0.104807
99% Chebyshev (MVUE) UCL	0.107237

95% Non-parametric UCLs	
CLT UCL	0.101889
Adj-CLT UCL (Adjusted for skewness)	0.102652
Mod-t UCL (Adjusted for skewness)	0.10205
Jackknife UCL	0.101931
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	0.103828
97.5% Chebyshev (Mean, Sd) UCL	0.105175
99% Chebyshev (Mean, Sd) UCL	0.107821

PREPARED BY: MKB 4/7/06
CHECKED BY: LMS 4/12/06

TABLE B-14

STATISTICAL ANALYSIS OF TOTAL THALLIUM SURFACE WATER DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File P:\dscr\RISK\Creeks\Revisions HHBRA 04-0(Variable: Thallium-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	29
Number of Unique Samples	4
Minimum	1
Maximum	2
Mean	1.127586
Median	1
Standard Deviation	0.299877
Variance	0.089926
Coefficient of Variation	0.265946
Skewness	2.231893

Gamma Statistics	
k hat	19.38462
k star (bias corrected)	17.4023
Theta hat	0.058169
Theta star	0.064795
nu hat	1124.308
nu star	1009.334
Approx.Chi Square Value (.05)	936.57
Adjusted Level of Significance	0.0407
Adjusted Chi Square Value	932.3965

Log-transformed Statistics	
Minimum of log data	0
Maximum of log data	0.693147
Mean of log data	0.094064
Standard Deviation of log data	0.216686
Variance of log data	0.046953

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.481891
Shapiro-Wilk 5% Critical Value	0.926
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**1.222315**

Gamma Distribution Test	
A-D Test Statistic	7.533012
A-D 5% Critical Value	0.744329
K-S Test Statistic	0.49826
K-S 5% Critical Value	0.16232
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.21519
Adjusted Gamma UCL	1.220629

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.485001
Shapiro-Wilk 5% Critical Value	0.926
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	1.20858
95% Chebyshev (MVUE) UCL	1.322595
97.5% Chebyshev (MVUE) UCL	1.408615
99% Chebyshev (MVUE) UCL	1.577584

95% Non-parametric UCLs	
CLT UCL	1.219181
Adj-CLT UCL (Adjusted for skewness)	1.243841
Mod-t UCL (Adjusted for skewness)	1.226161
Jackknife UCL	1.222315
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/R
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	1.370315
97.5% Chebyshev (Mean, Sd) UCL	1.475343
99% Chebyshev (Mean, Sd) UCL	1.681652

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-15

STATISTICAL ANALYSIS OF CIS-1,2-DICHLOROETHENE SURFACE WATER DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: cis-1,2-DCE-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	17
Number of Unique Samples	17
Minimum	0.28
Maximum	45
Mean	3.872941
Median	0.64
Standard Deviation	10.89318
Variance	118.6613
Coefficient of Variation	2.812637
Skewness	3.803936

Gamma Statistics	
k hat	0.450974
k star (bias corrected)	0.410606
Theta hat	8.587949
Theta star	9.432257
nu hat	15.33311
nu star	13.9606
Approx.Chi Square Value (.05)	6.543248
Adjusted Level of Significance	0.03461
Adjusted Chi Square Value	6.0173

Log-transformed Statistics	
Minimum of log data	-1.272966
Maximum of log data	3.806662
Mean of log data	-0.077427
Standard Deviation of log data	1.281476
Variance of log data	1.64218

RECOMMENDATION
Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.360339
Shapiro-Wilk 5% Critical Value	0.892
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	8.485536
Gamma Distribution Test	
A-D Test Statistic	3.607984
A-D 5% Critical Value	0.808679
K-S Test Statistic	0.424503
K-S 5% Critical Value	0.222357
Data do not follow gamma distribution at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	8.263266
Adjusted Gamma UCL	8.985525
Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.68933
Shapiro-Wilk 5% Critical Value	0.892
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	5.743837
95% Chebyshev (MVUE) UCL	4.955727
97.5% Chebyshev (MVUE) UCL	6.25852
99% Chebyshev (MVUE) UCL	8.817605
95% Non-parametric UCLs	
CLT UCL	8.218617
Adj-CLT UCL (Adjusted for skewness)	10.82309
Mod-t UCL (Adjusted for skewness)	8.891781
Jackknife UCL	8.485536
Standard Bootstrap UCL	7.909167
Bootstrap-t UCL	136.1398
Hall's Bootstrap UCL	56.5971
Percentile Bootstrap UCL	8.498824
BCA Bootstrap UCL	11.81
95% Chebyshev (Mean, Sd) UCL	15.38908
97.5% Chebyshev (Mean, Sd) UCL	20.37212
99% Chebyshev (Mean, Sd) UCL	**30.16034**

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-16

STATISTICAL ANALYSIS OF STYRENE SURFACE WATER DATA FOR NO NAMECREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: Styrene-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	31
Number of Unique Samples	4
Minimum	0.5
Maximum	120
Mean	7.390323
Median	0.5
Standard Deviation	26.25013
Variance	689.0696
Coefficient of Variation	3.551961
Skewness	3.865698

Gamma Statistics	
k hat	0.303393
k star (bias corrected)	0.295538
Theta hat	24.35891
Theta star	25.00636
nu hat	18.81037
nu star	18.32334
Approx.Chi Square Value (.05)	9.623551
Adjusted Level of Significance	0.0413
Adjusted Chi Square Value	9.272923

Log-transformed Statistics	
Minimum of log data	-0.693147
Maximum of log data	4.787492
Mean of log data	-0.268507
Standard Deviation of log data	1.385106
Variance of log data	1.918519

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.291794
Shapiro-Wilk 5% Critical Value	0.929
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	15.39234

Gamma Distribution Test	
A-D Test Statistic	10.67436
A-D 5% Critical Value	0.853574
K-S Test Statistic	0.561934
K-S 5% Critical Value	0.171086
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	14.07125
Adjusted Gamma UCL	14.60331

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.343369
Shapiro-Wilk 5% Critical Value	0.929
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	4.172634
95% Chebyshev (MVUE) UCL	4.426566
97.5% Chebyshev (MVUE) UCL	5.5257
99% Chebyshev (MVUE) UCL	7.684737

95% Non-parametric UCLs	
CLT UCL	15.14525
Adj-CLT UCL (Adjusted for skewness)	18.64292
Mod-t UCL (Adjusted for skewness)	15.9379
Jackknife UCL	15.39234
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/R
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	27.94106
97.5% Chebyshev (Mean, Sd) UCL	36.83339
99% Chebyshev (Mean, Sd) UCL	**54.30063**

RECOMMENDATION
Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-17

STATISTICAL ANALYSIS OF TETRACHLOROETHENE SURFACE WATER DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktoţ Variable: PCE-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	35
Number of Unique Samples	14
Minimum	0.45
Maximum	2.1
Mean	0.688857
Median	0.5
Standard Deviation	0.366652
Variance	0.134434
Coefficient of Variation	0.532262
Skewness	2.446325

Gamma Statistics	
k hat	5.664273
k star (bias corrected)	5.197812
Theta hat	0.121614
Theta star	0.132528
nu hat	396.4991
nu star	363.8468
Approx.Chi Square Value (.05)	320.6325
Adjusted Level of Significance	0.0425
Adjusted Chi Square Value	318.714

Log-transformed Statistics	
Minimum of log data	-0.798508
Maximum of log data	0.741937
Mean of log data	-0.463583
Standard Deviation of log data	0.39245
Variance of log data	0.154017

