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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/L	micrograms per liter
µmhos	micromhos
ACM	Asbestos-Containing Materials
ADD	Average Daily Dose
AST	Above-ground Storage Tank
AUF	Area Use Factor
BAF	Bioaccumulation Factor
BCF	Bioconcentration Factor
BEE	Baseline Ecological Evaluation
bgs	below ground surface
BRAC	Base Realignment and Closure Act of 1990
CEA	Classification Exception Area
CECOM	U.S. Army Communications and Electronics Command
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
COC	Chain-of-Custody
COPEC	Contaminant of Potential Ecological Concern
CORRACTS	Corrective Action Activity Site
CWA	Charles Wood Area
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DER	Declaration of Environmental Restriction
DPW	Directorate of Public Works
DQO	Data Quality Objective
Eco-SSL	Ecological Soil Screening Level
ECP	Environmental Condition of Property
EDR	Environmental Data Resources, Inc.
EMI	Electromagnetic Induction
ER-L	Effects Range-Low
ER-M	Effects Range-Medium
ESC	Ecological Screening Criteria
FSPM	Field Sampling Procedures Manual
ft msl	feet above mean sea level
FTMM	Fort Monmouth

gamma-BHC	gamma-Hexachlorocyclohexane
GC/MS	Gas Chromatography/Mass Spectrometry
GIS	Geographic Information System
GPS	Global Positioning System
GWQC	Groundwater Quality Criteria
HA	Hectare
HQ	Hazard Quotient
IA	Installation Assessment
IDW	Investigation-Derived Waste
IR	Ingestion Rate
IRP	Installation Restoration Program
LEL	Lowest Effect Level
LOAEL	Lowest Observable Adverse Effect Level
LUST	Leaking Underground Storage Tank
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
MP	Main Post
MTBE	Methyl *tert*-Butyl Ether
N.J.A.C.	New Jersey Administrative Code
NAD	North American Datum
ND	Non-Detect
NFA	No Further Action
NFRA	No Further Remedial Action
NFRAP	No Further Remedial Action Planned
NJDEP	New Jersey Department of Environmental Protection
NJPDES	New Jersey Pollutant Discharge Elimination System
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No Observable Adverse Effect Level
NPL	National Priorities List
ORNL	Oak Ridge National Laboratory
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PID	Photoionization Detector
PPE	Personal Protective Equipment
ppt	parts per thousand
PRG	Preliminary Remediation Goal
QC	Quality Control

R&D	Research and Development
RA	Remedial Action
RAM	Radioactive Materials
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RPD	Relative Percent Difference
SEL	Severe Effect Level
Shaw	Shaw Environmental, Inc.
SHWS	State Hazardous Waste Site
SI	Site Investigation
SOP	Standard Operating Procedure
SQG	Small Quantity Generator
SRP	Site Remediation Program
STP	Sewage Treatment Plant
SVOC	Semivolatile Organic Compound
SWQC	Surface Water Quality Criteria
TAL	Target Analyte List
TBA	*tert*-Butyl Alcohol
TCE	Trichloroethene
TCL	Target Compound List
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TRSR	Technical Requirements for Site Remediation
TRV	Toxicity Reference Value
TSDF	Transport, Storage, and Disposal Facility
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UTM	Universal Transverse Mercator
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound
VSI	Visual Site Inspection
Weston	Roy F. Weston, Inc.
WP	Work Plan

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (USACE), Baltimore District, tasked Shaw Environmental, Inc. (Shaw) to perform a Baseline Ecological Evaluation (BEE) at Fort Monmouth (FTMM) to fulfill requirements as set forth in New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (TRSR) [New Jersey Administrative Code (N.J.A.C.) 7:26E-3.11]. This BEE Report has been prepared under the Baltimore Architectural and Engineering Services Contract Number W912DR-05-D-0026 (Task Order 40) and is based on the Scope of Work dated June 3, 2008; information obtained through consultation with FTMM, U.S. Army Environmental Command, USACE, and NJDEP personnel; and the final Work Plan (WP) dated January 2010. A draft final WP, dated July 2009, was submitted to the NJDEP for review. NJDEP comments (dated September 1, 2009) were addressed and a conference call was held on November 13, 2009 to finalize the WP. The final WP was submitted to the NJDEP for review and approval prior to implementation of the work and an approval letter was obtained from the NJDEP on April 28, 2010 (**Appendix I**).

FTMM is an Army installation occupying approximately 1,126 acres in Monmouth County in central New Jersey, approximately 40 miles east of Trenton. FTMM is comprised of two operational areas known as the Main Post (MP) and the Charles Wood Area (CWA). The MP encompasses a 673-acre area and the CWA encompasses a 489-acre area.

The primary mission of FTMM was to provide command, administrative, and logistical support for Headquarters, U.S. Army Communications and Electronics Command. The support provided by the Garrison was used by tenants in the performance of research, development, procurement, and production of prototype communications and electronics equipment for use by the U.S. Armed Forces. The MP provides supporting administrative, training, and housing functions, as well as many of the community and industrial facilities for FTMM. These facilities are distributed across the property, with no distinct clustering of functions. The CWA was used primarily for research and development, testing, housing, and recreation. The CWA research, development, and testing facilities occupy the southwest corner of CWA. The northwest corner formerly consisted of residential units but is currently undeveloped. Residential units currently occupy the southeastern boundary, and the golf course occupies the northeast corner. In 2005, FTMM was identified as a facility to be closed as part of the Defense Base Realignment and Closure Act of 1990 (BRAC), Public Law 101-510, as amended. As part of this process, it is necessary for the Army to identify and document the environmental liabilities associated with installations where the BRAC action will involve the disposal of property. The environmental condition of property (ECP) process is the mechanism to provide a summary of the current environmental condition of a property.

A Phase I ECP Assessment was conducted in 2006 and 2007. The final Phase I ECP Report for FTMM was completed on January 29, 2007 (Shaw, 2007). The Phase I ECP evaluated the existing environmental conditions, and characterized the property into parcels according to their environmental condition based on Department of Defense guidelines. Using the results of the Phase I ECP Report, site investigation (SI) sampling recommendations were developed for 21 specific parcels and two areas of concern where no existing data or insufficient data were present to fully evaluate the environmental condition of the property. The ECP SI was conducted in 2007 and 2008 and the final SI Report for FTMM was completed on July 21, 2008 (Shaw, 2008). Eight parcels identified through the FTMM SI were deemed to require additional evaluation through the BEE process to fully evaluate the environmental condition of the property. NJDEP concurred with the determination that a BEE is required for these eight ECP sites in correspondence dated October 28, 2008.

Within the FTMM MP and CWA are 27 active/open Installation Restoration Program (IRP) Sites. The NJDEP indicated to the Army that, pursuant to N.J.A.C. 7:26E-3.11, BEEs are required at open/active IRP sites prior to considering No Further Action (NFA) determinations. Of these 27 IRP Sites, in consultation with NJDEP, 14 have been determined to require additional evaluation through the BEE process as having the potential for contamination migration and impacts to ecological receptors. In addition to these IRP Sites, it was determined that a BEE should also be conducted related to FTMM-20, which had been listed as Response Complete in the 2007 Installation Action Plan for FTMM (Fort Monmouth, 2007).

The NJDEP describes the purpose of conducting a BEE as follows (NJDEP, 2009a):

A critical part of every site investigation is the baseline ecological evaluation required in N.J.A.C 7:26E-3.11. The Technical Requirements for Site Remediation require each person conducting the remediation of a contaminated site or area of concern to conduct a baseline ecological evaluation as part of the process to ensure that the resulting remedy is protective of the environment. The Department uses the information that the person is already required to collect in the baseline ecological evaluation as the first step in determining whether or not natural resource injuries potentially exist as a result of a discharge at a site. In the baseline ecological evaluation, the person responsible for conducting the remediation must determine whether or not any natural resources may have been injured by a discharge.

The BEE is Tier I of the ecological evaluation and ecological risk assessment process as developed by the Site Remediation Program (SRP), and is defined in the TRSR and Site Remediation News (NJDEP, 1997). The BEE was developed to be an efficient and cost-effective screening process. As such, the results of a BEE will determine whether potential ecological impacts are negligible or whether more site-specific ecological evaluation is warranted.

The objective of the BEE at FTMM is to examine each of the 23 identified sites (8 ECP parcels and 15 IRP sites) and the sample results from sediment, surface water, soil, and groundwater at these sites for the co-occurrence of 1) contaminants of potential ecological concern (COPECs), 2) environmentally sensitive natural resources, and 3) a chemical migration pathway to these sensitive natural resources. In order to reach this objective, a data and literature review were conducted, a field investigation, including field sampling as applicable, was performed, and data analysis and ecological hazard characterization were completed within the BEE report. An additional objective of the field sampling was to provide information regarding the general background characteristics of surface water and sediment in the FTMM area through the collection of several upgradient samples to assist risk managers in the decision-making process.

The occurrence of COPECs is typically determined through a comparison of existing site data with ecological screening levels. Additional data needs were identified prior to the BEE and environmental samples were collected in 2010 as part of the BEE. The occurrence of environmentally sensitive natural resources and of potential chemical migration pathways was determined from existing literature for the site, a qualitative site visit, and other available information such as the NJDEP Natural Heritage database. Reviews of NJDEP tidal and freshwater wetland maps, U.S. Geological Survey (USGS) topographic maps, and U.S. Department of Agriculture (USDA) Soil Conservation Service soil survey maps were performed to provide an overview of the habitat expected to occur at or in the vicinity of the site. The qualitative site visit was conducted for the purpose of verifying information gathered and to identify existing ecology communities and species, environmentally sensitive natural resources, and potential contaminant pathways.

In order to evaluate the nature of contaminants detected at the FTMM sites and to identify the COPECs, several steps were followed. The first step was to review the analytical data collected from the environmental media with regards to the sites and selection of the data appropriate for use in the BEE. Site data addressed in this BEE is comprised of data previously collected for Remedial Investigations (e.g., near surface soil data for former landfills), ECP SIs, and routine environmental monitoring (e.g., groundwater data) and data collected specifically to fill data gaps for the BEE. The second step was the identification of the most appropriate and applicable criteria or benchmarks for comparison to data. The third step was the identification of the COPECs at the sites and an evaluation of these COPECs in terms of potential ecological impact.

COPECs are defined for the purposes of this BEE as those constituents that were detected above the appropriate screening benchmarks in any of the samples from a given medium from a site. These ecological screening concentrations (ESC) are intentionally conservative values and exceedances of these concentrations are not meant to imply ecological risks. A qualitative determination of the potential for adverse effects from site constituents was made based on the COPECs, the presence of environmentally sensitive areas, and the potential migration pathways of site constituents, as well as site history, natural geology, and other potential sources.

The character of the land use surrounding the FTMM properties typifies mixed use, small town development in New Jersey. Commercial services and shopping centers populate main roads interspersed with residential structures, apartments and office buildings. Business and light industrial parks are found along highways, streams and railroad tracks. Surrounding properties include National Priorities List (NPL) sites, State Hazardous Waste Sites, Leaking Underground Storage Tank Sites, and Voluntary Cleanup Program sites. These, as well as general small urban development activities lend to an increase in general anthropogenic inputs in the area.

Elevated concentrations of many metals, relative to the conservatively low ESC, are naturally found within the urban coastal plain region in which FTMM is located. In particular, glauconitic soils which are prevalent at FTMM and have been reported in the creek sediments are naturally high in arsenic, beryllium, chromium, nickel and vanadium as well as other metals.

COPECs identified in soils generally represent limited potential for direct ecological exposure as they are either from subsurface (e.g., landfill near surface samples) or are not within ecological habitats (e.g., near buildings, roads, and parking areas). COPECs identified in groundwater are not representative of direct ecological exposures. COPECs in both soil and groundwater, however, may migrate to nearby surface water or sediment where ecological exposures may occur.

Many organic COPECs identified in soil or groundwater were not identified as COPECs in surface water or sediment, suggesting limited organic contaminant migration to sensitive ecological receptors. Most of these were detected infrequently in soil or groundwater or at low concentrations in relation to the ESC.

Many organic COPECs identified in surface water or sediment were not identified as COPECs in soil or groundwater, suggesting the sources are unrelated to the sites under investigation, or were at low concentrations in relation to the ESC, which are intentionally conservative values. Polycyclic aromatic hydrocarbons (PAHs), in particular, though identified as COPECs, were found in sediments and surface water at concentrations similar to background sample concentrations or at locations indicative of other sources (e.g., at the upstream extent of the site and downstream of active roads or parking areas).

In surface water, lead was most often identified as a COPEC; however, it was found at similar concentrations at most of the sites and in the background samples. Most of the sediment metals identified as COPECs were at concentrations similar to background. Some metals (chromium, copper, lead, mercury, silver, and zinc) were found at a few locations above background levels measured during the BEE investigation, but many of these are similar to those reported for ambient soil in the region (BEM Systems, Inc., 1998) or, in particular, glauconitic soils (Dooley, 2001). Though there may be a potential for some ecological risk due to elevated metals in these limited areas, it is likely that these metals are related to natural geology or other anthropogenic sources.

Conservative screening level food chain models indicated estimated exposures to wildlife exceeded toxicity values. Based on the overly conservative nature of the food chain models (exposure to locations of maximum concentration, conservative model parameters, assumptions and toxicity values) and the biased sampling approach used in the BEE sediment investigations, it is unlikely that current site conditions present any risk to wildlife.

Though metals may be present above the background concentrations measured in limited areas during the 2010 BEE, many of these concentrations may still be related to natural or general anthropogenic sources and the differences in site concentrations from the measured background concentrations can be a function of the greater number of site samples collected compared to background samples. Regardless, these figures show that the area of metal concentrations greater than the measured background concentrations is limited in extent, with no definitive spatial distribution that would suggest the source of metals are related to sites evaluated in the BEE. Though these may represent a potential ecological risk in limited areas, it is concluded that constituents at FTMM are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at FTMM are not warranted or recommended. **Table ES-1** presents a summary of the results of this BEE.

Table ES-1
Fort Monmouth Main Post and Charles Wood Area
Baseline Ecological Evaluation Summary

ECP Parcel / IRP Site Designation	Associated Building / Feature	Acreage	Proximal Ecological Feature Evaluated	COPECs Identified Based on BEE results	Potential for Ecological Effects from COPECs	Recommendation
Main Post						
IRP Site FTMM-2	Landfill 2	8.10	Mill Creek	Near Surface Soil: SVOCs, Pesticides, PCBs, Metals Groundwater: VOCs, Pesticides, Metals Surface Water: SVOCs, Lead Sediment: SVOCs, PCBs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-3	Landfill 3	8.00	Lafetra Creek	Near Surface Soil: SVOCs, Pesticides, PCBs, Metals Groundwater: None Surface Water: None Sediment: SVOCs, Pesticides, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-4	Landfill 4	1.40	Mill Creek	Near Surface Soil: SVOCs, Pesticides, Metals Groundwater: Metals Surface Water: None Sediment: SVOCs, PCBs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-5	Landfill 5	3.20	Mill Creek	Near Surface Soil: SVOCs, Pesticides, PCBs, Metals Groundwater: None Surface Water: None Sediment: SVOCs, Pesticides, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-8	Landfill 8	7.20	Parkers Creek	Near Surface Soil: SVOCs, Pesticides, PCBs, Metals Groundwater: Pesticides Surface Water: None Sediment: Pesticides, PCBs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-12	Landfill 12	7.10	Husky Brook	Near Surface Soil: SVOCs, Pesticides, Metals Groundwater: Metals Surface Water: None Sediment: SVOCs, Pesticides, PCBs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-14	Landfill 14	6.90	Husky Brook	Near Surface Soil: SVOCs, Pesticides, Metals Groundwater: Metals Surface Water: None Sediment: SVOCs, Pesticides, PCBs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-15	Water Tank	0.30	Parkers Creek	Surface Soil: Not Applicable/Not Evaluated Groundwater: Not Applicable/Not Evaluated Surface Water: None Sediment: Pesticides, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-16	Building 498, Pesticide Storage	0.12	Oceanport Creek	Surface Soil: Not Applicable/Not Evaluated Groundwater: Not Applicable/Not Evaluated Surface Water: None Sediment: SVOCs, Metals	low	No Additional Ecological Assessment
IRP Site FTMM-18	Former Training Area	4.85	Parkers Creek	Surface Soil: SVOCs, Pesticides, Metals Groundwater: Metals Surface Water: None Sediment: Metals	low	No Additional Ecological Assessment
IRP Site FTMM-20 Pre-1941 STP	Pre-1941 Former Sanitary Sewage Treatment Plant	0.77	Parkers Creek	Surface Soil: Not Applicable/Not Evaluated Groundwater: Not Applicable/Not Evaluated Surface Water: None Sediment: Metals	low	No Additional Ecological Assessment
IRP Site FTMM-59 Building 1122	Building 1122, Unknown Discharge	0.34	Mill Creek	Surface Soil: Not Applicable/Not Evaluated Groundwater: None Surface Water: SVOCs, Lead Sediment: SVOCs,Metals	low	No Additional Ecological Assessment
ECP Parcel 43	Building 1122, "Do-it-Youself" Vehicle Repair Shop	1.54				

Table ES-1
Fort Monmouth Main Post and Charles Wood Area
Baseline Ecological Evaluation Summary