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.623339
Shapiro-Wilk 5% Critical Value	0.934
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**0.793653**

Gamma Distribution Test	
A-D Test Statistic	4.870637
A-D 5% Critical Value	0.749527
K-S Test Statistic	0.347592
K-S 5% Critical Value	0.148977
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.7817
Adjusted Gamma UCL	0.786406

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.700664
Shapiro-Wilk 5% Critical Value	0.934
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.769071
95% Chebyshev (MVUE) UCL	0.879465
97.5% Chebyshev (MVUE) UCL	0.966733
99% Chebyshev (MVUE) UCL	1.138155

95% Non-parametric UCLs	
CLT UCL	0.790798
Adj-CLT UCL (Adjusted for skewness)	0.818181
Mod-t UCL (Adjusted for skewness)	0.797924
Jackknife UCL	0.793653
Standard Bootstrap UCL	0.788347
Bootstrap-t UCL	0.860039
Hall's Bootstrap UCL	0.82462
Percentile Bootstrap UCL	0.798286
BCA Bootstrap UCL	0.818857
95% Chebyshev (Mean, Sd) UCL	0.959002
97.5% Chebyshev (Mean, Sd) UCL	1.075894
99% Chebyshev (Mean, Sd) UCL	1.305506

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-18

STATISTICAL ANALYSIS OF TRICHLOROETHENE SURFACE WATER DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: TCE-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	35
Number of Unique Samples	25
Minimum	0.26
Maximum	21
Mean	2.279143
Median	1.75
Standard Deviation	3.488814
Variance	12.17183
Coefficient of Variation	1.530757
Skewness	4.783835

Gamma Statistics	
k hat	1.124421
k star (bias corrected)	1.04709
Theta hat	2.026947
Theta star	2.176645
nu hat	78.7095
nu star	73.2963
Approx.Chi Square Value (.05)	54.57767
Adjusted Level of Significance	0.0425
Adjusted Chi Square Value	53.81127

Log-transformed Statistics	
Minimum of log data	-1.347074
Maximum of log data	3.044522
Mean of log data	0.317235
Standard Deviation of log data	0.958299
Variance of log data	0.918336

RECOMMENDATION
Assuming gamma distribution (0.05)

Use Approximate Gamma UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.477591
Shapiro-Wilk 5% Critical Value	0.934
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	3.27631

Gamma Distribution Test	
A-D Test Statistic	1.140469
A-D 5% Critical Value	0.773428
K-S Test Statistic	0.121668
K-S 5% Critical Value	0.152627
Data follow approximate gamma distibution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	**3.060826**
Adjusted Gamma UCL	3.10442

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.93879
Shapiro-Wilk 5% Critical Value	0.934
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	3.199835
95% Chebyshev (MVUE) UCL	3.862972
97.5% Chebyshev (MVUE) UCL	4.611169
99% Chebyshev (MVUE) UCL	6.080857

95% Non-parametric UCLs	
CLT UCL	3.249141
Adj-CLT UCL (Adjusted for skewness)	3.758668
Mod-t UCL (Adjusted for skewness)	3.355786
Jackknife UCL	3.27631
Standard Bootstrap UCL	3.243836
Bootstrap-t UCL	4.681427
Hall's Bootstrap UCL	7.100602
Percentile Bootstrap UCL	3.407429
BCA Bootstrap UCL	3.982
95% Chebyshev (Mean, Sd) UCL	4.849661
97.5% Chebyshev (Mean, Sd) UCL	5.961926
99% Chebyshev (Mean, Sd) UCL	8.146756

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-19

STATISTICAL ANALYSIS OF VINYL CHLORIDE SURFACE WATER DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File C:\Documents and Settings\mkbystedt\Desktop Variable: VC-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	35
Number of Unique Samples	3
Minimum	0.5
Maximum	6.1
Mean	0.771429
Median	0.5
Standard Deviation	1.137482
Variance	1.293866
Coefficient of Variation	1.474514
Skewness	4.205452

Gamma Statistics	
k hat	1.815378
k star (bias corrected)	1.678822
Theta hat	0.424941
Theta star	0.459506
nu hat	127.0764
nu star	117.5175
Approx.Chi Square Value (.05)	93.48292
Adjusted Level of Significance	0.0425
Adjusted Chi Square Value	92.46694

Log-transformed Statistics	
Minimum of log data	-0.693147
Maximum of log data	1.808289
Mean of log data	-0.559542
Standard Deviation of log data	0.552054
Variance of log data	0.304764

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.262627
Shapiro-Wilk 5% Critical Value	0.934
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1.096542

Gamma Distribution Test	
A-D Test Statistic	12.67216
A-D 5% Critical Value	0.762249
K-S Test Statistic	0.55605
K-S 5% Critical Value	0.150959
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.969764
Adjusted Gamma UCL	0.980419

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.259854
Shapiro-Wilk 5% Critical Value	0.934
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.801078
95% Chebyshev (MVUE) UCL	0.946607
97.5% Chebyshev (MVUE) UCL	1.06965
99% Chebyshev (MVUE) UCL	1.311344

95% Non-parametric UCLs	
CLT UCL	1.087684
Adj-CLT UCL (Adjusted for skewness)	1.233723
Mod-t UCL (Adjusted for skewness)	1.119321
Jackknife UCL	1.096542
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/R
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	**1.609512**
97.5% Chebyshev (Mean, Sd) UCL	1.972152
99% Chebyshev (Mean, Sd) UCL	2.684487

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

TABLE B-20

STATISTICAL ANALYSIS OF CHRYSENE SURFACE WATER DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File P:\dscr\RISK\Creeks\Revisions HHBRA 04-0(Variable: Chrysene-NNC (ug/L)

Raw Statistics	
Number of Valid Samples	26
Number of Unique Samples	2
Minimum	0.1
Maximum	0.12
Mean	0.100769
Median	0.1
Standard Deviation	0.003922
Variance	1.54E-05
Coefficient of Variation	0.038924
Skewness	5.09902

Gamma Statistics	
k hat	768.8
k star (bias corrected)	680.118
Theta hat	0.000131
Theta star	0.000148
nu hat	39977.6
nu star	35366.13
Approx.Chi Square Value (.05)	34929.72
Adjusted Level of Significance	0.0398
Adjusted Chi Square Value	34901.19

Log-transformed Statistics	
Minimum of log data	-2.302585
Maximum of log data	-2.120264
Mean of log data	-2.295573
Standard Deviation of log data	0.035756
Variance of log data	0.001279

RECOMMENDATION
Data are Non-parametric (0.05)

Use Student's-t UCL
or Modified-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.201985
Shapiro-Wilk 5% Critical Value	0.92
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**0.102083**

Gamma Distribution Test	
A-D Test Statistic	9.567361
A-D 5% Critical Value	0.74223
K-S Test Statistic	0.540945
K-S 5% Critical Value	0.1707
Data do not follow gamma distribution	
at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.102028
Adjusted Gamma UCL	0.102112

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.201985
Shapiro-Wilk 5% Critical Value	0.92
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	N/A
95% Chebyshev (MVUE) UCL	0.103846
97.5% Chebyshev (MVUE) UCL	0.105179
99% Chebyshev (MVUE) UCL	0.107798

95% Non-parametric UCLs	
CLT UCL	0.102035
Adj-CLT UCL (Adjusted for skewness)	0.102856
Mod-t UCL (Adjusted for skewness)	0.102211
Jackknife UCL	0.102083
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/A
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	0.104122
97.5% Chebyshev (Mean, Sd) UCL	0.105573
99% Chebyshev (Mean, Sd) UCL	0.108423

PREPARED BY: MKB 4/3/06
CHECKED BY: LMS 4/12/06

STATISTICAL ANALYSIS OF COPC SEDIMENT

TABLE B-21

STATISTICAL ANALYSIS OF TOTAL ARSENIC SEDIMENT DATA FOR KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Arsenic-Sed (mg/kg)

Raw Statistics	
Number of Valid Samples	17
Number of Unique Samples	16
Minimum	0.29
Maximum	5.8
Mean	0.989824
Median	0.6
Standard Deviation	1.286626
Variance	1.655405
Coefficient of Variation	1.299854
Skewness	3.667785

Gamma Statistics	
k hat	1.665361
k star (bias corrected)	1.41069
Theta hat	0.59436
Theta star	0.701659
nu hat	56.62228
nu star	47.96344
Approx.Chi Square Value (.05)	33.06501
Adjusted Level of Significance	0.03461
Adjusted Chi Square Value	31.77052

Log-transformed Statistics	
Minimum of log data	-1.237874
Maximum of log data	1.757858
Mean of log data	-0.339568
Standard Deviation of log data	0.688505
Variance of log data	0.47404

RECOMMENDATION
Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.46513
Shapiro-Wilk 5% Critical Value	0.892
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	1.534631

Gamma Distribution Test	
A-D Test Statistic	2.172159
A-D 5% Critical Value	0.7536
K-S Test Statistic	0.336128
K-S 5% Critical Value	0.212513
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	1.435818
Adjusted Gamma UCL	1.494321

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.794823
Shapiro-Wilk 5% Critical Value	0.892
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	1.330201
95% Chebyshev (MVUE) UCL	1.57141
97.5% Chebyshev (MVUE) UCL	1.867272
99% Chebyshev (MVUE) UCL	2.448437

95% Non-parametric UCLs	
CLT UCL	1.503104
Adj-CLT UCL (Adjusted for skewness)	1.799715
Mod-t UCL (Adjusted for skewness)	1.580896
Jackknife UCL	1.534631
Standard Bootstrap UCL	1.482272
Bootstrap-t UCL	3.359161
Hall's Bootstrap UCL	3.292224
Percentile Bootstrap UCL	1.554588
BCA Bootstrap UCL	1.915882
95% Chebyshev (Mean, Sd) UCL	**2.350029**
97.5% Chebyshev (Mean, Sd) UCL	2.938591
99% Chebyshev (Mean, Sd) UCL	4.094707

PREPARED/DATE: MKB 4/10/06
CHECKED/DATE: LMS 4/12/06

TABLE B-22

STATISTICAL ANALYSIS OF TOTAL ARSENIC SEDIMENT DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Arsenic - SED (mg/kg)

Raw Statistics	
Number of Valid Samples	15
Number of Unique Samples	15
Minimum	1.5
Maximum	9.4
Mean	4.815
Median	4.3
Standard Deviation	2.254308
Variance	5.081904
Coefficient of Variation	0.468184
Skewness	0.651196

Gamma Statistics	
k hat	4.817106
k star (bias corrected)	3.898129
Theta hat	0.999563
Theta star	1.235208
nu hat	144.5132
nu star	116.9439
Approx.Chi Square Value (.05)	92.97104
Adjusted Level of Significance	0.03235
Adjusted Chi Square Value	90.34134

Log-transformed Statistics	
Minimum of log data	0.405465
Maximum of log data	2.24071
Mean of log data	1.464363
Standard Deviation of log data	0.493068
Variance of log data	0.243116

RECOMMENDATION
Data are normal (0.05)

Use Student's-t UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.946609
Shapiro-Wilk 5% Critical Value	0.881
Data are normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	**5.840188**

Gamma Distribution Test	
A-D Test Statistic	0.210595
A-D 5% Critical Value	0.738821
K-S Test Statistic	0.147282
K-S 5% Critical Value	0.222166
Data follow gamma distribution at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	6.056561
Adjusted Gamma UCL	6.232859

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.973111
Shapiro-Wilk 5% Critical Value	0.881
Data are lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	6.407477
95% Chebyshev (MVUE) UCL	7.605096
97.5% Chebyshev (MVUE) UCL	8.801321
99% Chebyshev (MVUE) UCL	11.15107

95% Non-parametric UCLs	
CLT UCL	5.772403
Adj-CLT UCL (Adjusted for skewness)	5.876975
Mod-t UCL (Adjusted for skewness)	5.856499
Jackknife UCL	5.840188
Standard Bootstrap UCL	5.758645
Bootstrap-t UCL	5.941004
Hall's Bootstrap UCL	5.924156
Percentile Bootstrap UCL	5.758333
BCA Bootstrap UCL	5.776333
95% Chebyshev (Mean, Sd) UCL	7.35214
97.5% Chebyshev (Mean, Sd) UCL	8.449962
99% Chebyshev (Mean, Sd) UCL	10.60642

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-23

STATISTICAL ANALYSIS OF TOTAL BENZO(a)ANTHRACENE SEDIMENT DATA FOR NO NAME CREEK HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Benzo(a)anthracene - SED (mg/kg)

Raw Statistics	
Number of Valid Samples	15
Number of Unique Samples	15
Minimum	0.037
Maximum	10
Mean	1.3349
Median	0.22
Standard Deviation	2.791628
Variance	7.793185
Coefficient of Variation	2.091263
Skewness	2.713312

Gamma Statistics	
k hat	0.455616
k star (bias corrected)	0.408937
Theta hat	2.929878
Theta star	3.264313
nu hat	13.66849
nu star	12.26812
Approx.Chi Square Value (.05)	5.403126
Adjusted Level of Significance	0.03235
Adjusted Chi Square Value	4.8529

Log-transformed Statistics	
Minimum of log data	-3.296837
Maximum of log data	2.302585
Mean of log data	-1.125706
Standard Deviation of log data	1.590831
Variance of log data	2.530743

RECOMMENDATION
Data are lognormal (0.05)

Use 99% Chebyshev (MVUE) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.51947
Shapiro-Wilk 5% Critical Value	0.881
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	2.604444

Gamma Distribution Test	
A-D Test Statistic	1.538901
A-D 5% Critical Value	0.802426
K-S Test Statistic	0.31456
K-S 5% Critical Value	0.235188
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	3.030971
Adjusted Gamma UCL	3.374625

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.907953
Shapiro-Wilk 5% Critical Value	0.881
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	5.736414
95% Chebyshev (MVUE) UCL	2.993115
97.5% Chebyshev (MVUE) UCL	3.863843
99% Chebyshev (MVUE) UCL	**5.574219**

95% Non-parametric UCLs	
CLT UCL	2.520503
Adj-CLT UCL (Adjusted for skewness)	3.060071
Mod-t UCL (Adjusted for skewness)	2.688605
Jackknife UCL	2.604444
Standard Bootstrap UCL	2.503065
Bootstrap-t UCL	9.75483
Hall's Bootstrap UCL	8.081349
Percentile Bootstrap UCL	2.6199
BCA Bootstrap UCL	3.008667
95% Chebyshev (Mean, Sd) UCL	4.476773
97.5% Chebyshev (Mean, Sd) UCL	5.836264
99% Chebyshev (Mean, Sd) UCL	8.506721

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-24

STATISTICAL ANALYSIS OF TOTAL BENZO(a)PYRENE SEDIMENT DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Benzo(a)pyrene - SED (mg/kg)