ECP Parcel / IRP Site Designation	Associated Building / Feature	Acreage	Proximal Ecological Feature Evaluated	COPECs Identified Based on BEE results	Potential for Ecological Effects from COPECs	Recommendation
Main Post						
IRP Site FTMM-61 Building 283	Building 283, Leaking UST, Gasoline	0.20		Surface Soil: SVOCs, PCBs, Metals		
ECP Parcel 49	Buildings 283, 288, 291, 292, 293, 295, Former Squier Laboratory Complex	9.09	Parkers Creek	Groundwater: Zinc Surface Water: None Sediment: Metals	low	No Additional Ecological Assessment
ECP Parcel 39	Building 1150, Former Photoprocessing Activities	0.50	Mill Creek	Surface Soil: Metals Groundwater: Not Applicable/Not Evaluated Surface Water: SVOCs, Lead Sediment: SVOCs, PCBs, Metals	low	No Additional Ecological Assessment
ECP Parcel 61	Building 1075, Patterson Army Health Clinic	14.66	Husky Brook	Surface Soil: SVOCs, Metals Groundwater: Not Applicable/Not Evaluated Surface Water: None Sediment: SVOCs, Metals	low	No Additional Ecological Assessment
ECP Parcel 69	Building 900, Former Tactical Motor Pool	0.31	Oceanport Creek	Surface Soil: Metals Groundwater: None Surface Water: None Sediment: SVOCs, Metals	low	No Additional Ecological Assessment
Charles Wood Area						
IRP Site CW-6 FTMM-28	Former Pesticide Storage - Building 2044	0.67	Un-named Wetland, Wampum Brook	Surface Soil: Pesticides, SVOCs, Metals Groundwater: Metals Surface Water: PCBs, Metals Wetland Sediment: Pesticides, PCBs, SVOCs, Metals	low	No Additional Ecological Assessment
ECP Parcel 15	Building 2700, Meyers Center Laboratory	37.99	Shrewsbury Creek	Surface Soil: Not Applicable/Not Evaluated Groundwater: Metals Surface Water: Lead Sediment: Chromium	low	No Additional Ecological Assessment
IRP Site CW-3A FTMM-25	Suspected Former Landfill, CW-3A	2.08	Shrewsbury Creek	Near Surface Soil: Pesticides, PCBs, SVOCs, Metals Groundwater: Metals Surface Water: SVOCs, Cadmium, Zinc Sediment: Pesticides, SVOCs, Metals	low	No Additional Ecological Assessment
ECP Parcel 27	Southwest portion of CWA that includes the former Pulse Power Center, Machine Shop, Paint and Fabrication facility, Former Motor Pool, and portions of the former Watson Laboratories	29.83	Shrewsbury Creek	Surface Soil: Metals Groundwater: Not Applicable/ Not Evaluated Surface Water: Metals Sediment: Metals	low	No Additional Ecological Assessment
ECP Parcel 28	Former Eatontown Laboratory, Battery Test Facility, Safety Calibration Laboratory Office, Former Motor Pool	37.78	Shrewsbury Creek	Surface Soil: None Groundwater: Cadmium Surface Water: Lead Sediment: Chromium	low	No Additional Ecological Assessment

BEE - Baseline Ecological Evaluation
COPEC - Constituent of
CWA - Charles Wood
ECP - Environmental
IRP - Installation
PAH - Polycyclic
PCB - Polychlorinated
SVOC - Semivolatile
UST - Underground
VOC - Volatile Organic Compound

1.0 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Baltimore District, tasked Shaw Environmental, Inc. (Shaw) to perform a Baseline Ecological Evaluation (BEE) at Fort Monmouth (FTMM) to fulfill requirements as set forth in New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (TRSR) [New Jersey Administrative Code (N.J.A.C.) 7:26E-3.11]. This BEE report has been prepared under the Baltimore Architectural and Engineering Services Contract Number W912DR-05-D-0026 (Task Order 40) and is based on the Scope of Work dated June 3, 2008, the Work Plan (WP) dated January 2010, and information obtained through consultation with FTMM, U.S. Army Environmental Command, USACE, and NJDEP personnel. A draft final WP, dated July 2009, was submitted to the NJDEP for review. NJDEP comments (dated September 1, 2009) were addressed and a conference call was held on November 13, 2009, to finalize the WP. The final WP was submitted to the NJDEP for review and approval prior to implementation of the work and an approval letter was obtained from the NJDEP on April 28, 2010 (**Appendix I**).

FTMM is located in the central-eastern portion of New Jersey in Monmouth County (**Figure 1-1**). The installation includes Main Post (MP), Charles Wood Area (CWA), and the Evans Area. This WP only addresses the MP (**Figure 1-2**) and the CWA (**Figure 1-3**). The MP encompasses an area of approximately 637 acres and the CWA encompasses an area of approximately 489 acres and is located 1 mile west of the MP. The MP and CWA were selected in 2005 for closure under the Defense Base Realignment and Closure Act of 1990 (BRAC), Public Law 101-510, as amended.

The primary mission of FTMM is to provide command, administrative, and logistical support for Headquarters, U.S. Army Communications and Electronics Command. The support provided by the Garrison is used by tenants in the performance of research, development, procurement, and production of prototype communications and electronics equipment for use by the U.S. Armed Forces. The MP provides supporting administrative, training, and housing functions, as well as many of the community and industrial facilities for FTMM. These facilities are distributed across the property, with no distinct clustering of functions. The CWA is used primarily for research and development (R&D), testing, housing, and recreation. The CWA research, development, and testing facilities occupy the southwest corner of CWA. The northwest corner formerly consisted of residential units but is currently undeveloped. Residential units currently occupy the southeastern boundary, and the golf course occupies the northeast corner. FTMM was identified as a facility to be closed as part of BRAC 2005. As part of this process, it is necessary for the Army to identify and document the environmental liabilities associated with installations where the BRAC action will involve the disposal of property. The environmental condition of property (ECP) process is the mechanism to provide a summary of the current environmental condition of a property.

A Phase I ECP Assessment was conducted in 2006 and 2007. The final Phase I ECP Report for FTMM was completed on January 29, 2007 (Shaw, 2007). The Phase I ECP evaluated the existing environmental conditions, and characterized the property into parcels according to their environmental condition based on Department of Defense guidelines. Using the results of the Phase I ECP Report, site investigation (SI) sampling recommendations were developed for 21 specific parcels and two areas of concern where no existing data or insufficient data were present to fully evaluate the environmental condition of the property. The SI was conducted in 2007 and 2008 and the final SI Report for FTMM was completed on July 21, 2008 (Shaw, 2008). Eight parcels identified through the FTMM SI were deemed to require additional evaluation through the BEE process to fully evaluate the environmental condition of the property. NJDEP concurred with the determination that a BEE is required for these eight ECP sites in correspondence dated October 28, 2008.

Within the FTMM MP and CWA are 27 active/open Installation Restoration Program (IRP) Sites. The NJDEP indicated to the Army that, pursuant to the TRSR (N.J.A.C. 7:26E-3.11; NJDEP, 2009b), BEEs are required at open/active IRP sites prior to considering No Further Action (NFA) determinations. The NJDEP determination was documented in correspondence pertaining to IRP Sites M-12 and M-14 Landfills (dated July 25, 2007), IRP Site M-18 Landfill (dated August 14, 2007), and Building 283 (dated October 24, 2007). Of the 27 IRP Sites, 14 (FTMM-2, 3, 4, 5, 8, 12, 14, 15, 16, 18, 25, 28, 59, and 61) have been determined to require additional evaluation through the BEE process. In addition to these IRP

Sites, it was determined that a BEE should also be conducted related to FTMM-20, which had been listed as Response Complete in the 2007 Installation Action Plan for FTMM (Fort Monmouth, 2007). **Section 3.0** of this WP describes each of the IRP and ECP sites that were selected for inclusion in the BEE process, summarizes the previous findings, and describes the rationale for inclusion.

1.1 PURPOSE AND OBJECTIVES

The BEE is Tier I of the ecological evaluation and ecological risk assessment process as developed by the Site Remediation Program (SRP), and is defined in the TRSR and Site Remediation News (NJDEP, 1997). The BEE was developed to be an efficient and cost-effective screening process. As such, the results of the BEE will determine whether potential ecological impacts are negligible or whether more site-specific ecological evaluation is warranted.

The objective of the BEE at FTMM is to assess whether the presence of constituents of concern in sediments, surface water, soil, and groundwater on MP and CWA have the potential for adverse effects to biological receptors. This assessment is made through the examination of information on each of the 23 identified sites (8 ECP parcels and 15 IRP sites) and the sample results from sediment, surface water, soil, and groundwater at the sites for the co-occurrence of 1) contaminants of potential ecological concern (COPECs), 2) environmentally sensitive natural resources, and 3) a chemical migration pathway to these sensitive natural resources. This objective was accomplished based on the results of a data and literature review, a qualitative site visit, field sampling, data analysis and ecological hazard characterization, and an evaluation of the general background characteristics of surface water and sediment in the FTMM area.

The occurrence of COPECs is determined through a comparison of existing site data with ecological screening levels. The occurrence of environmentally sensitive natural resources and of potential chemical migration pathways is determined from existing literature for the site, a qualitative site visit, and other available information such as the NJDEP Natural Heritage database. NJDEP tidal and freshwater wetland maps, U.S. Geological Survey (USGS) topographic maps, and U.S. Department of Agriculture (USDA) Soil Conservation Service soil survey maps.

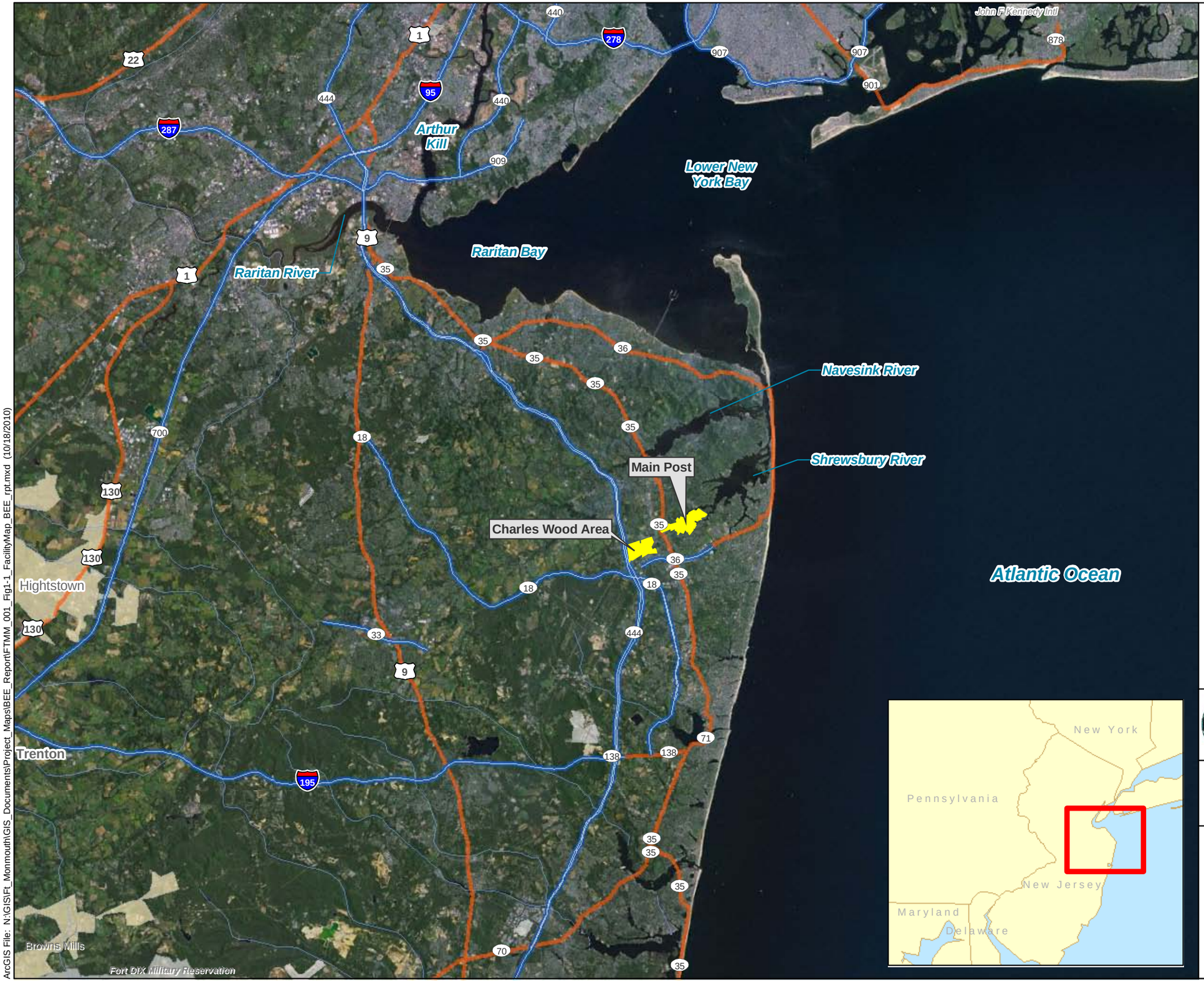
If it is determined through the BEE process that there are COPECs present, that there are environmentally sensitive natural resources at or near the sites, and that there are potential pathways from the contamination to the environmentally sensitive natural resources, then COPECs are compared to background and ambient levels and screening level food web models are evaluated to determine if further ecological investigation or risk assessments may be required. The nature of these investigations or Tier II and Tier III assessments are determined based on the findings of the BEE and they would be conducted in accordance with U.S. Environmental Protection Agency (USEPA, 1989a) and other applicable guidance.

This investigation will be used by the Army to determine if any future needs or actions are necessary in order to obtain a NFA Letter from NJDEP. The NJDEP SRP, as well as the Office of Natural Resources Restoration, will determine whether ecological injuries may have occurred and whether further investigations are required.

1.2 REPORT ORGANIZATION

Section 2.0 describes the location of the sites, provides site background information, and summarizes the environmental setting at FTMM. This section also identifies and describes the individual sites that are addressed in the BEE, including general history and previous investigation results, presence of ecologically sensitive areas, and potential contaminant migration pathways. **Section 3.0** presents the data evaluation performed to identify the COPECs at each site. **Section 4.0** presents a qualitative evaluation of potential for adverse effects at each site, including the use of conservative wildlife exposure models. **Section 5.0** presents a summary and conclusions. **Section 6.0** provides a list of references used in developing the WP. **Appendix A** through **Appendix D** contain the data evaluated in this BEE. **Appendix E** contains the applicable NJDEP Ecological Screening Criteria (ESC). **Appendix F** contains the analytical data packages for environmental samples collected as part of the BEE. **Appendix G** contains field documentation and field measured parameters. **Appendix H** contains Fort Monmouth Maximum Background Concentrations from the 1995 SI Report. **Appendix I** contains the NJDEP letter of approval, dated April 28, 2010, of the final WP. **Appendix J** contains Fort Monmouth salinity data for

several locations within the Main Post for the period 2004 through 2009. **Appendix K** contains utility maps for locations addressed in this BEE. **Appendix L** contains previously collected PCB analytical data for sediments samples during the landfill site Remedial Investigations.



LEGEND

Ft Monmouth Installation Area

Note: Aerial photography (1-meter resolution) was obtained from ESRIArcOnline World Imagery Map Services.

N

Scale:

0 2 4 8 Miles

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 1-1

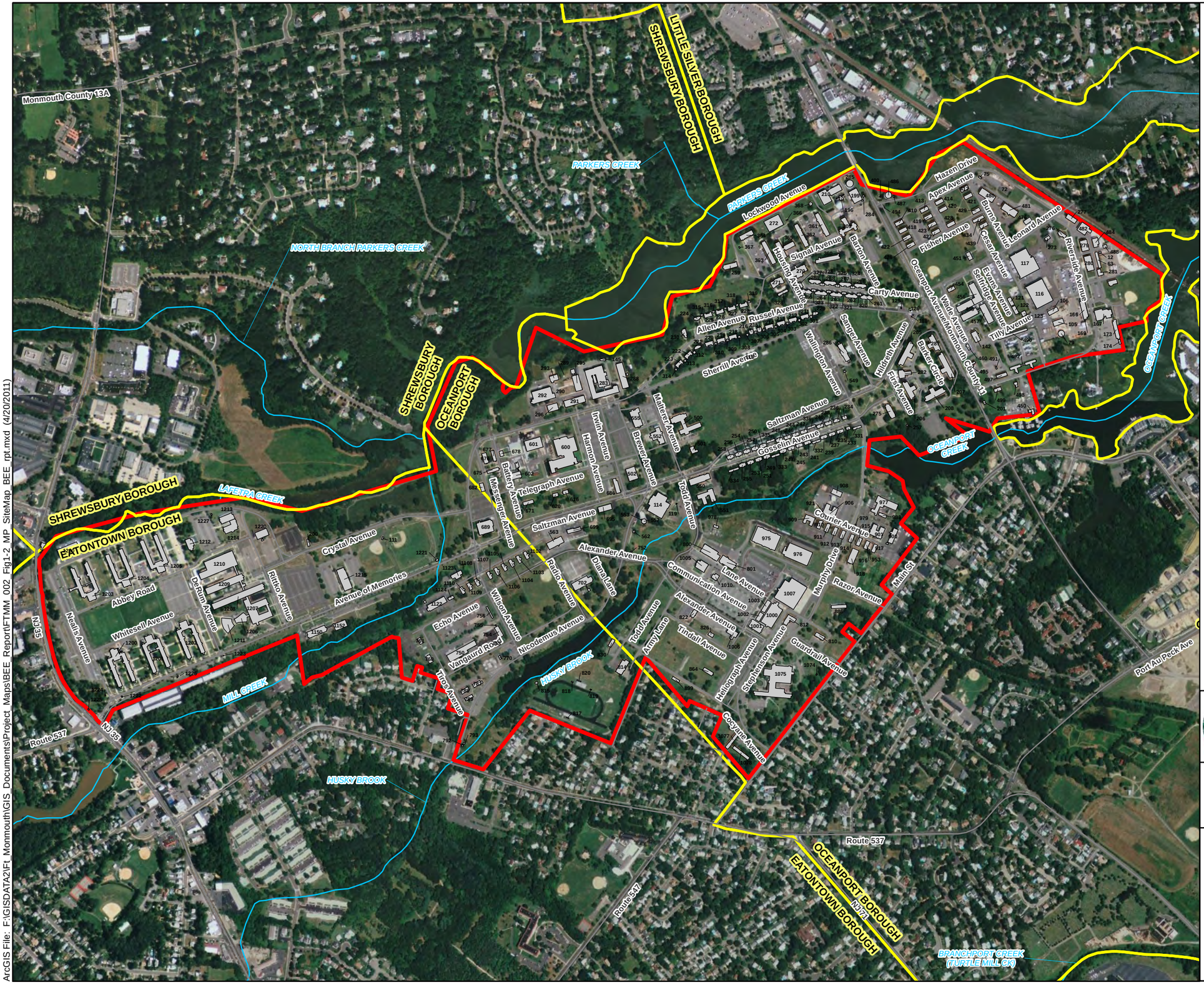
FORT MONMOUTH
BASELINE ECOLOGICAL
EVALUATION REPORT

FACILITY LOCATION MAP

FORT MONMOUTH
NEW JERSEY

ArcGIS File: N:\GIS\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_001_Fig1-1_FacilityMap_BEE_rpt.mxd (10/18/2010)

ArcGIS File: F:\GIS\DATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_002_Fig1-2_MP_SiteMap_BEE_rpt.mxd (4/20/2011)



LEGEND

- Water Feature
- Road Centerline
- Building
- Municipal Boundary
- Installation Boundary

Note: Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.