Raw Statistics	
Number of Valid Samples	15
Number of Unique Samples	14
Minimum	0.035
Maximum	9.5
Mean	1.160933
Median	0.2
Standard Deviation	2.526268
Variance	6.38203
Coefficient of Variation	2.176066
Skewness	3.036307

Gamma Statistics	
k hat	0.464362
k star (bias corrected)	0.415934
Theta hat	2.500059
Theta star	2.791146
nu hat	13.93087
nu star	12.47803
Approx.Chi Square Value (.05)	5.542486
Adjusted Level of Significance	0.03235
Adjusted Chi Square Value	4.983958

Log-transformed Statistics	
Minimum of log data	-3.352407
Maximum of log data	2.251292
Mean of log data	-1.234538
Standard Deviation of log data	1.555521
Variance of log data	2.419647

RECOMMENDATION
Data are lognormal (0.05)

Use 99% Chebyshev (MVUE) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.496992
Shapiro-Wilk 5% Critical Value	0.881
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	2.3098

Gamma Distribution Test	
A-D Test Statistic	1.535675
A-D 5% Critical Value	0.800567
K-S Test Statistic	0.321531
K-S 5% Critical Value	0.234917
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	2.613658
Adjusted Gamma UCL	2.906557

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.909687
Shapiro-Wilk 5% Critical Value	0.881
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	4.569886
95% Chebyshev (MVUE) UCL	2.523393
97.5% Chebyshev (MVUE) UCL	3.251691
99% Chebyshev (MVUE) UCL	**4.682292**

95% Non-parametric UCLs	
CLT UCL	2.233838
Adj-CLT UCL (Adjusted for skewness)	2.780242
Mod-t UCL (Adjusted for skewness)	2.395028
Jackknife UCL	2.3098
Standard Bootstrap UCL	2.214353
Bootstrap-t UCL	8.206146
Hall's Bootstrap UCL	6.880225
Percentile Bootstrap UCL	2.354933
BCA Bootstrap UCL	3.049533
95% Chebyshev (Mean, Sd) UCL	4.004154
97.5% Chebyshev (Mean, Sd) UCL	5.234418
99% Chebyshev (Mean, Sd) UCL	7.651033

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-25

STATISTICAL ANALYSIS OF TOTAL BENZO(b)FLUORANTHENE SEDIMENT DATA FOR NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Benzo(b)fluoranthene - SED (mg/kg)

Raw Statistics	
Number of Valid Samples	15
Number of Unique Samples	15
Minimum	0.049
Maximum	11
Mean	1.407367
Median	0.21
Standard Deviation	2.990566
Variance	8.943484
Coefficient of Variation	2.124937
Skewness	2.868883

Gamma Statistics	
k hat	0.463906
k star (bias corrected)	0.415569
Theta hat	3.033734
Theta star	3.386601
nu hat	13.91717
nu star	12.46707
Approx.Chi Square Value (.05)	5.535196
Adjusted Level of Significance	0.03235
Adjusted Chi Square Value	4.9771

Log-transformed Statistics	
Minimum of log data	-3.015935
Maximum of log data	2.397895
Mean of log data	-1.043618
Standard Deviation of log data	1.558778
Variance of log data	2.42979

RECOMMENDATION
Data are lognormal (0.05)

Use 99% Chebyshev (MVUE) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.510172
Shapiro-Wilk 5% Critical Value	0.881
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	2.767381

Gamma Distribution Test	
A-D Test Statistic	1.540475
A-D 5% Critical Value	0.800664
K-S Test Statistic	0.301119
K-S 5% Critical Value	0.234931
Data do not follow gamma distribution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	3.16985
Adjusted Gamma UCL	3.525294

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.901633
Shapiro-Wilk 5% Critical Value	0.881
Data are lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	5.591395
95% Chebyshev (MVUE) UCL	3.071641
97.5% Chebyshev (MVUE) UCL	3.958834
99% Chebyshev (MVUE) UCL	**5.701553**

95% Non-parametric UCLs	
CLT UCL	2.677458
Adj-CLT UCL (Adjusted for skewness)	3.288619
Mod-t UCL (Adjusted for skewness)	2.86271
Jackknife UCL	2.767381
Standard Bootstrap UCL	2.650127
Bootstrap-t UCL	9.745789
Hall's Bootstrap UCL	8.561961
Percentile Bootstrap UCL	2.868333
BCA Bootstrap UCL	3.505033
95% Chebyshev (Mean, Sd) UCL	4.773138
97.5% Chebyshev (Mean, Sd) UCL	6.229509
99% Chebyshev (Mean, Sd) UCL	9.090269

PREPARED BY: MKB 4/10/06
CHECKED BY: LMS 4/12/06

TABLE B-26

STATISTICAL ANALYSIS OF TOTAL ARSENIC SEDIMENT DATA FOR FALLING CREEK TRIBUTARY HUMAN HEALTH BASELINE RISK ASSESSMENT, DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Data File — Variable: Arsenic - SED (mg/kg)

Raw Statistics	
Number of Valid Samples	17
Number of Unique Samples	17
Minimum	0.31
Maximum	2.7
Mean	0.770794
Median	0.64
Standard Deviation	0.538238
Variance	0.2897
Coefficient of Variation	0.69829
Skewness	3.135798

Gamma Statistics	
k hat	3.718393
k star (bias corrected)	3.101421
Theta hat	0.207292
Theta star	0.248529
nu hat	126.4254
nu star	105.4483
Approx.Chi Square Value (.05)	82.74672
Adjusted Level of Significance	0.03461
Adjusted Chi Square Value	80.6404

Log-transformed Statistics	
Minimum of log data	-1.17118
Maximum of log data	0.993252
Mean of log data	-0.40079
Standard Deviation of log data	0.503702
Variance of log data	0.253715

RECOMMENDATION
Assuming gamma distribution (0.05)

Use Approximate Gamma UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.627074
Shapiro-Wilk 5% Critical Value	0.892
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	0.998705

Gamma Distribution Test	
A-D Test Statistic	0.961981
A-D 5% Critical Value	0.743539
K-S Test Statistic	0.17277
K-S 5% Critical Value	0.210209
Data follow approximate gamma distibution at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	**0.982262**
Adjusted Gamma UCL	1.007919

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.891224
Shapiro-Wilk 5% Critical Value	0.892
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.983775
95% Chebyshev (MVUE) UCL	1.169186
97.5% Chebyshev (MVUE) UCL	1.348774
99% Chebyshev (MVUE) UCL	1.701541

95% Non-parametric UCLs	
CLT UCL	0.985516
Adj-CLT UCL (Adjusted for skewness)	1.091601
Mod-t UCL (Adjusted for skewness)	1.015252
Jackknife UCL	0.998705
Standard Bootstrap UCL	0.980803
Bootstrap-t UCL	1.256772
Hall's Bootstrap UCL	1.897045
Percentile Bootstrap UCL	1.013676
BCA Bootstrap UCL	1.111824
95% Chebyshev (Mean, Sd) UCL	1.339813
97.5% Chebyshev (Mean, Sd) UCL	1.586028
99% Chebyshev (Mean, Sd) UCL	2.069669

PREPARED/DATE: MKB 4/10/06
CHECKED/DATE: LMS 4/12/06

APPENDIX C

IEUBK LEAD MODEL

LEAD MODEL FOR WINDOWS Version 1.0

Model Version: 1.0 Build 263
User Name: Laura Smith
Date: 04/12/2006
Site Name: DSCR
Operable Unit: Adjacent Creeks - NNC
Run Mode: Site Risk Assessment

Water Data
Assumed 1/5 of daily intake from surface water. Average lead concentration in SW = 6.8 ug/L.