N

Scale:

0 450 900 1,800 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

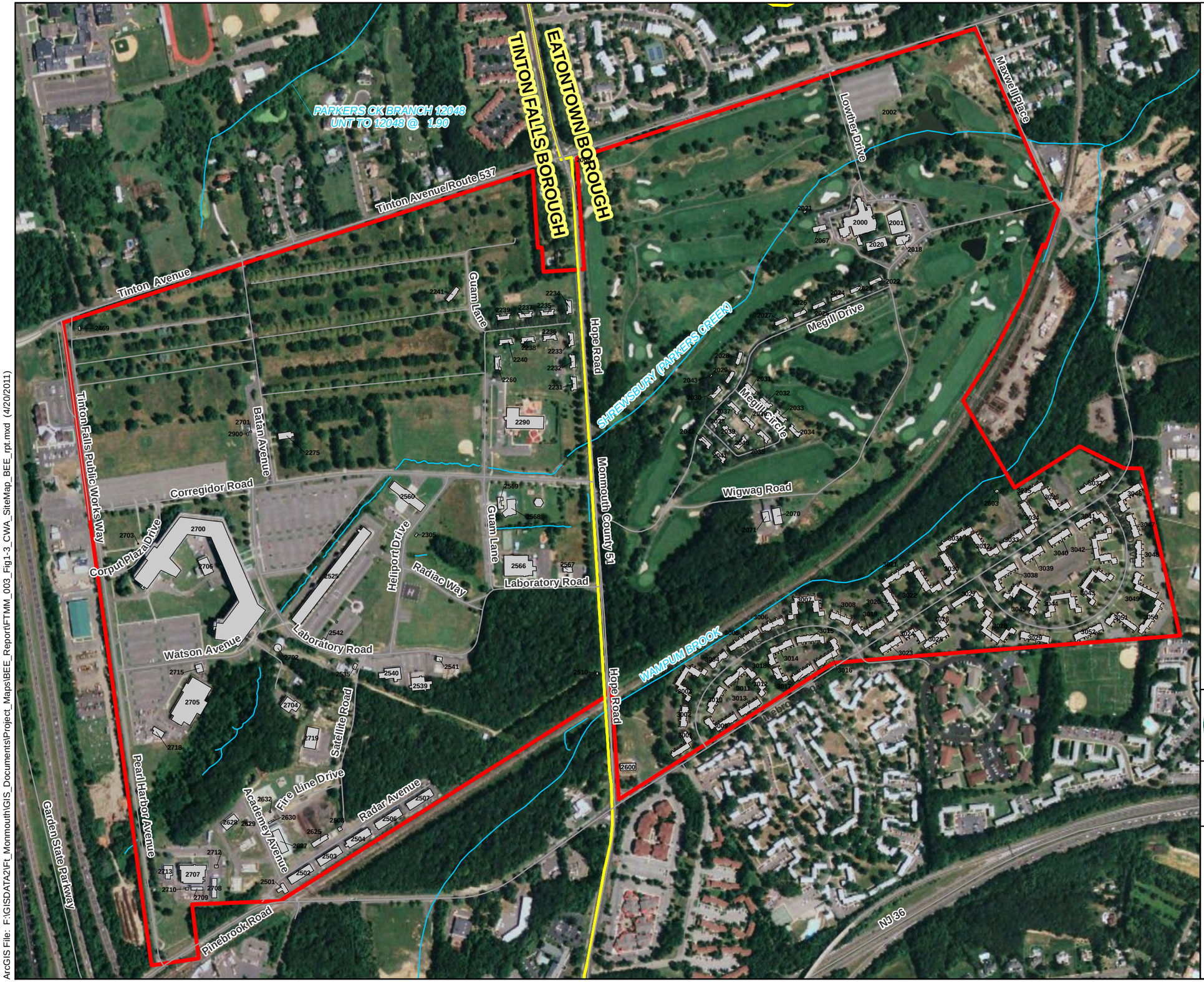
Shaw® Shaw Environmental, Inc.

FIGURE 1-2

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

MAIN POST SITE MAP

FORT MONMOUTH
NEW JERSEY



LEGEND

- Road Centerline
- Water Feature
- Building
- Municipal Boundary
- Installation Boundary

Note: Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.

N

Scale:

0 290 580 1,160 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 1-3

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

CHARLES WOOD AREA SITE MAP

FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_003_Fig1-3_CWA_SiteMap_BEE_rpt.mxd (4/20/2011)

2.0 FORT MONMOUTH BACKGROUND AND GENERAL ENVIRONMENTAL SETTING

The following sections summarize the site background and environmental setting of the geographical area surrounding the FTMM MP and CWA. Included is a description of the site location, site background and current conditions, and environmental setting, including regional and local geology, hydrogeology, topography, surface drainage, ecology, and land use.

2.1 LOCATION AND DESCRIPTION

FTMM is located in the central-eastern portion of New Jersey in Monmouth County, approximately 45 miles south of New York City, 70 miles northeast of Philadelphia, and 40 miles north of Trenton. The Atlantic Ocean is approximately 3 miles to the east. FTMM falls within the boroughs of Eatontown, Oceanport, and Tinton Falls. The areas surrounding FTMM are characterized by a mixture of residential, commercial, and light industrial uses (**Section 2.4.8**). A review of the land use plans for the surrounding municipalities shows that land uses are compatible with those along the inside perimeter of FTMM. FTMM occupies approximately 1,126 acres and is currently comprised of two operational areas: the MP and the CWA. The two areas are located about 2 miles from one another.

The primary mission of FTMM is to provide command, administrative, and logistical support for the U.S. Army Communications and Electronics Command (CECOM) Headquarters. The Installation performs research, development, procurement, and production of prototype communications and electronics equipment for use by the U.S. Armed Forces.

2.1.1 MAIN POST

The MP provides supporting administrative, training, and housing functions, as well as many of the community and industrial facilities for FTMM. These facilities are distributed across the property, with no distinct clustering of functions. The MP encompasses approximately 637 acres and contains a total of 397 buildings and structures. The MP is bounded by State Highway 35 to the west, Parkers Creek to the north, the New Jersey Transit Railroad to the east, and Main Street and State Highway 71 to the south. Universal Transverse Mercator (UTM) coordinate locations [North American Datum (NAD) 83, Zone 18 (meters)] for the MP include:

- Northeast Corner: 582178.33995, 4463977.92694
- Southeast Corner: 582755.27789, 4463525.90188
- Northwest Corner: 579532.14255, 4462789.29460
- Southwest Corner: 579689.14842, 4462269.63793

2.1.2 CHARLES WOOD AREA

The CWA is used primarily for R&D, testing, housing, and recreation. The CWA R&D and testing facilities occupy the southwest corner of the subpost. Residential areas are located along the southeastern boundary and were formerly located in the northwest corner; the golf course occupies the northeast corner. The CWA, located 2 miles west of the MP, is composed of approximately 489 acres and contains a total of 241 buildings and structures. The CWA is bounded by the Garden State Parkway to the west, Tinton Avenue to the north, Maxwell Place and the New Jersey Transit Railroad to the east, and Pinebrook Road to the south. UTM coordinate locations for the CWA [NAD83, Zone 18 (meters)] include:

- Northeast Corner: 578997.83200, 4462033.09195
- Southeast Corner: 579386.98486, 4460899.58327
- Northwest Corner: 577293.44846, 4461472.84017
- Southwest Corner: 577466.30241, 4460271.56946

2.2 HISTORICAL LAND USE

Historical Army uses of the FTMM MP and CWA property are well documented in *A Concise History of the U.S. Army Communications-Electronics Life Cycle Management Command and Fort Monmouth, New Jersey* (U.S. Army Communications-Electronics Life Cycle Management Command,

2005) and *Fort Monmouth: Landmarks and Place Names* (Kozlowski, 2004). The following sections provide a brief summary of the historical uses of the sites.

2.2.1 MAIN POST

The original FTMM Army camp, established for signal troop training in 1917, was located at Little Silver, New Jersey. Historical land use of the area included a 1-mile horse racing track, Monmouth Park, which had been established in 1870 and operated for 20 years. The track was located in the vicinity of Patterson Army Health Clinic near the intersection of Broad Street and Park Avenue. A larger Monmouth Park was reconstructed and opened on July 4, 1890. The oval track was centered on present day Greeley Field. The entire facility encompassed 640 acres (almost all of the MP area). Grandstands and a luxury hotel along Parkers Creek were part of the associated land uses. The Monmouth Park Race Track closed in 1893. Vacated buildings and structures fell into ruin and the hotel burned to the ground in 1915. The land was owned by Redacted - Privacy Act when it was evaluated for use by Camp Little Silver. The Army leased 468 acres from Redacted - Privacy Act on May 16, 1917. Prior to the Army's lease, the land had been farmed, producing a potato crop for approximately 4 years. The leased area was bounded on the north by the Shrewsbury River (currently referred to as Parkers' Creek), on the west and south by a stone road from Eatontown, and on the east by Oceanport-Little Silver Road. The condition of the land was reported as overgrown and overrun with poison ivy. The land was purchased by the government in 1919.

2.2.2 CHARLES WOOD AREA

The CWA was acquired by the Army in 1941. The CWA tract included the former Monmouth County Country Club (originally Sun Eagles Country Club), Olmstead Gardens, and areas currently occupied by the golf course and Myer Center. FTMM personnel indicated an orchard was located in the golf course area prior to Army acquisition. The Sun Eagles Country Club was constructed in the 1920s and included a clubhouse (currently Gibbs Hall), an 18-hole golf course, a polo field, and an airfield. A 7,000-troop cantonment area was immediately built on the land, including barracks, mess halls, a school building, an office building, a recreation hall, a Post Exchange, an infirmary, and a chapel.

2.3 FACILITY HISTORY

The MP of FTMM was established on June 17, 1917, as Camp Little Silver. The name of the Camp was changed after 3 months to Camp Alfred Vail. The initial mission of the Camp was to train Signal Corps operators for service in World War I. In the first 19 months of the Camp's existence, 129 semi-permanent structures were built, a tent camp established on the site of a former swamp, and a parade ground established on the site of a former marsh. A radio laboratory and an airfield were constructed in 1918. After the war, Camp Vail was designated as the site of the Signal Corps School, the only training area for Signal Corpsmen in the country. All but four World War I structures were demolished by 1924.

In 1925, the facility became a permanent post, and its name was changed to Fort Monmouth. The primary mission of FTMM continued to be Signal Corps training and electronics research. In 1934, laboratory operations were consolidated in a new facility, Squier Laboratory (Building 283). Research on radios and radar continued here until the early 1950s. During World War II, the pace of training increased tremendously at FTMM. The expanded laboratory effort was accomplished by starting new laboratories at other post facilities. Squier Laboratory continued to be the principal laboratory on the MP until 1954. In 1955 and 1956, 72 World War II wooden structures were demolished to make room for permanent structures. These new buildings were used for residential, administrative, commercial, and recreational purposes. A small number of additional administrative buildings were completed during the 1970s, 1980s, and 1990s.

Camp Charles Wood was purchased in 1941 and opened in 1942. The eastern half of the property was formerly a golf course, and the western half was residential property and farmland. During World War II, the Camp was used for training Signal Corpsmen. Antenna shelters were constructed on 26.5 acres of land and used by the Signal Corps Laboratory for R&D purposes.

A new R&D facility, the Myer Center (Building 2700), was completed in 1954. R&D activities that had formerly been conducted at Squier Laboratory and some activities from the Evans Area were

transferred to the Myer Center. To this day, laboratories within the Myer Center facility continue to develop state-of-the-art electronic and communications equipment for use by the U.S. Armed Forces. FTMM has a long history of R&D activity. The majority of this activity has been related to communications and electronic equipment. For the completion of these research activities, FTMM has operated and continues to operate a variety of laboratories. Additionally, FTMM has a significant history of training and housing troops. In support of these activities, FTMM has had a full complement of support activities including vehicle maintenance, warehousing, medical and dental services, photo processing, printing, historic solid waste handling methods (e.g., landfills), and facility infrastructure [e.g., underground storage tanks (USTs)]. Many of the former activities have resulted in environmental releases that are being addressed within the IRP and BRAC ECP processes.

2.4 ENVIRONMENTAL SETTING

The following is a description of the geological and hydrogeological setting of the area as well as the surrounding land use characteristics. The information in the following sections was taken from previous environmental reports produced by Roy F. Weston, Inc. (Weston, 1995) and Shaw (2007; 2008).

2.4.1 CLIMATE

The climate, temperature, and humidity of Monmouth County, New Jersey, are characteristic of the temperate zone of the Mid-Atlantic states. The mean annual temperature for Monmouth County is about 52 degrees Fahrenheit (°F); the summers are generally warm, with an average temperature around 70 °F and average minimum and maximum temperatures exceed 60 and 80 °F, respectively. Winters are moderate, with an average temperature around 30 °F.

Precipitation in Monmouth County averages between 40 and 50 inches per year; slightly more than half the total annual precipitation falls between April and September. Thunderstorms generally occur during the summer months, and hurricanes or tropical storms move northward along the Mid-Atlantic coast.

2.4.2 TOPOGRAPHY

The land surface at the MP is relatively flat and ranges in elevation from 4 feet above mean sea level (ft msl) in the east at Oceanport Creek to 32 ft msl at the western end of the post, near Highway 35. The eastern half of the post is generally 10 ft msl in elevation. The greatest elevation is at the M-8 Landfill, located on Parkers Creek, and along Lafetra Creek, Mill Creek, and Husky Brook.

At CWA, the land surface slopes from 72 ft msl in the southwest to 20 ft msl at the eastern end of the golf course. In general, the southwestern corner of CWA is gently rolling and has the greatest relief.

2.4.3 SURFACE WATER DRAINAGE AND WETLANDS

Within the western part of the MP, surface water runoff flows either north into Lafetra Creek or south into Mill Creek, both of which originate off site to the west of the MP. Mill Creek flows along the southern boundary of MP until it turns north and joins Lafetra Creek to form Parkers Creek. Parkers Creek flows eastward along the northern boundary and joins Oceanport Creek east of MP. Most of Parkers, Lafetra, and Mill Creeks in the vicinity of the MP are tidally influenced.

Surface water runoff from the southern half of the MP flows into Husky Brook and Husky Brook Lake through a series of drainage ditches and outfalls. Husky Brook originates off site to the west of the MP and flows into Husky Brook Lake on site. Husky Brook exits Husky Brook Lake and flows into Oceanport Creek, which forms the southern boundary of the eastern area. Oceanport Creek and Husky Brook below Husky Brook Lake are tidally influenced.

Parkers and Oceanport Creeks, as well as the tributaries to these creeks, on the Main Post are classified by the NJDEP, for the purposes of determining surface water quality criteria, as fresh nontrout water/saline water (FW2-NT/SE1). This classification indicates that the waterbody may exhibit a saltwater/freshwater interface; the point of demarcation between freshwater and saltwater is determined through salinity measurements. These waterbodies are characterized as freshwater FW2-NT where the mean salinity at high tide is 3.5 parts per thousand (ppt) or less and as saline SE1 where the mean salinity at high tide is greater than 3.5 ppt (N.J.A.C. 7:9B *et seq*.).

Salinity measurements were collected during surface water and sediment sample collection in June 2010 for the BEE investigation. These data are provided in **Appendix G**. Though these data represent conditions at the time of sample collection and not necessarily high tide conditions, several salinity measurements were recorded at or near high tide, based on National Oceanic and Atmospheric Administration (NOAA) tidal charts for Gooseneck Point which is located east of the MP (NOAA, 2010). These data are indicated as such in **Appendix G**. Quarterly salinity data collected by Fort Monmouth between 2004 and 2009 are provided in **Appendix J**. Data known to be collected during high tide are indicated as such in **Appendix J**. A summary of the average high tide salinity for waterbodies in the MP based on the documented high tide data are summarized below in **Table 2-1** and presented in **Figure 2-1**.

Table 2-1. Summary of High Tide Salinity Data

Creek	FTMM Site	FTMM Station	Average High Tide Salinity (ppt) n=3	BEE Station	Average High Tide Salinity (ppt) n=1	Overall Site Average High Tide Salinity (ppt)
Parkers Creek						
	Downgradient of Main Post	21	21.3			21.3
	Site M-18			P49-SW3	20.36	17.5
				P49-SW2	20.13	
		27	15.7			
	Site M-8			M8-SD5	16.3	15.5
		28	14.3			
				M8-SD6	17.37	
				M8-SD7	16.54	
Lafetra Creek						
	Site M-3	5	9.7			9.7
		26	7.0			7.0
		3	4.0			4.0
	Upgradient End of Main Post	14	0.0			0.0
Mill Creek						
	Site M-4	5	9.7			9.7
	Site M-2	24	6.7			3.4
				M2-SD08	0.27	
				M2-SD09	0.27	
				M2-SD10	0.27	
				M2-SD11	0.27	
				M2-SD12	0.27	
				M2-SD13	0.27	
		15	5.3			
	Upgradient End of Main Post	13	0.0			0.0
Oceanport Creek						
	Downgradient of Main Post	22	21.0			21.0
	Site M-16			M16-SD4	21.04	21.0
	Sites M-12/M-14	9	18.3			11.2
				P61-SW1	10.45	
		19	4.3			
	Husky Brook Pond	12	0.0	M14-SW14	0.13	0.0
	Upgradient End of Main Post	11	0.0			0.0

Based on the high tide salinity measurements, the freshwater/saltwater demarcation line lies between Landfill M-3 and the upgradient end of the Main Post on Lafetra Creek, between Landfill M-4 and Landfill M-2 on Mill Creek, and between Landfills M-12 and M-14 and Husky Brook Pond on Husky Brook. Therefore, all of Parkers and Lafetra Creeks, in the vicinity of the sites addressed in this BEE as well as all of Mill Creek on the Main Post west of Landfill M-4 and Oceanport Creek and Husky Brook below Husky Brook Pond are classified as SE1 waters. Areas of these creeks upgradient of the MP are classified as FW2-NT. These freshwater and saltwater designations are consistent with those presented in the Weston SI report (Weston, 1995), which designated all their surface water and sediment sampling locations at the MP to be saltwater with the exception of Landfill M-2, based on field-observations of tidal influence.