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Alternate Water Values Used
Values:
Percent of Total Consumed as First Draw: 80.000%
Concentration of Lead in First Draw: 4.000 ug/L
Concentration of Lead in Flushed: 4.000 ug/L
Percentage of Total Consumed from Surface Water: 20.000 %
Concentration of Lead in Surface Water: 6.800 ug/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 150.000 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	200.000	150.000
1-2	200.000	150.000
2-3	200.000	150.000
3-4	200.000	150.000
4-5	200.000	150.000
5-6	200.000	150.000
6-7	200.000	150.000

****** Alternate Intake ******

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 2.500 ug Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.551	0.000	0.421
1-2	0.034	2.644	0.000	1.043
2-3	0.062	2.999	0.000	1.096
3-4	0.067	2.917	0.000	1.130
4-5	0.067	2.861	0.000	1.194
5-6	0.093	3.038	0.000	1.267
6-7	0.093	3.364	0.000	1.293

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	4.059	7.052	3.8
1-2	6.392	10.114	4.2
2-3	6.456	10.613	3.9
3-4	6.531	10.644	3.7
4-5	4.926	9.047	3.2
5-6	4.463	8.862	2.8
6-7	4.228	8.979	2.6

APPENDIX D

RISK CHARACTERIZATION TABLES

TABLE D-1

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, CHILD
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	4.9E-06	3.0E-04	1.6E-02	4.2E-07	1.5E+00	6.3E-07
Iron	3.4E-03	3.0E-01	1.1E-02	2.9E-04	NA	NA
Manganese	1.4E-04	2.0E-02	6.9E-03	1.2E-05	NA	NA
Mercury	1.3E-07	3.0E-04	4.4E-04	1.1E-08	NA	NA
Thallium	2.1E-06	7.0E-05	3.0E-02	1.8E-07	NA	NA
VOCs						
Benzene	5.0E-06	4.0E-03	1.3E-03	4.3E-07	5.5E-02	2.4E-08
cis-1,2-Dichloroethene	3.7E-06	1.0E-02	3.7E-04	3.2E-07	NA	NA
Tetrachloroethene	1.3E-06	1.0E-02	1.3E-04	1.1E-07	5.4E-01	6.0E-08
Trichloroethene	3.6E-06	3.0E-04	1.2E-02	3.1E-07	2.1E-01	6.5E-08
Total			**0.08**			**8.E-07**

Notes:

(a) $ADDn = (EPC \times UCF1 \times IR \times UCF2 \times t_{event} \times EF \times EDc)/(BWc \times ATn)$;
$ADDc = (EPC \times UCF1 \times IR \times UCF2 \times t_{event} \times EF \times EDc)/(BWc \times ATc)$
from Tables 3-1 and 3-5

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-2

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, ADOLESCENT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	1.6E-06	3.0E-04	5.2E-03	2.7E-07	1.5E+00	4.0E-07
Iron	1.1E-03	3.0E-01	3.6E-03	1.9E-04	NA	NA
Manganese	4.4E-05	2.0E-02	2.2E-03	7.5E-06	NA	NA
Mercury	4.2E-08	3.0E-04	1.4E-04	7.3E-09	NA	NA
Thallium	6.8E-07	7.0E-05	9.7E-03	1.2E-07	NA	NA
VOCs						
Benzene	1.6E-06	4.0E-03	4.0E-04	2.7E-07	5.5E-02	1.5E-08
cis-1,2-Dichloroethene	1.2E-06	1.0E-02	1.2E-04	2.0E-07	NA	NA
Tetrachloroethene	4.1E-07	1.0E-02	4.1E-05	7.0E-08	5.4E-01	3.8E-08
Trichloroethene	1.2E-06	3.0E-04	3.9E-03	2.0E-07	2.1E-01	4.2E-08
Total			**0.03**			**5.E-07**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATc)
from Tables 3-1 and 3-5

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds

NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-3

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, ADULT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	1.0E-06	3.0E-04	3.5E-03	3.6E-07	1.5E+00	5.4E-07
Iron	7.3E-04	3.0E-01	2.4E-03	2.5E-04	NA	NA
Manganese	2.9E-05	2.0E-02	1.5E-03	1.0E-05	NA	NA
Mercury	2.8E-08	3.0E-04	9.5E-05	9.8E-09	NA	NA
Thallium	4.6E-07	7.0E-05	6.5E-03	1.6E-07	NA	NA
VOCs						
Benzene	1.1E-06	4.0E-03	2.7E-04	3.7E-07	5.5E-02	2.0E-08
cis-1,2-Dichloroethene	8.0E-07	1.0E-02	8.0E-05	2.7E-07	NA	NA
Tetrachloroethene	2.8E-07	1.0E-02	2.8E-05	9.5E-08	5.4E-01	5.1E-08
Trichloroethene	7.8E-07	3.0E-04	2.6E-03	2.7E-07	2.1E-01	5.6E-08
Total			**0.02**			**7.E-07**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDa)/(BWa x ATn);
ADDc = (EPC x UCF1 x IRa x UCF2 x t_{event} x EF x EDa)/(BWa x ATc)
from Tables 3-1 and 3-5

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-4

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, CHILD
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	2.6E-07	3.0E-04	8.8E-04	2.6E-07	1.5E+00	3.9E-07
Iron	1.8E-04	3.0E-01	6.2E-04	1.8E-04	NA	NA
Manganese	7.4E-06	8.0E-04	9.3E-03	7.4E-06	NA	NA
Mercury	7.2E-09	2.1E-05	3.4E-04	7.2E-09	NA	NA
Thallium	1.1E-07	7.0E-05	1.6E-03	1.1E-07	NA	NA
VOCs						
Benzene	9.2E-07	4.0E-03	2.3E-04	9.2E-07	5.5E-02	5.0E-08
cis-1,2-Dichloroethene	4.3E-07	1.0E-02	4.3E-05	4.3E-07	NA	NA
Tetrachloroethene	1.7E-06	1.0E-02	1.7E-04	1.7E-06	5.4E-01	9.1E-07
Trichloroethene	1.1E-06	3.0E-04	3.5E-03	1.1E-06	2.1E-01	2.2E-07
Total			**0.02**			**2.E-06**

Notes:

(a) ADDn = $(DA_{event} \times EV \times EF \times EDc \times SAc)/(BWc \times ATn)$; ADDc = $(DA_{event} \times EV \times EF \times EDc \times SAc)/(BWc \times ATc)$ from Tables 3-5 and 3-11

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds

NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-5

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADOLESCENT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	1.8E-07	3.0E-04	6.1E-04	3.2E-08	1.5E+00	4.7E-08
Iron	1.3E-04	3.0E-01	4.3E-04	2.2E-05	NA	NA
Manganese	5.2E-06	8.0E-04	6.5E-03	8.9E-07	NA	NA
Mercury	5.0E-09	2.1E-05	2.4E-04	8.6E-10	NA	NA
Thallium	8.1E-08	7.0E-05	1.2E-03	1.4E-08	NA	NA
VOCs						
Benzene	6.4E-07	4.0E-03	1.6E-04	1.1E-07	5.5E-02	6.1E-09
cis-1,2-Dichloroethene	3.0E-07	1.0E-02	3.0E-05	5.2E-08	NA	NA
Tetrachloroethene	1.2E-06	1.0E-02	1.2E-04	2.0E-07	5.4E-01	1.1E-07
Trichloroethene	7.4E-07	3.0E-04	2.5E-03	1.3E-07	2.1E-01	2.7E-08
Total			**0.01**			**2.E-07**