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory indicates the presence of wetlands at the MP. Parkers and Oceanport Creeks are classified as estuarine and marine deepwater with estuarine and marine wetland areas. Husky Brook and Lafetra Creek are classified predominantly as freshwater riverine, emergent wetland, and forested/shrub wetland. Husky Brook Lake is classified as a freshwater pond.

Surface water runoff at the CWA is drained by Wampum Brook and Shrewsbury Creek. Shrewsbury Creek flows eastward through the center of the CWA and Wampum Brook flows along the southern boundary. These join east of the CWA before becoming Wampum Lake. Wampum Lake discharges into Mill Creek, which flows through the MP. All surface water streams at the CWA are classified as FW2-NT by the NJDEP for the purposes of determining surface water quality criteria, indicating they are non-trout freshwaters.

Several CWA wetland areas are identified on the USFWS National Wetland Inventory. Most of Shrewsbury Creek and Wampum Brook are classified as freshwater forested/shrub wetland, and the open water in the golf course in the eastern portion of the CWA is classified as a freshwater pond.

2.4.4 REGIONAL AND LOCAL GEOLOGY

Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The MP, as well as the CWA and the Evans Area, are located in what may be referred to as the Outer Coastal Plain subprovince or the Outer Lowlands.

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, and gravel. These formations, which typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile, were deposited on Precambrian and lower Paleozoic rocks. The sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from the Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

The formations record several major transgressive/regressive cycles and contain units that are generally thicker to the southeast and reflect a deeper water environment. More than 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are usually aquifers (e.g., the Englishtown and Kirkwood Formations, and the Cohansey Sand), while the transgressive deposits are typically confining units (e.g., the Merchantville, Marshalltown and Navesink formations). The individual thicknesses for these units vary greatly (that is, from several feet to several hundred feet).

Based on the regional geologic map, the Cretaceous Age Red Bank and Tinton Sands outcrop at the MP. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at a slope of 35 feet per mile. The upper member of the Red Bank Sand (Shrewsbury) is a yellowish-gray to reddish-brown clayey, medium- to coarse-grained sand that contains abundant rock fragments, minor mica, and glauconite. The lower member (Sandy Hook) is a dark gray to black, medium- to fine-grained sand with abundant clay, mica, and glauconite.

The Tinton Sand conformably overlies the Red Bank sand and ranges from a clayey medium- to very coarse-grained feldspathic quartz, and glauconite sand to a glauconitic coarse sand. The color varies from dark yellowish-orange or light brown to moderate brown, and from light olive to grayish-olive.

Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit. The upper part of the Tinton Sand is often highly oxidized and iron-oxide encrusted.

Both the Tinton Sand and the Hornerstown Sand (or marl) crop out at the CWA. The Hornerstown unconformably overlies the Tinton Sand and is a dusky-green to grayish-olive or grayish-olive-green clayey glauconitic sand that may oxidize to moderate reddish-brown and dusky red. The percentage of quartz sand ranges from a few percent to 30 percent. Approximately half of this formation is composed of silt and clay.

The Kirkwood Formation (part of the Kirkwood-Cohansey system) crops out southeast of the MP and dips to the southeast at a slope of 20 feet per mile. The Kirkwood Formation consists of alternating layers of sand and clay. The upper unit is a light gray to yellowish-brown fine-grained quartz sand with quartz nodules and small pebbles. The lower unit is a brown silt in Monmouth County.

2.4.5 SOILS

According to the Monmouth County Soil Survey (USDA, 2008), much of the MP is covered by urban land (developed land with disturbed soils). The majority of the area is of the Udorthents-Urban land complex with 0 to 8 percent slopes (UDauB). The following soil series and classification units are mapped in the MP Area:

AptAV – Appoquinimink-Transquaking-Mispillion complex, 0-1% slope, very frequently flooded

DoeB – Downser sandy loam, 2-5% slopes

FrkB – Freehold sandy loam, 2-5% slopes

FrrC – Freehold-Urban land complex, 0-10% slopes

HumAt – Humaquepts, 0-3% slopes, frequently flooded

KrhB – Kresson loam, 2-5% slopes

ShrA – Shrewsbury sandy loam, 0-2% slopes

ThgB – Tinton loamy sand, 0-5% slopes

ThhB – Tinton-Urban land complex, 0-5% slopes

UdaB – Udorthents, 0-8% slopes

UdauB – Urban land complex, 0-8% slopes

The CWA is covered by less urban land complexes than the MP. The Shrewsbury sandy loam, Freehold sandy loam, and Freehold-Urban land complex are the dominant soil types. The following soil series and classification units are mapped in the CWA:

AtsA – Atsion sand, 0-2% slopes

EveB – Evesboro sand, 0-5% slopes

FrkB – Freehold sandy loam, 2-5% slopes

FrkC – Freehold sandy loam, 5-10% slopes

FrrC – Freehold-Urban land complex, 0-10% slopes

HocA – Holmdel sandy loam, 0-2% slopes

HofB – Holmdel-Urban land complex, 0-5% slopes

PHG – Pits, sand and gravel

ShrA – Shrewsbury sandy loam, 0-2% slopes

UdauB – Udorthents-Urban land complex, 0-8% slopes

2.4.6 HYDROGEOLOGY

FTMM lies in the Atlantic and Eastern Gulf Coastal Plain groundwater region. This groundwater region is underlain by undeformed unconsolidated to semi-consolidated sedimentary deposits. Water chemistry near the surface is variable with low dissolved solids and high iron concentrations. In the areas underlain by glauconitic sediments such as the Red Bank and Tinton sands, the water chemistry is dominated by calcium, magnesium, and iron. The sediments in the area of the site were deposited in fluvial-deltaic to nearshore environments.

The water table aquifer is identified as part of the composite confining units or minor aquifers, which include the Navesink Formation, the Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, the Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation. The Hornerstown Sand probably serves as an aquitard or aquiclude rather than as an aquifer due to its high silt and clay content.

2.4.7 NATURAL BACKGROUND CONSTITUENTS

The local geology and soil types determine the levels of naturally-occurring constituents present in soil. For instance, glauconitic soils, such as those present in the Cretaceous Age Red Bank and Tinton Sands of the FTMM area, can exhibit high concentrations of naturally-occurring arsenic and beryllium (Dooley, 2001), and the upper part of the Tinton Sand is often highly iron-oxide encrusted. The ambient levels of metals in soils of the urban coastal plain region are reported by Sanders (2003) based on an extensive characterization study conducted by BEM Systems, Inc. (1998). These natural background levels are meant to be inclusive of naturally-occurring levels in soil as well as those from regional deposition but not those from point source contamination. **Table 2-2** presents a summary of these ambient levels.

Naturally-occurring metals present in soil also affect the concentrations of these constituents measured in groundwater. Elevated concentrations of arsenic and lead in groundwater at FTMM have been found within the glauconitic-rich soil layers and are most likely attributed to these natural conditions (FTMM, 2011). The presence of glauconitic soils were noted in sediment samples collected during the BEE investigation, particularly in Parkers, Lafetra, and Mill Creeks in the MP (**Appendix H**). Dooley (2001) reported higher than ambient concentrations in glauconitic soils for several metals. In particular, the 90th percentile concentrations of aluminum [49,130 milligrams per kilogram (mg/kg)], arsenic (77 mg/kg), barium (340 mg/kg), beryllium (9.6 mg/kg), chromium (769 mg/kg), cobalt (11 mg/kg), nickel (24 mg/kg), vanadium (213 mg/kg), and zinc (196 mg/kg) were greater than those reported as ambient soil levels for the urban coastal region (BEM Systems, Inc).

2.4.8 ECOLOGY

The MP and CWA are within the Atlantic Coastal Plain, in the Outer Coastal Plain physiographic region of New Jersey, and contain both upland and wetland ecological habitats. Coastal plains are typically of low relief and consequently suitable for the formation of wetlands. Areas of wetlands are present on both the MP and CWA, with estuarine and fresh water wetlands present on the MP. Much of the upland areas of the MP and CWA consist of extensive areas of regularly mowed lawns and landscaped areas. However, upland ecological habitats are present, and include forested areas and old field herbaceous habitat. Except for occasional transient species, no federally listed or proposed threatened or endangered flora or fauna are known to exist on the site. There was one observance in 1992 of a New Jersey listed endangered species, the clustered sedge. In addition, no federal or state listed species were observed during the BEE site visit conducted on the MP and CWA on September 15, 2009. This section includes descriptions of the important ecological habitats present at the MP and CWA. As indicated in **Section 2.4.3**, the USFWS National Wetland Inventory maps have designated wetland areas at the MP and CWA. Areas along Oceanport Creek and Parkers Creek are designated estuarine and marine wetlands or open waters; areas along Mill Creek, Husky Brook, Lafetra and Shrewsbury Creeks are freshwater emergent or forested/shrub wetlands.

Estuarine Wetlands. Estuarine wetlands on the MP are associated with the tidal brackish waters of Parkers and Oceanport Creeks. They include both mesohaline areas of moderate salinity (5-18 ppt) and oligohaline areas of low salinity (0.5-5 ppt). Emergent wetlands in mesohaline tidal areas of New Jersey are often characterized by smooth cordgrass (*Spartina alterniflora*) and common reed (*Phragmites*

australis). Other species present often include marsh elder (*Iva frutescens*), eastern baccharis (*Baccharis halimifolia*), spike grass (*Distichlis spicata*), salt hay (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), and salt marsh asters (*Aster subulatus* and *A. tenuifolius*). Where present on the MP, estuarine wetlands are dominated by common reed. Common reed tends to create a monoculture and, although they can provide valuable habitat, are generally not considered to be high quality wetlands. Common reed wetlands provide nesting habitat for many avian species, including Pied-billed Grebe (*Podilymbus podiceps*), Black-crowned and Yellow-crowned Night Heron (*Nycticorax nycticorax* and *Nyctanassa violacea*), American and Least Bittern (*Botaurus lentiginosus* and *Ixobrychus exilis*), Green Heron (*Butorides virescens*), Coot (*Fulica americana),* Common Moorhen (*Gallinula chloropus*), King and Virginia Rail (*Rallus elegans* and *Rallus limicola*), grackles (*Quiscalus* sp.), Red-winged Blackbird (*Agelaius phoeniceus*), Swamp Sparrow (*Melospiza georgiana*), Marsh Wren (*Cistothorus palustris*), and several waterfowl species. White-tailed deer (*Odocoileus virginianus*), northern raccoon (*Procyon lotor*), and other mammalian species use common reed wetlands for refuge cover. In many areas of the MP steep banks along the creeks limit the extent of the riparian zone and thereby prevent the formation of extensive wetlands. These areas have a narrow riparian zone dominated by marsh elder, also known as high-tide bush. Avian wildlife species observed utilizing estuarine wetlands at the MP during the BEE site visit included Double-crested Cormorant (*Phalacrocorax auritus*), Common Egret (*Ardea alba*), Great Blue Heron (*Ardea herodias*), Little Blue Heron (*Egretta caerulea*), Wilson's Plover (*Charadrius wilsonia*), and numerous small sandpipers (*Calidris sp.*).

Freshwater Wetlands. Freshwater wetlands occur on both the MP and CWA. The most extensive of these are forested wetlands, with areas of emergent wetlands associated with the fresh water portions of the several creeks that traverse the MP and CWA. Forested wetlands in the area are typically dominated by red maple (*Acer rubrum*) and other hardwoods, including sweetgum (*Liquidambar styraciflua*), and black gum (*Nyssa sylvatica*). Shrubs/vines include arrowwood (*Viburnum dentatum*), coastal sweet pepperbush (*Clethra alnifolia*), and greenbrier (*Smilax rotundifolia*). Herbaceous species found in these forested wetlands include smartweed (*Polygonum sp.*), jewelweed (*Impatiens capensis*), violets (*Viola sp.*), asters, sedges and ferns. Forested wetlands at the MP and CWA may be utilized by mammalian species including white-tailed deer, eastern gray squirrel (*Sciurus carolinensis*), northern raccoon, Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*). Numerous avian species are known to utilize forested wetlands habitat for nesting and foraging including: Barred Owl (*Strix varia*), Veery (*Catharus fuscescens*), Wild Turkey (*Meleagris gallopavo*), American Woodcock (*Scolopax minor*), and several species of woodpeckers and warblers. Although several streams are present at the MP and CWA, fresh water emergent wetlands are limited in some areas due to stream bank stabilization. Fresh water emergent vegetation includes cattail (*Typha latifolia*), water smartweed (*Polygonum amphibium*), arrowhead (*Sagittaria sp.*), pondweed (*Potamogeton sp.*), sedges, and rushes. Although limited in extent, emergent wetlands at the MP and CWA may provide habitat for muskrat (*Ondatra zibethicus*), Mallard (*Anas platyrhynchos*) and other species of water fowl, and for herptiles including northern water snake (*Nerodia sipedon*) and several frog species. Avian species observed utilizing freshwater wetlands or adjacent open waters at the MP during the BEE site visit included Mallard and Belted Kingfisher (*Megaceryle alcyon*).

Forested Uplands. Although most upland areas of the MP and CWA are developed, patches of upland forest are present in several areas. Dominant tree species include red oak (*Quercus rubra*), chestnut oak (*Quercus prinus*), tuliptree (*Liriodendron tulipifera*), and sweetgum (*Liquidambar styraciflua*). Understory species include sassafras (*Sassafras albidum*), flowering dogwood (*Cornus florida*), and black cherry (*Prunus serotina*). Mammals utilizing forested uplands include white-tailed deer, eastern gray squirrel, northern raccoon, Virginia opossum, striped skunk, eastern chipmunk (*Tamias striatus*), red fox (*Vulpes vulpes*), and white-footed mouse (*Peromyscus leucopus*). Avian species inhabiting forested uplands at the MP and CWA and utilizing these areas for foraging and nesting habitat are likely to include Red-tailed Hawk (*Buteo jamaicensis*), Cooper's Hawk (*Accipiter cooperii*), Blue Jay (*Cyanocitta cristata*), Tufted Titmouse (*Baeolophus bicolor*), Carolina Chickadee (*Parus carolinensis*), Red-eyed Vireo (*Vireo olivaceus*), Wood Thrush (*Hylocichla mustelina*), and several species of wood warblers. Avian species observed or heard in forested upland habitat during the BEE site visit included Catbird (*Dumetella carolinensis*), Carolina Chickadee, and American Robin (*Turdus migratorius*).

Old Field Habitat. Old field habitats include formerly mowed areas where the vegetation includes grasses and forbes and often immature trees. Old field habitat at the MP includes grasses, many forbes including Queen Ann's lace (*Daucus carota*), pokeweed (*Phytolacca americana*), goldenrod (*Solidago sp.*), milkweed (*Asclepias syriaca*), and sparse saplings of tree species including eastern red cedar (*Juniperus virginiana*) and winged sumac (*Rhus copallinum*). Mammals utilizing this habitat at the MP and CWA are likely to include include white-tailed deer, groundhog (*Marmota monax*), eastern cottontail (*Sylvilagus floridanus*), and meadow vole (*Microtus pennsylvanicus*). Deer and groundhog burrows were observed in this habitat at MP in the vicinity of IRP Site M-14. Avian species that prefer open old field habitat and are likely to be present at the MP and CWA include Northern Mockingbird (*Mimus polyglottos*), Eastern Bluebird (*Sialia sialis*), American Goldfinch (*Spinus tristis*), Rufus-sided Towhee (*Pipilo erythrophthalmus*), Common Yellowthroat (*Geothlypis trichas*), and other warblers, and several sparrow species. Birds observed or heard in or in the vicinity of old-field habitat during the BEE site visit included Mourning Dove (*Zenaida macroura*), House Finch (*Carpodacus mexicanus*), Carolina Wren (*Thryothorus ludovicianus*), Fish Crow (*Corvus ossifragus*), and Northern Mockingbird.

2.4.9 SURROUNDING LAND USE

In addition to ambient levels of background constituents, contaminants can also be present in the environment within the region of FTMM due to proximal off-site sources. This section describes the surrounding general land use, properties observed during surveys, and a review of regulatory databases. This information is adapted from that contained in the Environmental Condition of Property Report (Shaw, 2007) and recent searches of the NJDEP web-based application (http://www.nj.gov/dep/gis/deptutorial.htm#), performed to update information obtained during the 2007 effort.

2.4.9.1 ADJACENT PROPERTIES

The character of land use surrounding the FTMM properties typifies mixed use, small town development in New Jersey. Commercial services and shopping centers populate main roads, periodically interspersed with a residential structure, apartments, or an office building. Boundaries between towns are typically unnoticeable, although each town still tries to maintain a downtown "Main Street" shopping district. Tracts of housing subdivisions offer privacy from commonly traveled roads. Residential development is characteristically along grid-style side roads which are becoming encroached with small business and commercial service endeavors. Business and light industrial parks are tucked away along highways, streams, and RR tracks. **Figure 2-2** presents a schematic representation of general land use categories surrounding FTMM.

Main Post. The MP is surrounded by four towns. Little Silver lies to the northeast, Oceanport to the southeast, Eatontown to the southwest, and Shrewsbury to the northwest. The northeast boundary of MP is bordered by the Shrewsbury River, from the northeast corner to the area north of Battery Avenue, where the water narrows and becomes known as Parkers Creek. The downtown commercial and business district of Little Silver runs along Oceanport Avenue. Light industrial businesses are located east of Oceanport Avenue. Commercial businesses, including an animal hospital are located along the west side of Oceanport Avenue. An apartment complex is also located along the west side of Oceanport Avenue. Gas stations, the railroad station, and various stores surround the intersection of Oceanport Avenue and Sycamore Avenue. Further to the east, development is primarily residential. The eastern boundary of the MP is the railroad tracks with residential development along Horseneck Point Road.

The southeast boundary of the MP is bordered by Oceanport Creek, from the southeast corner to Wallington Avenue, where the water narrows. The area south of Oceanport Creek and east of the railroad tracks is developed with residential structures. Monmouth Park Racetrack is just west of the railroad and south of Bridgewaters Drive. Main Street in Oceanport borders the MP to the south, west of Oceanport Avenue. Residential houses, a church, and houses converted to small service businesses are located along Main Street to the south. The land immediately adjacent to the MP, north along Main Street, is residential development and a fire station. Another small area of residences borders the south boundary of MP north of the intersection of Main and Broad Streets. The Eatontown Sewage Authority, a church, residences, apartments, and the Eatontown municipal building are adjacent to the south of the MP along Throckmorton Avenue.

The intersection of Broad and Main Streets, Eatontown is located to the southwest of the MP. Small commercial stores, restaurants, and gas stations line Main Street in this area. A park surrounds Wampum Lake north of West Street. Storage USA is immediately adjacent along the southwest boundary of the MP, developed with an office and six self-service storage buildings. Two gas stations are located at the intersection of Main Street and Tinton Avenue. North along Main Street, the area is developed with banks, hotels, office buildings, and shopping centers. The Revmont Park Office Building is immediately adjacent to the MP on the northwest corner of the property, followed by Register Plaza Office Park, and a shopping center. As Main Street heads north towards Sycamore Avenue, development trends towards older residential structures. North of MP, Lafetra Creek runs along the property line. North of the creek are wooded areas with new subdivision housing developments. The entire area north of MP to Sycamore Avenue is primarily residential development.

Table 2-3 highlights specific properties observed during the adjacent property survey and the regulatory database review as presented in the Environmental Condition of Property Report (Shaw, 2007). The properties highlighted were documented with releases of contaminants or were observed with potentially hazardous substances on their premises.

Table 2-3. Properties Observed During Main Post Property Survey

Location	Property	Concern	Potential Impact
Oceanport Avenue & Main Street	Abandoned Shell Gas Station	Observed monitoring wells. State Hazardous Waste Site (SHWS) – Closed with restrictions 3/2005 (1).	Low due to hydraulic separation by Oceanport Creek.
61/63 Main Street	Residence	Observed above-ground storage tank (AST) along MP fence line.	High if there is a release.
9 Monmouth Park Place	Hi Tech Turf	Observed 55-gallon drum and AST. SHWS – Active 4/2004 (2).	High due to status and upgradient location.
25 Lake Avenue		SHWS – Active 10/2005 (3).	High due to status and upgradient location.
330 Broad Street		SHWS – Active 04/1997 (4).	Moderate due to date and upgradient location.
25 Cloverdale Avenue		SHWS – Active 09/2005 (5).	High due to status and upgradient location.
29 Rose Court	Residence	New Jersey Spills & Voluntary Cleanup Program (VCP) – 11/1999 (6).	Moderate due to date and upgradient location.
Broad & Rose	Getty Gas Station	Observed monitoring wells. SHWS – Active 08/2004 (7).	High due to status and upgradient location.
Route 35 & Tinton Avenue	Lukoil Gas Station – previous location of Mobil Station	SHWS – Active 04/1997 (8).	Moderate due to date and upgradient location.
Route 35 & Tinton Avenue	Exxon Gas Station	Historic Leaking Underground Storage Tank (historic LUST) 1991 (9).	Moderate due to date and upgradient location.
160 Main Street (Route 35)	Abandoned Amoco Gas Station	Observed monitoring wells. SHWS – Active 01/2001 (10).	High due to status and upgradient location.
37 Tinton Avenue	Residence	SHWS – Active 10/2000 (11).	High due to status and upgradient location.

Charles Wood Area. The CWA is surrounded by two towns. Eatontown lies to the east and south and Tinton Falls lies to the west and north. Tinton Avenue runs along the entire northern boundary of the CWA. North of the Golf Course, across Tinton Avenue, the land is developed with apartment complexes and the Ranney School. The northern branch of Parkers Creek also bisects this area. The area north of Tinton Avenue and west of Hope Road is developed with apartments, residential structures

and the Monmouth Regional High School. Further west on Tinton Avenue, across the Garden State Parkway, a nursery business occupies a large tract of land.

Tinton Falls Borough Department of Public Works facilities are located along the entire western property line of the CWA. Construction of new buildings is underway closest to Tinton Avenue. South of the new construction are the police department buildings. Further south are Department of Public Works storage warehouses for equipment, sand, and mulch, parking, a fueling station, and the equipment/truck storage yard. The Department of Public Works also operates a recycling collection center in this area. The southwest adjacent land appears to be cultivated with rows of bushes or trees. West of the Department of Public Works facilities is the Garden State Parkway and the Monmouth County Highway Department Site 3&6. Materials, equipment, sand, and mulch are stored outside in this area.

The southern boundary of the CWA is Pinebrook Road. A light industrial park is located along Park Road, from the southwest corner of the CWA to Hope Road. Businesses in this area include Standard Co., Hatteras Press, the Residence Inn, Garden State Delivery, IROC, DRS Technologies, Comcast, Ranger Industries, the Marriott, and Applebee's. Several commercial establishments are located along Pinebrook Road, south of the CWA, including an air conditioning and heating contractor, a construction contractor, and a 7-Eleven convenience store.

East of Hope Road, along Pinebrook Road to the south, the area is developed with office buildings and apartment complexes. Further south is Route 36. Apartment complexes and the Vetter School are located adjacent to the southeast corner of the CWA. The Eatontown Department of Public Works is located east of the CWA along Pinebrook Road. The facility has storage buildings, outside storage of materials and equipment, and a fueling station. A railroad switch storage yard and the Indian Head Enterprises (utility, pipe, and sewer company) are also located in this area along Pinebrook Road. Another railroad materials and equipment storage yard boarders the CWA property to the east off of Maxwell Road. The Borough of Eatontown also operates a recycling collection center along Lewis Street to the east of the CWA.

Maxwell Road runs along the eastern border of the CWA golf course. Fiore Paving facilities are located along Maxwell Road next to the railroad tracks. Further north along Maxwell the area is developed with residential structures. Several residences were observed to have ASTs.

Table 2-4 highlights specific properties observed during the adjacent property survey and the regulatory database review conducted in 2007. The properties highlighted were documented with releases of contaminants in the Environmental Data Resources, Inc. (EDR) report or were observed with potentially hazardous substances on their premises.

Table 2-4. Properties Observed During CWA 2007 ECP Property Survey

Location	Property	Concern	Potential Impact
539 Tinton Avenue	Concession Supply Company	Observed AST & Cylinders. SHWS – Active 05/2002. Inst Control – 08/2005 (1).	High due to status and upgradient location.
535 & 556 Tinton Avenue	Tinton Falls Borough	Observed AST and outside equipment /materials storage. SHWS – Active 10/1999 (2).	High due to status and upgradient location.
600 Tinton Avenue	CECOM (7)	SHWS – Active 12/2005 (3).	High due to status and upgradient location.
Pinebrook Road & GSP	Monmouth County Highway Dist 3&6	Observed outside storage of equipment/materials. SHWS – Active 11/1995. Class. Exempt area (4).	High due to status and upgradient location.
100 Park Road	Standard Company	Observed outside storage of equipment/materials. Historic LUST/New Jersey Release.	Low due to NFA 09/1994.

Table 2-4. Properties Observed During CWA 2007 ECP Property Survey

Location	Property	Concern	Potential Impact
45 Park Road	Hecon Corporation	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – No Further Remedial Action (NFRA) Transport, Storage, and Disposal Facility (TSDF)	Low due to NFA 11/1998.
14 Park Road	Mazel Company	CERCLA-NFRA	Low due to NFA 04/1984.
1 Coldstream Way	Metallurgical Industries	Area observed to be vacant field. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – Remedial Action (RA) 06/1997. SHWS – Active 03/1995. Industrial Site Recovery Act – 03/1995 (5).	High due to status and upgradient location.
Pinebrook & Hope Roads	Fitzpatrick & Associates	Observed outside equipment/materials storage.	High if there is a release.
250 Pinebrook Road	Eatontown Borough	Observed AST and outside equipment /materials storage. SHWS – Closed with Restrictions - 08/1995. Inst Control - (6)	Moderate due to continued fueling operations and closure status with restrictions.
37 Maxwell Road	Fiore Paving	Observed outside equipment/materials storage. New Jersey manifest.	High if there is a release.
Maxwell & Mill	Residence	Observed AST.	High if there is a release.

Numerous adjacent properties have the potential to impact the surface water quality in the vicinity of FTMM. Historically, there was concern that FTMM sewage plants were degrading surface water quality. In response to NJDEP concerns that sewage discharges were causing deleterious effects on Parkers Creek, an evaluation of the effluent and the receiving streams was performed in 1971. The evaluation concluded that the effluent met all written requirements of federal, state and local water pollution agencies. There was no visual evidence of contamination, no noticeable sewage odor and the color and turbidity of the effluent were less than that of the receiving stream (First U.S. Army Medical Laboratory, 1971). Another evaluation of the impact of wastewater discharges on the environment concluded that the impact was minimal (USAEHA, 1977). It was noted that the condition of the streams entering the installation were of similar or poorer quality due to a variety of upstream industrial operations such as Styrofoam cup manufacturing, metal plating and photo processing as well as domestic discharges. Water samples collected from Wampum Brook upstream of the CWA Sewage Treatment Plant (STP) outfall indicated no evidence of life in the brook (USAEHA, 1976).

2.4.9.2 STANDARD ENVIRONMENTAL RECORD SOURCES

A comprehensive search of state and federal environmental databases was undertaken for the facility as part of the ECP Report (Shaw, 2007) and any listed sites within standard search distances were identified. Two EDR area studies were performed: one for the MP and one for the CWA. The findings of this search, as it pertains to the FTMM surrounding land use and this BEE, are summarized below and the complete search results are provided in Appendix K of the ECP Report (Shaw, 2007).

Main Post Off-Site Facilities Summary. **Table 2-5** summarizes the results of the EDR search for the MP area. Within each database type, the location relative to MP (i.e., upgradient or downgradient)

has been provided. The location of these facilities relative to MP was based on topographic gradient, as identified on the USGS topographic quadrangle maps provided in the EDR report.

One Resource Conservation and Recovery Act (RCRA) Corrective Action Activity Site (CORRACTS) facility is reported within the 1-mile radius of the MP. The Lowe's Home Improvement Center, 118 Highway 35 South, Eatontown, is approximately ¾-mile south and upgradient from the MP. Twenty RCRA Small Quantity Generators (SQGs) facilities are reported within the ¼-mile radius of the MP. A total of 73 SHWS facilities are reported within the 1-mile radius of the MP. Eight leaking underground storage tank (LUST) facilities are reported within a ½-mile radius of the MP, an additional 22 are on the historical LUST database (this database has been inactive since 2002), and 19 facilities are also listed as registered UST sites. A total of 126 participants are listed in the VCP within a ½-mile radius of the MP.

The facilities identified in the EDR search include several service stations with USTs and other light industrial facilities. Though many are hydraulically separate from MP to prevent the migration of shallow groundwater to the MP, migration of contaminants towards Parkers Creek, Oceanport Creek, and their tributaries is feasible.

Table 2-5. MP Standard Environmental Record Results

Record(s) Source for FTMM MP	Number of Sites	Minimum Search Distance (miles)
Federal RCRA CORRACTS Facilities	1	1.0
Federal RCRA Small Quantity Generators	21	0.25
New Jersey State Hazardous Waste Sites	73	1.0
New Jersey State Landfill, Historic Landfill, and Approved Class B Recycling Facilities	3	0.5
New Jersey Active LUST Facilities	8	0.5
New Jersey Historical LUST Facilities	22	0.5
New Jersey Engineering Controls	1	0.5
New Jersey Institutional Controls	4	0.5
New Jersey VCP Facilities	126	0.5
New Jersey Registered UST Facilities	19	0.25

Charles Wood Area Off-Site Facilities Summary. **Table 2-6** summarizes the results of the EDR search for the CWA. Within each database type, the location relative to CWA (i.e., upgradient or downgradient) has been provided. The location of these facilities relative to CWA was based on topographic gradient, as identified on the USGS topographic quadrangle maps provided in the EDR report.

One National Priorities List (NPL) facility, the Naval Weapons Station Earl, is approximately ¾-mile southwest of the CWA in Colts Neck Township. Two RCRA CORRACTS facilities are reported within the ½-mile radius of the CWA: the Lowe's Home Improvement Center and the Naval Weapons Station Earl. One CERCLIS facility is reported within the ½-mile radius of the CWA; the Metallurgical Industries site participates in a state-lead cleanup program. Two additional CERCLIS facilities are listed as No Further Remedial Action Planned (NFRAP): Mazel Chemical Company and Hecon Corporation. Hecon Corporation is listed as a RCRA TSDF. There is one facility within a ¼-mile radius listed as a RCRA Large Quantity Generator (The Standard Group) and nine listed as RCRA SQGs, including public works facilities and cleaners. A total of 53 SHWS facilities are reported within the ½-mile radius of the CWA. Two facilities are listed in the Historic Solid Waste Facility Directory (Tinton Falls Borough Compost and All County Recycling) and are located upgradient of the CWA. Four LUST facilities are reported within a ½-mile radius of the CWA, an additional 20 are on the historical LUST database (this database has been inactive since 2002), and 16 facilities are also listed as registered UST sites. A total of 16 participants are listed in the VCP within a ½-mile radius of the CWA.

The facilities identified in the EDR search include several service stations with USTs and other light industrial facilities. Some of these sites are located upgradient and contaminant migration in shallow groundwater from these sites could impact groundwater at the CWA. Many, though, are hydraulically separate from CWA preventing the migration of shallow groundwater to the CWA; migration of contaminants towards Shrewsbury Creek and Wampum Brook is feasible.

Table 2-6. CWA Standard Environmental Record Results

Record(s) Source for FTMM Charles Wood Area	Number of Sites	Minimum Search Distance (miles)
Federal NPL Facilities	1	1.0
Federal RCRA CORRACTS Facilities	2	1.0
Federal CERCLIS Facilities	1	0.5
Federal CERCLIS-NFRAP Facilities	2	0.5
Federal RCRA TSD Facilities	1	0.5
Federal RCRA Large Quantity Generators	1	0.25
Federal RCRA Small Quantity Generators	9	0.25
New Jersey State Hazardous Waste Sites	53	1.0
New Jersey State Landfill, Historic Landfill, and Approved Class B Recycling Facilities	3	0.5
New Jersey Active LUST Facilities	4	0.5
New Jersey Historical LUST Facilities	20	0.5
New Jersey Institutional Controls	3	0.5
New Jersey VCP Facilities	16	0.5
New Jersey Registered UST Facilities	16	0.25

2.5 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

The Phase I ECP Assessment conducted in 2006 and 2007 evaluated the existing environmental conditions of FTMM MP and CWA (including IRP sites) and the entirety of MP and CWA were characterized into 95 parcels according to their environmental condition (Shaw, 2007). **Tables 2-7 and 2-8** list all ECP parcels and IRP sites at CWA and MP, respectively. **Tables 2-7 and 2-8** are organized by ECP parcel, with all IRP sites listed with the parcel in which they are included. Within the FTMM MP and CWA are 21 parcels that were evaluated through the FTMM SI under the BRAC 2005 ECP process and 27 active/open IRP Sites. Within the 27 active/open IRP Sites, 14, as well as 1 IRP site listed as Response Complete (Fort Monmouth, 2007), have been determined to require additional evaluation through the BEE process. **Tables 2-7 and 2-8** provide the rationale for inclusion, or non-inclusion, of all parcels in the BEE based on the potential for contaminant migration and impacts to ecological receptors.

In addition, eight of the 21 ECP parcels included in the FTMM SI under the BRAC 2005 ECP process are deemed to require a BEE based on NJDEP correspondence. In total, 23 sites/parcels were evaluated as part of this BEE. The IRP sites and ECP parcels evaluated as part of the BEE are summarized in **Table 2-9**.

This section provides brief site descriptions and summaries of the previous investigations or remedial actions at the IRP and ECP sites that are addressed in the BEE. Though detected concentrations were often compared to criteria within these previous reports, the criteria are not necessarily ecologically based. The comparisons discussed in this section are simply summarized and do not imply ecological risks.