Notes:

(a) $ADDn = (DA_{event} \times EV \times EF \times EDad \times SAad)/(BWad \times ATn)$;
$ADDc = (DA_{event} \times EV \times EF \times EDad \times SAad)/(BWad \times ATc)$
from Tables 3-5 and 3-11

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-6

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADULT
KINGSLAND CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	1.8E-07	3.0E-04	5.8E-04	6.0E-08	1.5E+00	9.0E-08
Iron	1.2E-04	3.0E-01	4.1E-04	4.2E-05	NA	NA
Manganese	5.0E-06	8.0E-04	6.2E-03	1.7E-06	NA	NA
Mercury	4.8E-09	2.1E-05	2.3E-04	1.6E-09	NA	NA
Thallium	7.7E-08	7.0E-05	1.1E-03	2.6E-08	NA	NA
VOCs						
Benzene	6.1E-07	4.0E-03	1.5E-04	2.1E-07	5.5E-02	1.2E-08
cis-1,2-Dichloroethene	2.9E-07	1.0E-02	2.9E-05	9.9E-08	NA	NA
Tetrachloroethene	1.1E-06	1.0E-02	1.1E-04	3.8E-07	5.4E-01	2.1E-07
Trichloroethene	7.1E-07	3.0E-04	2.4E-03	2.4E-07	2.1E-01	5.1E-08
Total			0.01			**4.E-07**

Notes:

(a) ADDn = $(DA_{event} \times EV \times EF \times EDa \times SAa)/(BWa \times ATn)$;
ADDc = $(DA_{event} \times EV \times EF \times EDa \times SAa)/(BWa \times ATc)$
from Tables 3-5 and 3-11

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-7

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, CHILD
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	7.9E-06	3.00E-04	2.6E-02	6.7E-07	1.5E+00	1.0E-06
Iron	1.9E-02	3.00E-01	6.4E-02	1.6E-03	NA	NA
Manganese	1.9E-04	2.00E-02	9.5E-03	1.6E-05	NA	NA
Mercury	1.9E-07	3.0E-04	6.3E-04	1.6E-08	NA	NA
Thallium	2.3E-06	7.00E-05	3.3E-02	2.0E-07	NA	NA
VOCs						
cis-1,2-Dichloroethene	5.7E-05	1.00E-02	5.7E-03	4.9E-06	NA	NA
Styrene	1.0E-04	2.00E-01	5.2E-04	8.8E-06	NA	NA
Tetrachloroethene	1 5E-06	1.00E-02	1.5E-04	1.3E-07	5.4E-01	7.0E-08
Trichloroethene	5.8E-06	3.00E-04	1.9E-02	5.0E-07	2.1E-01	1.0E-07
Vinyl chloride	3.1E-06	3.00E-03	1.0E-03	2.6E-07	7.2E-01	1.9E-07
Vinyl chloride (e)	NA	NA	NA	3.1E-06	7.2E-01	2.2E-06
PAHs						
Chrysene	1.9E-07	NA	NA	1.7E-08	7.3E-03	1.2E-10
Total			**0.2**			**4.E-06**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDc)/(BWc x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDc)/(BWc x ATc)
From Tables 3-2 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

(e) Non-prorated risk: EPC x UCF1 x IRc x UCF2 x t_{event} x EF/BWc x 365

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-8

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, ADOLESCENT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	2.5E-06	3.00E-04	8.4E-03	4.3E-07	1.5E+00	6.5E-07
Iron	6.1E-03	3.00E-01	2.0E-02	1.0E-03	NA	NA
Manganese	6.1E-05	2.00E-02	3.0E-03	1.0E-05	NA	NA
Mercury	6.1E-08	3.0E-04	2.0E-04	1.0E-08	NA	NA
Thallium	7.4E-07	7.00E-05	1.1E-02	1.3E-07	NA	NA
VOCs						
cis-1,2-Dichloroethene	1.8E-05	1.00E-02	1.8E-03	3.1E-06	NA	NA
Styrene	3.3E-05	2.00E-01	1.6E-04	5.6E-06	NA	NA
Tetrachloroethene	4.8E-07	1.00E-02	4.8E-05	8.3E-08	5.4E-01	4.5E-08
Trichloroethene	1.9E-06	3.00E-04	6.2E-03	3.2E-07	2.1E-01	6.7E-08
Vinyl chloride	9.8E-07	3.00E-03	3.3E-04	1.7E-07	1.4E+00	2.3E-07
PAHs						
Chrysene	6.2E-08	NA	NA	1.1E-08	7.3E-03	7.7E-11
Total			**0.05**			**1.E-06**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATc)
From Tables 3-2 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-9

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INCIDENTAL INGESTION OF CREEK WATER, ADULT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
Metals/Inorganics						
Arsenic	1.7E-06	3.00E-04	5.6E-03	5.8E-07	1.5E+00	8.7E-07
Iron	4.1E-03	3.00E-01	1.4E-02	1.4E-03	NA	NA
Manganese	4.1E-05	2.00E-02	2.0E-03	1.4E-05	NA	NA
Mercury	4.1E-08	3.0E-04	1.4E-04	1.4E-08	NA	NA
Thallium	5.0E-07	7.00E-05	7.1E-03	1.7E-07	NA	NA
VOCs						
cis-1,2-Dichloroethene	1.2E-05	1.00E-02	1.2E-03	4.2E-06	NA	NA
Styrene	2.2E-05	2.00E-01	1.1E-04	7.6E-06	NA	NA
Tetrachloroethene	3.2E-07	1.00E-02	3.2E-05	1.1E-07	5.4E-01	6.0E-08
Trichloroethene	1.2E-06	3.00E-04	4.2E-03	4.3E-07	2.1E-01	9.0E-08
Vinyl chloride	6.6E-07	3.00E-03	2.2E-04	2.2E-07	7.2E-01	1.6E-07
PAHs						
Chrysene	4.2E-08	NA	NA	1.4E-08	7.3E-03	1.0E-10
Total			**0.03**			**1.E-06**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDa)/(BWa x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDa)/(BWa x ATc)
From Tables 3-2 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-10

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, CHILD
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	4.2E-07	3.00E-04	1.4E-03	3.6E-08	1.5E+00	5.5E-08
Iron	1.0E-03	3.00E-01	3.4E-03	8.8E-05	NA	NA
Manganese	1.0E-05	8.00E-04	1.3E-02	8.8E-07	NA	NA
Mercury	1.0E-08	2.1E-05	4.9E-04	8.8E-10	NA	NA
Thallium	1.3E-07	7.00E-05	1.8E-03	1.1E-08	NA	NA
VOCs						
cis-1,2-Dichloroethene	6.6E-06	1.00E-02	6.6E-04	5.6E-07	NA	NA
Styrene	6.6E-05	2.00E-01	3.3E-04	5.6E-06	NA	NA
Tetrachloroethene	2.0E-06	1.00E-02	2.0E-04	1.7E-07	5.4E-01	9.1E-08
Trichloroethene	1.7E-06	3.00E-04	5.7E-03	1.5E-07	2.1E-01	3.1E-08
Vinyl chloride	1.7E-07	3.00E-03	5.5E-05	1.4E-08	7.2E-01	1.0E-08
Vinyl chloride (e)	NA	NA	NA	1.7E-07	7.2E-01	1.2E-07
PAHs						
Chrysene	9.7E-06	NA	NA	8.3E-07	7.3E-03	6.1E-09
Total			**0.03**			**3.E-07**

Notes:

(a) ADDn = (DAevent x EV x EF x EDc x SAc)/(BWc x ATn); ADDc = (DAevent x EV x EF x EDc x SAc)/(BWc x ATc) from Tables 3-5 and 3-12

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

(e) Non-prorated risk: DAevent x EV x EF x SAc/BWc x 365

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-11

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADOLESCENT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	3.0E-07	3.00E-04	9.9E-04	5 1E-08	1.5E+00	7.7E-08
Iron	7.2E-04	3 00E-01	2.4E-03	1.2E-04	NA	NA
Manganese	7 2E-06	8.00E-04	9.0E-03	1.2E-06	NA	NA
Mercury	7.2E-09	2.1E-05	3 4E-04	1.2E-09	NA	NA
Thallium	8.8E-08	7.00E-05	1.3E-03	1.5E-08	NA	NA
VOCs						
cis-1,2-Dichloroethene	4.6E-06	1.00E-02	4.6E-04	7.9E-07	NA	NA
Styrene	4.6E-05	2.00E-01	2 3E-04	7.9E-06	NA	NA
Tetrachloroethene	1.4E-06	1 00E-02	1.4E-04	2.4E-07	5.4E-01	1.3E-07
Trichloroethene	1.2E-06	3.00E-04	4.0E-03	2.0E-07	2.1E-01	4.3E-08
Vinyl chloride	1.2E-07	3.00E-03	3 9E-05	2.0E-08	1.4E+00	2.8E-08
PAHs						
Chrysene	6.8E-06	NA	NA	1.2E-06	7.3E-03	8.5E-09
Total			**0.02**			**3.E-07**

Notes:
(a) ADDn = (DAevent x EV x EF x EDad x SAad)/(BWad x ATn); ADDc = (DAevent x EV x EF x EDad x SAad)/(BWad x ATc) from Tables 3-5 and 3-12
(b) From Table 4-1
(c) ADDn/RfDd
(d) ADDc x SFd

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-12

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADULT
NO NAME CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
Metals/Inorganics						
Arsenic	2.8E-07	3.00E-04	9.4E-04	9.7E-08	1.5E+00	1.5E-07
Iron	6.9E-04	3.00E-01	2.3E-03	2.4E-04	NA	NA
Manganese	6.8E-06	8.00E-04	8.5E-03	2.3E-06	NA	NA
Mercury	6.8E-09	2.1E-05	3.3E-04	2.3E-09	NA	NA
Thallium	8.3E-08	7.00E-05	1.2E-03	2.9E-08	NA	NA
VOCs						
cis-1,2-Dichloroethene	4.4E-06	1.00E-02	4.4E-04	1.5E-06	NA	NA
Styrene	4.4E-05	2.00E-01	2.2E-04	1.5E-05	NA	NA
Tetrachloroethene	1.3E-06	1.00E-02	1.3E-04	4.5E-07	5.4E-01	2.4E-07
Trichloroethene	1.1E-06	3.00E-04	3.8E-03	3.9E-07	2.1E-01	8.1E-08
Vinyl chloride	1.1E-07	3.00E-03	3.7E-05	3.8E-08	7.2E-01	2.7E-08
PAHs						
Chrysene	6.5E-06	NA	NA	2.2E-06	7.3E-03	1.6E-08
Total			**0.02**			**5.E-07**

Notes

(a) ADDn = (DAevent x EV x EF x EDa x SAa)/(BWa x ATn); ADDc = (DAevent x EV x EF x EDa x SAa)/(BWa x ATc) from Tables 3-5 and 3-12

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: MKB 4/5/06
CHECKED/DATE: LMS 4/7/06

TABLE D-13

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, CHILD
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	1.7E-07	NA	NA	1.5E-08	7.3E-01	1.1E-08
Chrysene	1.3E-07	NA	NA	1.2E-08	7 3E-03	8.4E-11
Indeno(1,2,3-cd)pyrene	9.3E-08	NA	NA	8.0E-09	7 3E-01	5.8E-09
Total			NA			**2.E-08**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDc)/(BWc x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDc)/(BWc x ATc)
From Tables 3-3 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE D-14

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INGESTION OF CREEK WATER, ADOLESCENT
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	5.5E-08	NA	NA	9.4E-09	7.3E-01	6.8E-09
Chrysene	4.3E-08	NA	NA	7.4E-09	7.3E-03	5.4E-11
Indeno(1,2,3-cd)pyrene	3.0E-08	NA	NA	5.1E-09	7.3E-01	3.7E-09
Total			**NA**			**1.E-08**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDad)/(BWad x ATc)
From Tables 3-3 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: LMS 4/7/06
CHECKED/DATE: MKB 4/10/06

TABLE D-15

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR INCIDENTAL INGESTION OF CREEK WATER, ADULT
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Oral Reference Dose (RfDo) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Oral Cancer Slope Factor (SFo) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	3.7E-08	NA	NA	1.3E-08	7.3E-01	9.2E-09
Chrysene	2.9E-08	NA	NA	9.9E-09	7.3E-03	7.2E-11
Indeno(1,2,3-cd)pyrene	2.0E-08	NA	NA	6.8E-09	7.3E-01	5.0E-09
Total			**NA**			**1.E-08**

Notes:

(a) ADDn = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDa)/(BWa x ATn);
ADDc = (EPC x UCF1 x IR x UCF2 x t_{event} x EF x EDa)/(BWa x ATc)
From Tables 3-3 and 3-5.

(b) From Table 4-1

(c) ADDn/RfDo

(d) ADDc x SFo

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: LMS 4/7/06
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TABLE D-16

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, CHILD
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	1.5E-05	NA	NA	1.3E-06	7.3E-01	9.3E-07
Chrysene	6.7E-06	NA	NA	5.8E-07	7.3E-03	4.2E-09
Indeno(1,2,3-cd)pyrene	8.1E-06	NA	NA	6.9E-07	7.3E-01	5.1E-07
Total			**0.00**			**1.E-06**

Notes:

(a) ADDn = (DAevent x EV x EF x EDc x SAc)/(BWc x ATn); ADDc = (DAevent x EV x EF x EDc x SAc)/(BWc x ATc) from Tables 3-5 and 3-13

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: LMS 4/7/06
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TABLE D-17

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADOLESCENT
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	1.0E-05	NA	NA	1.8E-06	7.3E-01	1.3E-06
Chrysene	4.7E-06	NA	NA	8.1E-07	7.3E-03	5.9E-09
Indeno(1,2,3-cd)pyrene	5.7E-06	NA	NA	9.8E-07	7.3E-01	7.1E-07
Total			**NA**			**2.E-06**

Notes:

(a) ADDn = (DAevent x EV x EF x EDad x SAad)/(BWad x ATn); ADDc = (DAevent x EV x EF x EDad x SAad)/(BWad x ATc)
from Tables 3-5 and 3-13

(b) From Table 4-1

(c) ADDn/RfDd

(d) ADDc x SFd

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

PREPARED/DATE: LMS 4/7/06
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TABLE D-18