Table 2-9. Fort Monmouth Main Post/Charles Wood Area BEE Sites

Site No.	Associated Building/Feature	AEDB-R No.	Proximal Ecological Feature to be Evaluated
Main Post			
IRP Site M-2	Landfill 2	FTMM-02	Mill Creek
IRP Site M-3	Landfill 3	FTMM-03	Lafetra Creek
IRP Site M-4	Landfill 4	FTMM-04	Mill Creek
IRP Site M-5	Landfill 5	FTMM-05	Mill Creek
IRP Site M-8	Landfill 8	FTMM-08	Parkers Creek
IRP Site M-12	Landfill 12	FTMM-12	Husky Brook
IRP Site M-14	Landfill 14	FTMM-14	Husky Brook
IRP Site M-15	Water Tank	FTMM-15	Parkers Creek
IRP Site M-16	Building 498, Pesticide Storage	FTMM-16	Oceanport Creek
IRP Site M-18	Former Training Area	FTMM-18	Parkers Creek
IRP Site Pre-1941 STP	Pre-1941 Former Sanitary STP	FTMM-20	Parkers Creek
IRP Site Building 1122	Building 1122, Unknown Discharge	FTMM-59	Mill Creek
IRP Site Building 283	Building 283, LUST, Gasoline	FTMM-61	Parkers Creek
ECP Parcel 39	Building 1150, Former Photoprocessing Activities	N.A.	Mill Creek
ECP Parcel 43	Building 1122, “Do-It-Yourself” Vehicle Repair Shop	N.A.	Mill Creek
ECP Parcel 49	Buildings 283, 288, 291, 292, 293, 295, Former Squier Laboratory Complex	N.A.	Parkers Creek
ECP Parcel 61	Building 1075, Patterson Army Health Clinic	N.A.	Husky Brook
ECP Parcel 69	Building 900, Former Tactical Motor Pool	N.A.	Oceanport Creek
Charles Wood Area			
IRP Site CW-3A	Landfill, CW-3A	FTMM-25	Shrewsbury Creek
IRP Site CW-6	Former Pest. Storage	FTMM-28	Un-named Wetland
ECP Parcel 15	Building 2700, Meyers Center laboratory	N.A.	Shrewsbury Creek
ECP Parcel 27	Buildings 2507 and 2704	N.A.	Shrewsbury Creek
ECP Parcel 28	Building 2525	N.A.	Shrewsbury Creek

2.5.1 MAIN POST

2.5.1.1 LANDFILL 2 (FTMM-2)

The FTMM-2 Landfill is located in the southwestern corner of the MP, on the south bank of Mill Creek. The 8.1-acre landfill operated from 1964 until 1968. The types of materials disposed in the landfill have been reported to include construction debris, scrap metal, asbestos-containing materials (ACM), vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. Metal, concrete, and other types of landfill debris had previously been observed protruding from the stream bank along Mill Creek. The bank has since undergone stabilization and debris is no longer protruding from the stream bank.

Under the IRP SI phase, three monitoring wells were installed to evaluate groundwater quality. In addition, surface water samples were collected from Mill Creek. All samples were analyzed for target compound list (TCL)+30, target analyte list (TAL) metals, and cyanide. The results are as follows:

- Chlorobenzene, arsenic, and lead were detected in downgradient monitoring wells at concentrations exceeding NJDEP Ground Water Quality Criteria (GWQC).
- Trichloroethene (TCE) and tetrachloroethene (PCE) were detected in surface water at concentrations exceeding the NJDEP Surface Water Quality Criteria (SWQC).

Under an enhanced SI phase, seven additional monitoring wells were installed to further evaluate groundwater quality. Subsequently, consecutive quarterly rounds of groundwater samples were collected for analysis. The results are as follows:

- Benzene, chlorobenzene, cadmium, and lead have been detected in six of the seven downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.

A remedial investigation (RI) to delineate contaminants of concern within groundwater and soil has been completed. A second RI that evaluated the potential for environmental contaminants being present within the existing landfill cover material has also been completed. The results are as follows:

- Polychlorinated biphenyls (PCBs) were identified in site soils at two separate areas within the boundary of the landfill.

The IRP recommended a NFA for near surface soil (Versar, Inc., 2001). For PCB contamination in subsurface soils, the Directorate of Public Works (DPW) incorporated a document equivalent to a Declaration of Environmental Restriction (DER) into the FTMM Installation Master Plan. For groundwater, the DPW established a Classification Exception Area (CEA). Subsequently, it was determined that the FTMM-2 Landfill required additional evaluation through the BEE process.

As part of the BEE, 12 sediment samples and two surface water samples were collected from Mill Creek adjacent to Landfill 2 (FTMM-2), one surface water and one sediment sample were collected upstream of Landfill 2 (FTMM-2), and two surface water samples were collected downstream of Landfill 2 (FTMM-2). These are discussed further in **Section 3.4.2.1**.

Mill Creek borders Landfill 2 (FTMM-2) along its north side and a small drainage tributary to Mill Creek borders it along its west side. The bank of Mill Creek along Landfill 2 (FTMM-2) has undergone stabilization and a service road lies adjacent to Mill Creek. The site slopes gently to the north and surface runoff is discharged to Mill Creek. Groundwater underlying Landfill 2 (FTMM-2) flows to the north-northwest to Mill Creek. Conductivity and salinity monitoring conducted in 1995 in Mill Creek indicate the presence of freshwater with conductivity readings less than 240 micromhos (µmhos) and salinity readings less than 0.2 ppt with a maximum tidal fluctuation of 1.2 feet (Weston, 1995).

As indicated on the FTMM utility maps in **Appendix K**, several storm water outfalls discharge into Mill Creek in the vicinity of Landfill 2 (FTMM-2) from the vicinity of Building 1150 and Building 1152 located in Parcel 39 (**Section 2.5.1.14**) located north of Mill Creek from Landfill 2. A gas utility line and a storm water line located in the southeastern corner of Landfill 2 may provide additional migration pathways for contaminants from Landfill 2; migration along these pathways would not be in the direction of Mill Creek.

The vegetative cover of Landfill 2 (FTMM-2) is mostly cut field with isolated areas of wood-shrub habitat. Silver maple (*Acer saccharinum*), viburnum (*Viburnum* sp.), smartweed (*Polygonum* sp.), and blackgum (*Nyssa sylvatica*) are present along Mill Creek. The upland portions contain black walnut (*juglans nigra*), silver maple, boxwood (*Buxus* sp.), catalpa (*Catalpa speciosa*), and black locust (*Robinia pseudoacacia*).

Geographic Information System (GIS) digital data available through the NJDEP indicate the presence of deciduous wetlands along Mill Creek and to the east and west of Landfill 2 (FTMM-2) as well as herbaceous wetlands across the site. A site visit on September 9, 2009, confirmed the presence of deciduous wetlands bordering Mill Creek and Landfill 2 (FTMM-2); however, the site was typical of upland habitat and not herbaceous wetlands.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.1.2 LANDFILL 3 (FTMM-3)

The M-3 Landfill is located between North Drive and Lafetra Creek in the west-central part of the MP and it is bordered by Mill Creek to the east. The 8.0-acre landfill operated from 1959 until 1964. The types of materials disposed of in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. The stream bank has undergone stabilization along Lafetra Creek.

Under the IRP SI, three monitoring wells were installed to evaluate groundwater quality. In addition, surface water samples were collected from Lafetra Creek. All samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- Chlorobenzene and lead were detected in downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.
- No contaminants of concern were detected in surface water samples collected during the SI phase.
- Surface water samples collected under a New Jersey Pollutant Discharge Elimination System (NJPDES) permit identified PCE at concentrations exceeding the NJDEP SWQC.

Under an enhanced SI, five additional monitoring wells were installed to further evaluate groundwater quality. Subsequently, consecutive quarterly rounds of groundwater samples have been collected for analysis. The results are as follows:

- Benzene, chlorobenzene, cadmium, and lead were detected in all five downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.

The IRP recommended NFA for near surface soil (Versar, Inc. 2004a), and a CEA was prepared for groundwater. Subsequently, the M-3 Landfill was considered to require additional evaluation through the BEE process.

As part of the BEE, 11 sediment samples and two surface water samples were collected from Lafetra Creek and five sediment samples and one surface water sample were collected from Mill Creek adjacent to Landfill 3 (FTMM-3), and one surface water and one sediment sample were collected upstream of Landfill 3 (FTMM-3) on Mill Creek. These are discussed further in **Section 3.4.2.2**.

Lafetra Creek borders Landfill 3 (FTMM-3) along its north side and Mill Creek borders it along its east side. The banks of Mill Creek and Lafetra Creek along Landfill 3 (FTMM-3) have undergone stabilization and a service road lies adjacent to Mill Creek and Lafetra Creek. The site slopes gently to the north and east and surface runoff is discharged to Mill Creek or Lafetra Creek. Groundwater underlying Landfill 3 (FTMM-3) flows predominantly to the north to Lafetra Creek.

As indicated on the FTMM utility maps in **Appendix K**, there are no outfalls or discharges from FTMM into Lafetra Creek or Mill Creek in the vicinity of Landfill 3 (FTMM-3) that may serve as potential contaminant migration pathways nor utility lines through Landfill 3 that may provide additional contaminant migration pathways from Landfill 3.

The vegetative cover of Landfill 3 (FTMM-3) is mostly cut field with isolated areas of wood-shrub habitat. Silver maple is present along the bank growing through the stabilizing riprap and poison ivy (*Toxicodendron radicans*) can be found on many of the trees. Opposite the landfill, emergent wetlands are dominated by cattail (*Typha* sp.) with patches of common reed (*Phragmites australis*). In the upland areas are black gum, American beech (*Fagus grandifolia*), pin oak (*Quercus palustris*), and silver maple as wells as mixed grasses and forbes including foxtail (*Alopercurus* sp.) and catalpa as well as Japanese knotweed (*Polygonum cuspidatum*) and wild grape (*Vitis* sp.).

GIS digital data available through the NJDEP indicate the presence of freshwater tidal wetlands along the Lafetra Creek opposite Landfill 3 (FTMM-3) as well as deciduous wetlands further to the north and to the west of Landfill 3 (FTMM-3).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. Lafetra Creek, as well as the adjacent wetlands, is Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.3 LANDFILL 4 (FTMM-4)

The M-4 Landfill is located on MP in the area bounded by Avenue of Memories to the south, North Drive to the north, Mill Creek to the west, and Wilson Avenue to the east. The 1.4-acre landfill operated from 1955 until 1956. The types of materials disposed of in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. A stream bank stabilization project was completed for this site.

Under the IRP SI, three monitoring wells were installed to evaluate groundwater quality. All samples were analyzed for TCL+30 parameters, TAL metals, and cyanide. The results are as follows:

- A single pesticide [4,4′-dichlorodiphenyltrichloroethane (4,4′-DDT)] was detected in an upgradient monitoring well at concentrations exceeding the NJDEP GWQC. As of 2002, 15 consecutive quarterly rounds of groundwater samples had been collected for subsequent analysis. Lead was initially detected in site monitoring wells at concentrations exceeding the NJDEP GWQC.

The IRP recommended NFA for the site (Versar, Inc., 2004b, 2005a). Subsequently, it was determined that the FTMM-4 Landfill required additional evaluation through the BEE process.

As part of the BEE, six sediment samples and one surface water sample were collected from Mill Creek adjacent to Landfill 4 (FTMM-4). These are discussed further in **Section 3.4.2.3**.

Mill Creek borders Landfill 4 (FTMM-4) along its west side. Both banks of Mill Creek along Landfill 4 (FTMM-4) have undergone stabilization. The site slopes gently to the west and surface runoff is discharged to Mill Creek. Groundwater underlying Landfill 4 (FTMM-4) flows to the west in the direction of Mill Creek.

As indicated on the FTMM utility maps in **Appendix K**, storm water outfalls discharge into Mill Creek in the vicinity of Landfill 4 (FTMM-4) near the northern and southern end of Landfill 4 (FTMM-4) which direct discharges from the surrounding area including the vicinity of Buildings 689, 1123, and 1221. The storm water line discharging into the northern end of Landfill 4 crosses Landfill 4 in a northwesterly direction and may act as a preferentially migration pathway for contaminants from Landfill 4 towards Mill Creek.

Landfill 4 (FTMM-4) is mostly mowed lawn with scattered large trees with grasses and forbes and small trees along Mill Creek. Along the creek are grasses and forbes with small trees; dominant vegetation is poison ivy, black cherry (*Prunus serotina*), catalpa, and goldenrod (*Solidago* sp.). To the south along the creek are Virginia creeper and wild rose, as well as pin oak and black willow (*salix nigra*). Black locust (*Robinia pseudoacacia*) and black oak (*Quercus velutina*) are present in the mowed area as well as Norway maple (*Acer platanoides*) and American bittersweet (*Celastrus scandens*) bordering the road.

No significant habitats in the vicinity of Landfill 4 (FTMM-4) are identified within GIS digital data available through the NJDEP.

2.5.1.4 LANDFILL 5 (FTMM-5)

The FTMM-5 Landfill is located just north of the FTMM-4 Landfill in the area bounded by North Drive to the south, an unpaved road south of Building 198 to the north, Wilson Avenue to the east, and Mill Creek and Parkers Creek to the west. The 3.2-acre landfill operated from 1952 until 1959. The types of materials disposed of in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated

photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. A stream bank stabilization project was completed for this site.

Under the IRP SI, two monitoring wells were installed to evaluate groundwater quality. All samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- PCE was detected in one monitoring well at concentrations exceeding the NJDEP GWQC. Subsequently, consecutive quarterly rounds of groundwater samples have been collected for analysis.
- Surface water samples collected under an NJPDES permit identified PCE at concentrations exceeding the NJDEP SWQC.

Under the RI, approximately 260 groundwater and soil samples were collected by means of a Geoprobe® sampling device. Following the Geoprobe® investigation, 13 additional monitoring wells were installed to further evaluate groundwater quality. At present, the extent of the PCE plume has been delineated both vertically and horizontally.

The IRP recommended NFA for near surface soil (Versar, Inc., 2004c), and a CEA was prepared for groundwater. Subsequently, it was determined that the M-5 Landfill required additional evaluation through the BEE process.

As part of the BEE, six sediment samples and one surface water sample were collected from Mill Creek adjacent to Landfill 5 (FTMM-5). These are discussed further in **Section 3.4.2.4**.

Mill Creek borders Landfill 5 (FTMM-5) along its west side. Landfill 3 (FTMM-3) lies across Mill Creek to the west, Landfill 8 (FTMM-8) is to the north, and Landfill 4 (FTMM-4) is to the south. The bank of Mill Creek along Landfill 5 (FTMM-5) has undergone stabilization. The site slopes gently to the west and surface runoff is discharged to Mill Creek. Groundwater at the Landfill 5 (FTMM-5) flows to the west to Mill Creek.

As indicated on the FTMM utility maps in **Appendix K**, there are no outfalls or discharges from FTMM into Mill Creek adjacent Landfill 5 (FTMM-5) that may serve as potential contaminant migration pathways, though there are storm water utility discharges located immediate upstream of Landfill 5 (FTMM-5) that serve to drain the surrounding roads and building areas. There are, however, storm water lines within Landfill 5 that may act as additional contaminant migration pathways for transport from Landfill 5, particularly toward Landfill 8 (FTMM-8) located to the north (**Section 2.5.1.5**).

Landfill 5 (FTMM-5) is mostly mowed lawn with scattered large trees: white oak (*Quercus alba*), red mulberry (*Morus rubra*), black gum, and red maple. Along the creek are mixed forbs and shrubs: black locust, horseweed (*Conyza* sp.), Queen Anne's lace (*Daucus carota*), black-eyed Susan (*Rudbeckia hirta*), and cone flowers (*Echinacea* sp.).

Though the GIS digital data available through the NJDEP do not indicate the presence of critical habitats at Landfill 5 (FTMM-5), the forested area to the north is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species, and is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.5 LANDFILL 8 (FTMM-8)

The FTMM-8 Landfill is located north of Buildings 692 and 697 along a bend of Parkers Creek. The 7.2-acre landfill operated from 1962 until 1981. Following closure of the FTMM-8 Landfill, all solid wastes generated at FTMM were directed off-Post to the Monmouth County Landfill. The types of materials disposed of in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. A stream bank stabilization project was completed for this site.

Under the SI, four monitoring wells were installed to evaluate groundwater quality. All samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- Benzene and chlorobenzene were detected in downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.

Under an enhanced SI phase, seven additional monitoring wells were installed to further evaluate groundwater quality. The results are as follows:

- Benzene and chlorobenzene were detected in four downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.

Contaminant concentrations are consistent with those identified during the IRP SI phase and subsequent quarterly long-term monitoring results for surface water and groundwater at the FTMM-8 Landfill.

PCB soil contamination was identified at one location within the FTMM-8 Landfill. A second RI was also completed that evaluated the potential for environmental contaminants being present within the existing landfill cover material.

The IRP recommended NFA for near surface soil (Versar, Inc., 2004d). For subsurface soils, the DPW incorporated a document equivalent to a DER into the FTMM Installation Master Plan for PCB soil contamination. A CEA was prepared for groundwater. Subsequently, it was determined that the FTMM-8 Landfill required additional evaluation through the BEE process.

As part of the BEE, 10 sediment samples and two surface water samples were collected from Parkers Creek adjacent to Landfill 8 (FTMM-8), and one surface water and one sediment sample were collected upstream of Landfill 8 (FTMM-8) on the North Branch Parkers Creek. These are discussed further in **Section 3.4.2.5**.

Parkers Creek borders Landfill 8 (FTMM-8) along its west, north, and east sides. The bank of Parkers Creek along Landfill 8 (FTMM-8) has undergone stabilization and a service road lies adjacent to Parkers Creek. The site slopes sharply toward Parkers Creek and surface runoff is discharged to Parkers Creek. Groundwater underlying Landfill 8 (FTMM-8) flows to the north-northwest to Parkers Creek.

As indicated on the FTMM utility maps in **Appendix K**, storm water outfalls discharge into Parkers Creek at the western end of Landfill 8 (FTMM-8), as well as to the east of Landfill 8, which may direct discharges from the surrounding area, including Landfill 5 (**Section 2.5.1.4**), to Parkers Creek. Storm water utility lines in the south and eastern end of Landfill 8 may provide additional contaminant migration pathways from Landfill 8 including towards Parkers Creek to the west.

Common reed dominates the emergent wetlands opposite Parkers Creek from Landfill 8 (FTMM-8). The upland area is heavily wooded. Dominant species are cedar (*Chamaecyparis* sp.), sweet gum (*Liquidambar styraciflua*), black locust, Japanese knotweed, staghorn sumac (*Rhus typhina*), foxtail grass, Asiatic dayflower (*Commelina communis*), pin oak, common mullein (*Verbascum thapsus*), boxwood (*Buxus* sp.), black willow, poison ivy, silver maple, yellow birch (*Betula alleghaniensis*), Norway maple, red oak, and tree of heaven (*Ailanthus altissima*).