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK WATER, ADULT
FALLING CREEK
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose Noncarcinogenic (ADDn) (a)	Dermal Reference Dose (RfDd) (b)	Hazard Quotient (HQ) (c)	Average Daily Dose Carcinogenic (ADDc) (a)	Dermal Cancer Slope Factor (SFd) (b)	Risk (d)
PAHs						
Benzo(b)fluoranthene	9.9E-06	NA	NA	3.4E-06	7.3E-01	2.5E-06
Chrysene	4.5E-06	NA	NA	1.5E-06	7.3E-03	1.1E-08
Indeno(1,2,3-cd)pyrene	5.4E-06	NA	NA	1.9E-06	7.3E-01	1.4E-06
Total			**NA**			**4.E-06**

Notes:
(a) ADDn = (DAevent x EV x EF x EDa x SAa)/(BWa x ATn); ADDc = (DAevent x EV x EF x EDa x SAa)/(BWa x ATc) from Tables 3-5 and 3-13
(b) From Table 4-1
(c) ADDn/RfDd
(d) ADDc x SFd

VOCs Volatile Organic Compounds
PAHs Polycyclic Aromatic Hydrocarbons
NA Not Applicable

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TABLE D-19

DERMAL ABSORPTION FACTORS FOR SEDIMENT CONSTITUENTS OF POTENTIAL CONCERN
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent of Potential Concern	Dermal Absorption Factors (DAF) (a)
Metals/Inorganics	
Arsenic	0.03
PAHs	
Benzo(a)anthracene	0.13
Benzo(a)pyrene	0.13
Benzo(b)fluoranthene	0.13
Dibenzo(a,h)anthracene	0.13

Notes:
(a) USEPA (2004), RAGS Part E, Exhibit 3-4.

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TABLE D-20

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK SEDIMENTS, CHILD
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose (ADDn) (mg/kg-d) (a)	Dermal Reference Dose (RfDd) (mg/kg-d) (b)	Hazard Quotient (c)	Average Daily Dose (ADDc) (mg/kg-d) (a)	Dermal Cancer Slope Factor (SFd) $(mg/kg\text{-}d)^{-1}$ (b)	Excess Cancer Risk (d)
Kingsland Creek						
Arsenic	3.6E-07	3.0E-04	**0.001**	3.1E-08	1.5E+00	**5.E-08**
No Name Creek						
Arsenic	9.0E-07	3.0E-04	0.003	7.7E-08	1.5E+00	1.E-07
Benzo(a)anthracene	3.7E-06	NA	NA	3.2E-07	7.3E-01	2.E-07
Benzo(a)pyrene	3.1E-06	NA	NA	2.7E-07	7.3E+00	2.E-06
Benzo(b)fluoranthene	3.8E-06	NA	NA	3.3E-07	7.3E-01	2.E-07
Dibenzo(a,h)anthracene	2.8E-07	NA	NA	2.4E-08	7.3E+00	2.E-07
Total			**0.003**			**3.E-06**
Falling Creek						
Benzo(a)pyrene	1.1E-07	NA	**NA**	3.9E-08	7.3E+00	**3.E-07**

Notes:

COPC Constituent of Potential Concern
HQ Hazard Quotient
NA Not Applicable

(a) ADDn = $(EPC_{sed} \times SAFc \times UCF1 \times SAc \times DAF \times EF \times EDc)/(BWc \times ATn)$;
ADDc = (EPCsed x SAFc x UCF1 x SAc x DAF x EF x EDc)/(BWc x ATc); From Tables 3-4 and 3-5.
(b) From Table 4-2.
(c) ADDn/RfDd.
(d) ADDc x SFd.

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TABLE D-21

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK SEDIMENTS, ADOLESCENT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose (ADDn) (mg/kg-d) (a)	Dermal Reference Dose (RfDd) (mg/kg-d) (b)	Hazard Quotient (c)	Average Daily Dose (ADDc) (mg/kg-d) (a)	Dermal Cancer Slope Factor (SFd) $(mg/kg\text{-}d)^{-1}$ (b)	Excess Cancer Risk (d)
Kingsland Creek						
Arsenic	2.5E-07	3.0E-04	**0.0008**	4.4E-08	1.5E+00	**7.E-08**
No Name Creek						
Arsenic	6.3E-07	3.0E-04	0.002	1.1E-07	1.5E+00	2.E-07
Benzo(a)anthracene	2.6E-06	NA	NA	4.5E-07	7.3E-01	3.E-07
Benzo(a)pyrene	2.2E-06	NA	NA	3.8E-07	7.3E+00	3.E-06
Benzo(b)fluoranthene	2.7E-06	NA	NA	4.6E-07	7.3E-01	3.E-07
Dibenzo(a,h)anthracene	2.0E-07	NA	NA	3.4E-08	7.3E+00	2.E-07
Total			**0.002**			**4.E-06**
Falling Creek						
Benzo(a)pyrene	7.5E-08	NA	**NA**	5.5E-08	7.3E+00	**4.E-07**

Notes:

COPC Constituent of Potential Concern
HQ Hazard Quotient
NA Not Applicable

(a) ADDn = $(EPC_{sed}$ x SAFad x UCF1 x SAad x DAF x EF x EDad)/(BWad x ATn);
ADDc = (EPCsed x SAFad x UCF1 x SAad x DAF x EF x EDad)/(BWad x ATc); From Tables 3-4 and 3-5.
(b) From Table 4-2.
(c) ADDn/RfDd.
(d) ADDc x SFd.

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TABLE D-22

AVERAGE DAILY DOSES AND RISK CHARACTERIZATION FOR DERMAL CONTACT WITH CREEK SEDIMENTS, ADULT
HUMAN HEALTH BASELINE RISK ASSESSMENT
DSCR ADJACENT CREEKS
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Average Daily Dose (ADDn) (mg/kg-d) (a)	Dermal Reference Dose (RfDd) (mg/kg-d) (b)	Hazard Quotient (c)	Average Daily Dose (ADDc) (mg/kg-d) (a)	Dermal Cancer Slope Factor (SFd) $(mg/kg\text{-}d)^{-1}$ (b)	Excess Cancer Risk (d)
Kingsland Creek						
Arsenic	8.4E-08	3.0E-04	**0.0003**	2.9E-08	1.5E+00	**4.E-08**
No Name Creek						
Arsenic	2.1E-07	3.0E-04	0.0007	7.2E-08	1.5E+00	1.E-07
Benzo(a)anthracene	8.7E-07	NA	NA	3.0E-07	7.3E-01	2.E-07
Benzo(a)pyrene	7.3E-07	NA	NA	2.5E-07	7.3E+00	2.E-06
Benzo(b)fluoranthene	8.9E-07	NA	NA	3.0E-07	7.3E-01	2.E-07
Dibenzo(a,h)anthracene	6.5E-08	NA	NA	2.2E-08	7.3E+00	2.E-07
Total			**0.0007**			**3.E-06**
Falling Creek						
Benzo(a)pyrene	2.5E-08	NA	**NA**	3.7E-08	7.3E+00	**3.E-07**

Notes:

COPC Constituent of Potential Concern
HQ Hazard Quotient
NA Not Applicable

(a) ADDn = $(EPC_{sed}$ x SAFa x UCF1 x SAa x DAF x EF x EDa)/(BWa x ATn);
ADDc = (EPCsed x SAFa x UCF1 x SAa x DAF x EF x EDa)/(BWc x ATa); From Tables 3-4 and 3-5.
(b) From Table 4-2.
(c) ADDn/RfDd.
(d) ADDc x SFd.

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