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated wetlands along Parkers Creek opposite Landfill 8 (FTMM-8), with deciduous shrub/scrub wetlands and deciduous wetlands present further from the landfill. Landfill 8 (FTMM-8) is identified as coastal forest habitat.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas across Parkers Creek and the forested areas on Landfill 8 (FTMM-8) are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. Parkers Creek and the wetlands and forested areas are listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.6 LANDFILL 12 (FTMM-12)

The M-12 Landfill is located on the MP, on the south side of Husky Brook, west of Murphy Drive. Dates of operation for the 7.1-acre landfill are unknown. The types of materials disposed in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. Metal, concrete, and other types of landfill debris had previously been observed protruding from the stream bank along Husky Brook. The bank has since undergone stabilization, and debris no longer protrudes from the stream bank..

Under the IRP SI, three monitoring wells were installed to evaluate groundwater quality. All samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- Arsenic, cadmium, mercury, and lead were detected in site monitoring wells at concentrations less than the NJDEP GWQC.

An RI of site groundwater has been completed and eight additional monitoring wells have been installed at the site. The results are as follows:

- Arsenic was consistently detected in two monitoring wells at concentrations exceeding the NJDEP GWQC.

An RI that evaluated the potential for environmental contaminants being present within the existing landfill cover material was completed.

The IRP recommended NFA for near surface soil (Versar, Inc., 2003), and a CEA was submitted for groundwater. Subsequently, it was determined that the FTMM-12 Landfill required additional evaluation through the BEE process.

As part of the BEE, nine sediment samples and two surface water samples were collected from Husky Brook adjacent to Landfill 12 (FTMM-12), one surface water sample and one sediment sample were collected downstream of Landfill 12 (FTMM-12) on Oceanport Creek, one surface water and two sediment samples were collected immediately upstream of Landfill 12 (FTMM-12), and one surface water sample and one sediment sample were collected further upstream. These are discussed further in **Section 3.4.2.6**.

Husky Brook borders Landfill 12 (FTMM-12) along its north side and a small tributary to Husky Brook divides Landfill 12 (FTMM-12) into an east and a west section. The bank of Husky Brook along Landfill 12 (FTMM-12) has undergone stabilization. The site is generally flat and groundwater underlying Landfill 12 (FTMM-12) flows to the north to Husky Brook.

As indicated on the FTMM utility maps in **Appendix K**, several storm water outfalls discharge into Husky Brook, as well as the small tributary to Husky Brook, in the vicinity of Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) from the surrounding areas. Several of the storm water utility lines cross through Landfill 12 and may act as preferential contaminant migration pathways for transport from Landfill 12 towards Husky Brook.

The riparian zone on both banks of Husky Brook is characterized as hardwoods and shrubs and contains groundsel bush, locust trees, black cherry, common wormwood (*Artemisia vulgaris*), bayberry, black oak, milkweed, horseweed, goldenrod, eastern cottonweed, staghorn sumac, Queen Anne's lace, red cedar, marsh elder, silver maple, and pin oak. Some common reed is present nearest Wallington Avenue-Murphy Drive. The upland area south of Husky Brook is old field habitat and includes common reed and tall grasses, mugwort, goldenrod, Queen Anne's lace, vetch, as well as black locust, marsh elder, groundsel bush, wild grape, staghorn sumac, bayberry, silver maple, crab apple, and gray birch.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along both banks of Husky Brook in the western half of Landfill 12 (FTMM-12) as well as along the small tributary that divides Landfill 12 (FTMM-12). Based on on-site observations, these wetlands are less extensive than indicated through the NJDEP data.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Husky Brook and the small tributary are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. To the east of Landfill 12 (FTMM-12), on the opposite side of Wallington Avenue-Murphy Drive, the emergent wetland areas are habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Husky Brook, as well as the wetlands and the forested areas of Landfill 12 (FTMM-12), is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.7 LANDFILL 14 (FTMM-14)

The M-14 Landfill is located on the MP, on the north side of Husky Brook, west of Murphy Drive. The 6.9-acre landfill operated from 1965 until 1966. The types of materials disposed of in the landfill have been reported to include construction debris, scrap metal, ACM, vegetative waste, unwashed containers that previously held hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the STP, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. Metal, concrete, and other types of landfill debris were previously observed protruding from the stream bank along Husky Brook. The bank has since undergone stabilization and debris no longer protrudes from the stream bank.

Under the IRP SI, three monitoring wells were installed to evaluate groundwater quality. In addition, surface water samples were collected from Husky Brook. All samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- Lead was detected in one downgradient monitoring well above NJDEP GWQC.

As of 2002, 11 consecutive quarterly rounds of groundwater samples had been collected for subsequent analysis. The results are as follows:

- Arsenic was detected in one site monitoring well at concentrations exceeding the NJDEP GWQC.
- Lead and *cis*-1,2-dichloroethene were detected in surface water samples less than the NJDEP SWQC.

The IRP recommended NFA for the site (Versar, Inc., 2004e). Subsequently, it was determined that the FTMM-14 Landfill required additional evaluation through the BEE process.

As part of the BEE, 10 sediment samples and two surface water samples were collected from Husky Brook adjacent to Landfill 14 (FTMM-14), one surface water sample and one sediment sample were collected downstream of Landfill 14 (FTMM-14) on Oceanport Creek, one surface water and two sediment samples were collected immediately upstream of Landfill 14 (FTMM-14), and one surface water sample and one sediment sample were collected further upstream. These are discussed further in **Section 3.4.2.7**.

Husky Brook borders Landfill 14 (FTMM-14) along its south side. An access road/walking trail lies adjacent to Husky Brook for most of the length of Landfill 14 (FTMM-14) before crossing over Husky Brook. The bank of Husky Brook along Landfill 14 (FTMM-14) has undergone stabilization. The site is generally flat and groundwater underlying Landfill 14 (FTMM-14) flows to the south to Husky Brook.

As indicated on the FTMM utility maps in **Appendix K**, several storm water outfalls discharge into Husky Brook, as well as the small tributary to Husky Brook, in the vicinity of Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) from the surrounding areas. Though several of the storm water utility lines cross through Landfill 12 and may act as preferential contaminant migration pathways for transport from Landfill 12 towards Husky Brook, the storm water and gas lines located in the northern section of Landfill 14 may act as contaminant migration pathways from Landfill 14 to the east, west, and north, away from Husky Brook.

The riparian zone on both banks of Husky Brook is characterized as hardwoods and shrubs and contains groundsel bush, locust trees, black cherry, common wormwood, bayberry, black oak, milkweed,

horseweed, goldenrod, eastern cottonweed, staghorn sumac, Queen Anne's lace, red cedar, marsh elder, silver maple, and pin oak. Some common reed is present nearest Wallington Avenue-Murphy Drive. The area to the east and north of the trail is mostly mixed tall grasses. To the west of the field area is a heavily wooded section; this area contains boxwood, sweetgum, pin oak, black locust, goldenrod, milkweed, pokeweed, wild rose, black cherry, poison ivy, Asiatic bittersweet, sassafras, and black oak. An emergent wetland area is present bordering Husky Brook and is characterized by cattail, smartweed, and vibernum. The far western section is maintained lawn with isolated trees.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along both banks of Husky Brook in the western half of Landfill 14 (FTMM-14) as well as along the small tributary that divides Landfill 12 (FTMM-12). Based on on-site observations, these wetlands are less extensive than indicated through the NJDEP data.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Husky Brook and the small tributary are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. To the east of Landfill 14 (FTMM-14), on the opposite side of Wallington Avenue-Murphy Drive, the emergent wetland areas are habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Husky Brook, as well as the wetlands and the forested areas of Landfill 14 (FTMM-14), is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.8 WATER TANK (FTMM-15)

The 1980 Installation Assessment (IA) report (USATHAMA, 1980) identified the 0.3-acre FTMM-15 site as a potential Area of Concern. A 500,000-gallon AST is located at the FTMM-15 site. The tank, built in 1941, is of steel construction and was always used for the storage of potable water. The tank is located in the northeast section of the MP next to Parkers Creek, a tributary of the Shrewsbury River.

Under the IRP SI, environmental contaminants in the form of pesticides and heavy metals were identified in site soil. The results are as follows:

- Two pesticides, 4,4′-dichlorodiphenyldichloroethylene (4,4′-DDE) and 4,4′-DDT, were identified at concentrations exceeding the NJDEP Residential Direct Contact Soil Cleanup Criteria. It was determined that the pesticide contamination was the result of past over spraying practices.
- Three heavy metals—cadmium, lead, and zinc—were also identified at concentrations exceeding the NJDEP Residential Direct Contact Soil Cleanup Criteria.

Under the IRP RI, environmental sampling confirmed that the contaminants of concern had migrated horizontally towards Parkers Creek. A corrective action was implemented at the FTMM-15 site involving the removal of the contaminated soil from the site, thereby eliminating the contaminants of concern. Final remedial activities were completed in November of 1999. An RA report will be submitted to NJDEP with a NFA recommendation from the Army.

The IRP recommended NFA for the site. Subsequently, it was determined that FTMM-15 required additional evaluation through the BEE process.

As part of the BEE, four sediment samples and three surface water samples were collected from Parkers Creek adjacent to FTMM-15, of which one surface water sample and one sediment sample were collected immediately downstream of FTMM-15 and one surface water sample and one sediment sample were collected immediately upstream of FTMM-15. These are discussed further in **Section 3.4.2.8**.

Parkers Creek borders FTMM-15 along its north side. Parkers Creek is a wide, open water tidal water body in this area. The banks along Parkers Creek are steep and groundwater underlying FTMM-15 flows to the north to Parkers Creek.

The area of FTMM-15 immediately surrounding the water tank is maintained lawn. The banks along Parkers Creek are steep and vegetated. Vegetation includes poison ivy, pin oak, alder, Japanese knotweed, black willow, staghorn sumac, black locust, rose, and Norway maple.

No significant habitats in the vicinity of FTMM-15 are identified within GIS digital data available through the NJDEP.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.9 PESTICIDE STORAGE, BUILDING 498 (FTMM-16)

A former pesticide storage and mixing area was located at the 0.12-acre FTMM-16 site on the MP. The facility (Building 498) is a brick structure and was constructed in 1939. Pesticide management was conducted at the site until the late 1950s. Following this, the operation was moved to Building 65.

Under the IRP SI, a total of 10 pesticide compounds were detected greater than laboratory quantitative limits in site soil. Five pesticide compounds were found at concentrations exceeding the NJDEP Residential Direct Contact Soil Cleanup Criteria.

Environmental sampling confirmed that the contaminants were migrating horizontally in the direction of Oceanport Creek. The creek is located approximately 250 feet downgradient of the FTMM-16 site. A corrective action was implemented to remove the contaminated soil from the site, and final remedial activities were completed in February of 1999.

The IRP recommended a NFA for the site. Subsequently, it was determined that FTMM-16 required additional evaluation through the BEE process.

As part of the BEE, four sediment samples and three surface water samples were collected from Oceanport Creek near FTMM-16, of which one surface water sample and one sediment sample were collected downstream of FTMM-16, and one surface water sample and one sediment sample were collected upstream of FTMM-16. These are discussed further in **Section 3.4.2.9**.

Site FTMM-16 is approximately 100 yards north of Oceanport Creek which is a wide, open water tidal water body in this area. Immediately south of Site FTMM-16 is a marina and the banks of Oceanport Creek are contained by bulkheads. West of the marina and east of Oceanport Avenue the bank slopes gently to Oceanport Creek. Groundwater underlying FTMM-16 flows to the south to Oceanport Creek.

The area immediately surrounding the FTMM-16 site is maintained lawn. Along Oceanport Creek are buildings, structures, and pavement associated with the marina. West of the marina is an emergent wetland area of sedges and rushes dominated by cattails and common reeds.

GIS digital data available through the NJDEP indicate the presence of low marsh saline wetlands west of the marina and east of Oceanport Avenue.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area along Oceanport Creek is habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Oceanport Creek, as well as the wetlands, is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.10 FORMER TRAINING AREA/LANDFILL (FTMM-18)

The FTMM-18 site is a former training area utilized by the Army Signal School and other Army units. The FTMM-18 site is located on the MP, between Parkers Creek to the north and Buildings 283, 289, 293, and 294 to the south. The 4.85-acre site is partially paved and the remaining portion is an open sandy area. A tidal marsh adjoins the site. The 1980 IA report (USATHAMA, 1980) identifies diesel and gasoline generators and military vehicles being used at this site. The report states that several fuel spills occurred as a result of these activities. A stream bank stabilization project was completed for this site.

Under the IRP SI, nine soil borings in a grid pattern were drilled at the site. Two soil samples were collected from each boring, either 6 to 12 inches or 12 to 18 inches below the bottom of the asphalt (to avoid bias) and either from intervals with visible staining or from just above the water table. Soil samples were analyzed for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). The results are as follows:

- No compounds of concern were detected at concentrations exceeding the NJDEP Direct Residential Contact Soil Cleanup Criteria.

Two soil boring locations were converted to monitoring wells in order to evaluate groundwater quality. One existing monitoring well was also used to evaluate groundwater quality. Groundwater samples were analyzed for TCL+30, TAL metals, and TPH. The results are as follows:

- Arsenic, lead, and 4,4′-dichlorodiphenyldichloroethane (4,4′-DDD) were detected in downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.

Under an enhanced SI under the IRP, three additional monitoring wells were installed to further evaluate groundwater quality. Subsequently, consecutive quarterly rounds of groundwater samples have been collected for analysis. The results are as follows:

- Benzene and lead were detected in four of the six site monitoring wells at concentrations exceeding the NJDEP GWQC.

A geophysical survey was also conducted under the SI to determine whether the M-18 site was a former landfill. The data gathered from geophysical survey identified waste materials buried at the site. Subsequent trenching work confirmed the presence of construction debris.

An RI that evaluated the potential for environmental contaminants being present within the existing landfill cover material was completed. This resulted in a NFA determination regarding the landfill cover material.

The IRP recommended NFA for near surface soil (Versar, Inc., 2004f), and a CEA was submitted for groundwater. Subsequently, it was determined that FTMM-18 required additional evaluation through the BEE process.

As part of the BEE, four sediment samples and one surface water sample were collected from Parkers Creek adjacent to Site FTMM-18, and one surface water sample and one sediment sample were collected immediately upstream of Site FTMM-18. These are discussed further in **Section 3.4.2.10**.

Parkers Creek borders Site FTMM-18 along all but its southern boundary. At the western end, Parkers Creek is narrow (approximately 10 yards) but then opens to a wide (approximately 100 yard) open water tidal area at the eastern end. The bank of Parkers Creek on the western side of Site FTMM-18 has undergone stabilization. The central portion of the site is generally flat with greater slopes to the north and east and groundwater underlying Site FTMM-18 flows toward Parkers Creek.

As indicated on the FTMM utility maps in **Appendix K**, several storm water utility lines may discharge into Parkers Creek in the vicinity of Site FTMM-18. These storm water lines drain areas south and east of Site FTMM-18 including Buildings 291 to 296 and Building 283 (FTMM-61) in Parcel 49 (**Sections 2.5.1.13 and 2.5.1.15**). Several of the storm water utility lines cross through Site FTMM-18 in a northerly direction and may act as preferential contaminant migration pathways for transport from Site FTMM-18 towards Parkers Creek.

The western and central portion of Site FTMM-18 is maintained lawn with some hardwoods and small pockets of emergent wetland dominated by common reed. The western border, adjacent to Parkers Creek, contains shrubs and small hardwoods. Some pines are planted in this area and an active Osprey platform is present. Bordering Parkers Creek to the north and east are extensive emergent wetlands dominated by common reed in the high marsh and sedge-reed wetlands in the low marsh. The northeastern and eastern portions also contain forested wetlands sloping sharply to the emergent wetlands and Parkers Creek. Common vegetation at Landfill 18 (FTMM-18) includes black locust, black cherry, northern boxwood, Asian bittersweet, wild grape, marsh elder, goldenrod, red cedar, poison ivy, tree of heaven, red mulberry, and bayberry.

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated coastal wetlands and high marsh saline wetlands adjacent to Parkers Creek. Based on observations, there is also an area of deciduous wetlands between the maintained lawns and the emergent wetlands, and a small emergent wetlands within the area of maintained lawn.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Parker Creek are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. Parkers Creek, as well as the associated wetlands, is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.11 PRE-1941 FORMER SANITARY SEWAGE TREATMENT PLANT (FTMM-20)

Site FTMM-20 is the location of the former Sanitary STP adjacent to Parkers Creek in an area north of Allen Avenue in approximately the same location as current Building 259. Though the date of construction and period of operation are unknown, it is believed that this STP operated until the second MP STP came on line in 1941.

As part of the IRP SI (Weston, 1995), one sediment sample was collected from Parkers Creek at the former wastewater discharge point. The results from this sample are as follows:

- Arsenic, cadmium, chromium, and zinc were detected at concentrations exceeding NJDEP sediment criteria and background levels.

Additional sediment samples were collected during the IRP RI to delineate the extent of the metal contamination at the site (Versar, Inc., 2004g). Sediment samples at three depths at seven locations in the vicinity of the former wastewater discharge point, as well as three locations northwest and away from the influence of the STP discharge were collected. The RI results are as follows:

- Heavy metal concentrations at the site were consistent with background metal concentrations from nearby, undisturbed locations.

The RI Report was submitted to the NJDEP in 2004 requesting a NFA determination. Subsequently, it was determined that the FTMM-20 Landfill required additional evaluation through the BEE process.

As part of the BEE, two sediment samples and two surface water samples were collected from Parkers Creek adjacent to Site FTMM-20. These are discussed further in **Section 3.4.2.11**.

The majority of the area of Site FTMM-20 is pavement and maintained lawns sloping towards Parkers Creek to the northwest. Adjacent to Parkers Creek the banks are steep and dominated by hardwoods and shrubs. Emergent wetlands exist at the bottom of the slope dominated by common reed. Groundwater in the vicinity of Site FTMM-20 is to the northwest and toward Parkers Creek.

No significant habitats in the vicinity of Site FTMM-20 are identified within GIS digital data available through the NJDEP.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.12 BUILDING 1122, UNKNOWN DISCHARGE (FTMM-59)

Site FTMM-59 is located on Alexander Avenue, adjacent to Mill Creek on the MP. The 0.34-acre Site FTMM-59 contains Building 1122, which is also identified as part of the 1.54-acre Parcel 43. Site FTMM-59 and ECP Parcel 43 are addressed in this BEE as one site – FTMM-59.

Building 1122 is located on the MP and houses a modern “do-it-yourself” vehicle repair shop. Building 1122 is a single story slab building approximately 11,600 square feet in size. Furniture paint stripping was reported in the Woodworking Craft Shop section of Building 1122 in 1973. Currently, all vehicle repairs are done by FTMM personnel and are performed inside the building. Degreasing solvents

are used, which generates hazardous waste. Pneumatic lifts are present. The 2006 Stormwater Pollution Prevention Plan states, "Floor drains located near the pneumatic lifts, have been closed off." Used oil is collected in a 55-gallon drum stored inside the shop. When filled, the contents are pumped into a 995-gallon, double-walled AST located between the repair shop and the car wash (Building 1124). The floors drains, previously connected to the car wash facility in Building 1124, were sealed in June 2007. The enclosed car wash facility is located east of the repair shop. All wash water is recycled and reused and an active oil/water separator is in place. A 1993 renovation plan, which details the replacement of the floor drains, shows that the drains were connected to the sanitary sewer system. A former oil/water separator was associated with this building.

In 2007, as part of the ECP SI (Shaw, 2008), sediment, soil gas, and indoor air samples were collected to assess environmental conditions on Parcel 43. Six sediment samples were collected from three sample borings located along the south bank of Mill Creek at potential discharge locations adjacent to Building 1122. Mill Creek is a tidally influenced water body in this portion of the facility. At each sample location, two samples were collected: one from the 0- to 6-inch below ground surface (bgs) interval and the other from the 12- to 18-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. All samples collected were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 11 semivolatile organic compounds (SVOCs), 2 VOCs, and 18 metals were detected in sediment samples.

- Eight SVOCs [anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*k*)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene] were detected at concentrations that exceeded the salt water sediment criteria in two samples.
- The two VOCs were detected at concentrations less than the salt water sediment criteria .
- Eight of 18 metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc) were detected at concentrations that exceeded the salt water sediment criteria in all six samples.

Five soil gas samples (including one duplicate) and an indoor air sample were collected in and around Building 1122 to evaluate vapor intrusion. Samples were analyzed for VOCs. The results are as follows:

Twenty-one VOCs were detected in all five soil gas samples. A total of 25 VOCs were detected in the indoor air sample.

- Of the 21 VOCs detected in soil, 2 (PCE and TCE) exceeded the NJDEP generic vapor intrusion non-residential indoor air screening levels.
- Of the 25 VOCs detected in indoor air, 2 (benzene and dichloromethane) exceeded the NJDEP generic vapor intrusion screening levels.

The DPW removed one UST located next to Building 1122 (a self-help vehicle repair shop) in June 1994. The UST was a single wall steel tank used for storing No. 2 fuel oil. During tank closure activities, a petroleum discharge to site soil and groundwater was identified. Upon further investigation, the DPW determined that a second UST was removed from the same area during the late 1980s. Discussions with site personnel indicated that the tank was removed because of inventory control problems. It is assumed that the site was not fully remediated during the first UST closure.

In accordance with NJDEP UST Site Assessment activity requirements, all petroleum contaminated soils have been removed and disposed. In addition, the DPW has installed two monitoring wells to determine any adverse impact to groundwater. The results are as follows:

- TCE was initially detected at concentrations exceeding the NJDEP GWQC.

Subsequently, consecutive quarterly rounds of groundwater samples have been collected for analysis. The results are as follows:

- TCE continues to be quantified in one of the two site monitoring wells at concentrations exceeding the NJDEP GWQC.

Surface water sampling points (Mill Creek) downstream from the site and are currently being monitored.

The IRP recommended a CEA for groundwater, and a BEE was recommended for Parcel 43 in the ECP SI.

As part of the BEE, two surface water samples were collected from Mill Creek adjacent to Building 1122, FTMM-59 and Parcel 43. These are discussed further in **Section 3.4.2.12**.

Mill Creek borders Building 1122, FTMM-59, and Parcel 43 along its north side. The bank of Mill Creek along this area has not undergone stabilization. FTMM-59 and Parcel 43 is mostly paved with small patches of mowed and maintained lawns. The site slopes gently to the north and the banks immediately adjacent to Mill Creek are steep. Surface runoff is discharged to Mill Creek. Groundwater underlying FTMM-59 and Parcel 43 flows to the north-northwest to Mill Creek.

As indicated on the FTMM utility maps in **Appendix K**, a storm water outfall may discharge into Mill Creek to the east of Building 1122. This storm water line may drain the area of Building 1122 and Parcel 43 as well as buildings to the east. Storm water and gas lines located around Building 1122 may also act as contaminant migration pathways from Parcel 43 away from Mill Creek.

The vegetative cover along Mill Creek adjacent to FTMM-59 and Parcel 43 is mostly hardwoods with a thick understory. Common vegetation includes black jack oak, black cherry, black locust, pin oak, poison ivy, sassafras, jewelweed, greenbrier, Japanese knotweed, crab apple, and wild rose.

GIS digital data available through the NJDEP indicate the presence of deciduous wetlands along Mill Creek in the area of Building 1122, FTMM-59, and Parcel 43.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.1.13 BUILDING 283, LEAKING UST, GASOLINE (FTMM-61)

Site FTMM-61 is located off of Sherrill Avenue in the northern section of the MP and encompasses an area of less than 0.2 acre. Because FTMM-61 is within Parcel 49, the two areas are addressed in this BEE as one site: FTMM-61. On August 28, 1997, a 3,000-gallon steel UST (No. 0081533-229) used to store gasoline was removed. The UST was located within the courtyard of Building 283. Following its removal, the UST was inspected and numerous holes were noted. Soils within the tank excavation that corresponded with the locations of the holes in the tank were dark in color and appeared to be contaminated. Based on site assessment activities, it was concluded that a discharge to the environment had occurred. The NJDEP hotline was notified and the site was assigned Case # 97-8-28-1330-33. Approximately 400 cubic yards of contaminated soil was removed and disposed off-site in accordance with NJDEP requirements. Groundwater was encountered at 12.0 feet below grade and a sheen was observed on the groundwater. In response to this observation, one groundwater sample was collected. The sample was analyzed for VOCs to include a calibration for xylenes plus 15 tentatively identified compounds (TICs). The results are as follows:

- Benzene, ethylbenzene, toluene, and lead were detected at concentrations exceeding the NJDEP GWQC.

Subsequently, consecutive quarterly rounds of groundwater samples have been collected for analysis. The results are as follows:

- Benzene was detected at a concentration at concentrations exceeding the GWQC.
- Ethyl benzene was detected at a concentration at concentrations exceeding the GWQC.
- Toluene was detected at a concentration at concentrations exceeding the GWQC.
- Lead was detected at a concentration at concentrations exceeding the GWQC.

The IRP recommended that a CEA for groundwater be submitted. Subsequently, the site was considered to require additional evaluation through the BEE process.

As part of the BEE, two surface water samples were collected from Parkers Creek adjacent to Parcel 49 and Building 283. These are discussed further in **Section 3.4.2.13**.

Parkers Creek borders FTMM-61 and Parcel 49 along its north side. The bank of Parkers Creek adjacent to FTMM-61 and Parcel 49 has not undergone stabilization and is steep and well-vegetated. Parcel 49 is mostly buildings and pavement with small portions of mowed and maintained lawns. The site slopes gently to the north and surface runoff is discharged to Parkers Creek. Groundwater underlying Parcel 49 flows to the north toward Parkers Creek.

As indicated on the FTMM utility maps in **Appendix K**, several storm water utility lines may discharge into Parkers Creek in the vicinity of Building 283 and Parcel 49 (**Section 2.5.1.15**). These storm water lines drain the areas around Building 283 and Parcel 49. Several of the storm water utility lines cross through Site FTMM-18 in a northerly direction and may act as preferential contaminant migration pathways for transport from Parcel 49 to Site FTMM-18 and Parkers Creek. Two storm water utility lines discharge northeast of Building 283 directly into Parkers Creek. Storm water, gas, and water lines located around Building 283 and Parcel 49 may also act as contaminant migration pathways from Parcel 49 and not directly to Parkers Creek.

The vegetative cover of the wooded area along Parkers Creek adjacent to FTMM-61 and Parcel 49 contains red oak, white oak, black locust, and black gum.

GIS digital data available through the NJDEP indicate the presence of mixed high marsh saline wetlands and Phragmites dominated coastal wetlands along Parkers Creek on the western portion of FTMM-61 and Parcel 49.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. In addition, Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.14 BUILDING 1150 (PARCEL 39)

Parcel 39 is located in the southwestern portion of the MP and encompasses the area between Building 1150 (Vail Hall) and Mill Creek, approximately 0.5 acre. Building 1150 is utilized for administrative purposes. Within the basement is a large Uninterruptible Power Supply Room, emergency generator, floor drains, and a sump pump strictly for high water table events (discharges to basin behind the building and ultimately to Mill Creek). Film developing activities formerly occurred in the basement of the building.

In 2007, as part of an ECP SI (Shaw, 2008), sediment and surface soil were collected to assess environmental conditions on Parcel 39.

A total of four sediment samples were collected from two sample borings located along the north bank of Mill Creek adjacent to Building 1150. Samples were collected from deposition locations immediately downgradient of the drainage basin located directly behind Building 1150. At each sample location, two samples were collected: one from the 0- to 6-inch bgs interval and the other from the 18- to 24-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. All samples collected were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 9 SVOCs and 18 metals were detected in Parcel 39 sediment samples.

- Six [benzo(*a*)anthracene, benzo(*a*)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene] of the nine SVOCs were detected at concentrations that exceeded the freshwater comparison criteria in two samples.
- Arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc were detected at concentrations that exceeded the freshwater comparison criteria in all four samples.

Based upon the resulting data, the ECP SI recommended NFA for soil within Parcel 39.

One surface soil sample was collected from one boring located below an outfall on the north bank of Mill Creek adjacent to Building 1150. The outfall is the end of an underground terracotta pipe that leads from the direction of Building 1150. A sample was collected in order to determine if any contamination exists from potential historical discharges from Building 1150. The surface soil sample for non-VOC analysis was collected from the 0- to 6-inch interval bgs, and the soil sample for VOC analysis was collected from the 18- to 24-inch bgs interval. No visual or olfactory evidence of soil contamination was noted. All samples collected were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

- A total of 4 SVOCs and 18 metals were detected at concentrations less than the non-residential and impact to groundwater comparison criteria in the Parcel 39 surface soil sample.

Based upon the resulting data, the ECP SI recommended that a BEE be conducted for surface water and sediment at Parcel 39.

As part of the BEE, three sediment samples and one surface water sample were collected from Mill Creek adjacent to Parcel 39. Parcel 39 is on the opposite bank of Mill Creek from Landfill 2 (FTMM-2) and these samples were also collected as part of the Landfill 2 investigation. These are discussed further in **Section 3.4.2.14**.

Mill Creek borders Parcel 39 along its south side. The bank of Mill Creek along Parcel 39 has not undergone stabilization, though the opposite bank along Landfill 2 has been stabilized. Parcel 39 consists mostly of buildings and pavement with some mowed and maintained lawns. The site slopes gently to the south and the banks to Mill Creek are steep; surface runoff is discharged to Mill Creek. Groundwater underlying Parcel 39 flows to the south towards Mill Creek.

As indicated on the FTMM utility maps in **Appendix K**, several storm water outfalls discharge into Mill Creek from the vicinity of Building 1150 and Building 1152 located in Parcel 39 located north of Mill Creek from Landfill 2 (**Section 2.5.1.1**), and these storm water utility lines may act as preferential contaminant migration pathways towards Mill Creek.

Within the lawn areas are tulip trees and black gum. Near Mill Creek, the vegetative cover includes Norway maple, silver maple, black cherry, Asiatic bittersweet, Japanese knotweed, poison ivy, pignut hickory (*Carya glabra*), black willow, black gum, Asiatic dayflower, and burning bush (*Euonymus alata*).

GIS digital data available through the NJDEP indicate the presence of deciduous wetlands and herbaceous wetlands along Mill Creek.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the forested wetland area along Mill Creek adjacent to Parcel 39 is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.1.15 BUILDINGS 283, 288, 291, 292, 293, 295 (ECP PARCEL 49)

Parcel 49 encompasses the buildings associated with the former Squier Laboratory and other facilities with similar operational histories in the north-central portion of the MP and incorporates an area of approximately 4 acres. The Squier Laboratory Complex included existing Buildings 283, 285, 288, 292, 293, and 298, and former Buildings S-5, S-6, S-6 Annex, S-9, S-10, S-11, S-12, and S-15. Buildings 291, 294, and 295, and former Buildings 289, 290, L-3, T-45, X-9, and X-7 have a similar operational history and are included in Parcel 49 along with the Squier Laboratory buildings. Environmental concerns associated with Squier Laboratory operations include the use of chemicals, solvents, radioisotopes, and metals when waste handling procedures may not have been sufficiently protective to preclude a release to the environment.

A corollary investigation of the historical use of radioactive materials (RAM) was conducted by Cabrera during the Phase I ECP. A Special Investigation Report issued in 1951 for the Squier Signal Laboratory Director discussed a wipe test performed on samples of aluminum covered with polonium

lacquer (approximately 230 microcuries) to ensure that no hazard was present at Building 283. Building 292 serves as storage space for the communications-electronics museum. This storage space contains or contained a Chinese radio and a vacuum tube where radiological commodities were identified with radiological readings above background levels, and radium-contaminated components were found in a posted radioactive storage locker. This storage space once contained 65 items containing RAM, but numerous non-radioactive items have since been removed.

In 2007, as part of the ECP SI (Shaw, 2008), sediment, soil, and groundwater samples were collected to assess environmental conditions on Parcel 49.

Seven (including one duplicate) sediment samples were collected from three sample borings located along the south bank of Parkers Creek. Parkers Creek is a tidally influenced water body in this portion of the facility. Samples were collected in order to determine if previous discharges from former septic and sump systems associated with the Squier Complex have impacted sediment within Parkers Creek. At each sample location, two samples were collected; one from the 0- to 6-inch bgs interval, and the other from the 18- to 24-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. All samples collected were analyzed for TCL+30 (without pesticides), TAL metals, and cyanide. The results are as follows:

A total of 10 SVOCs, 1 VOC, and 20 metals were detected in Parcel 49 sediment samples.

- All 10 SVOCs and the 1 VOC (acetone) were detected at concentrations less than the saltwater sediment criteria.
- Of the 20 metals, 9 (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc) were detected at concentrations that exceeded the saltwater sediment criteria in all seven sediment samples.

Six surface soil samples and seven subsurface soil samples (including one duplicate sample) were collected from six distinct Geoprobe® borings located throughout Parcel 49. An additional seven surface soil samples were collected via hand-auger throughout Parcel 49. Surface soil samples for non-VOC analysis were collected from the 0- to 6-inch interval bgs. For borings located in paved areas, non-VOC surface soil samples were collected from the 0- to 6-inch interval directly below the pavement sub-base. Surface soil samples for VOC analysis were collected from the 18- to 24-inch interval bgs. Subsurface soil samples were collected from the 6-inch interval directly above the water table. No visual or olfactory evidence of contaminated soil was noted. All soil samples were analyzed for TCL+30 (without pesticides), TAL metals, and cyanide. The results are as follows:

A total of 22 SVOCs, 5 VOCs, 20 metals, and 1 Aroclor were detected in Parcel 49 soil samples.

- Of the 22 SVOCs, 7 [benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*b*)fluoranthene, benzo(*k*)fluoranthene, chrysene, dibenzo(*a,h*)anthracene, and indeno(1,2,3-*cd*)pyrene] were detected at concentrations that exceeded the non-residential comparison criteria in five surface soil samples.
- The five VOCs were detected at concentrations less than the applicable criteria.
- Of the 20 metals, 1 (arsenic) was detected at concentrations that exceeded regulatory criteria.
- Aroclor 1260 was detected in one surface soil sample at a concentration that exceeded regulatory criteria.
- Cyanide was not detected in soil.

Two groundwater samples were collected from two temporary wells that were installed using the Geoprobe®. Temporary wells P49GW-1 and P49GW-1 were installed north of Building 293 and east of former Building 289, respectively. The samples were analyzed for TCL+30 (without pesticides/PCBs) and *tert*-butyl alcohol (TBA). Five groundwater samples (including one duplicate sample) were collected from four existing FTMM monitoring wells located along the northern perimeter of the former Squier Complex area to evaluate groundwater on a parcel-wide basis. These samples were analyzed for TCL+30 (without pesticides), TBA, TAL metals, and cyanide. The results are as follows:

A total of 4 SVOCs, 9 VOCs, and 18 metals were detected in groundwater samples collected in Parcel 49.

- Of the four SVOCs, one [bis(2-ethylhexyl) phthalate] was detected at concentrations that exceeded the NJDEP GWQC in three groundwater samples. The contamination was likely the result of the polyethylene sampling tube that is commonly used for sampling wells. Therefore, it is not considered to be a contaminant of concern in groundwater at Parcel 49.
- Of the nine VOCs, two (benzene and bromodichloromethane) were detected at concentrations that exceed the NJDEP GWQC in two groundwater samples.
- Of the 18 metals, 6 (aluminum, arsenic, beryllium, iron, manganese, and sodium) were detected at concentrations that exceeded the NJDEP GWQC.

Based upon the resulting data, the SI recommended additional evaluation of soils, further evaluation of groundwater under the M-18 groundwater CEA, and that Parcel 49 be included as part of the BEE.

As part of the BEE, two surface water samples were collected from Parkers Creek adjacent to Parcel 49 and Building 283. These are discussed further in **Section 3.4.2.15**.

Parkers Creek borders Parcel 49 along its north side. The bank of Parkers Creek adjacent to Parcel 49 has not undergone stabilization and is steep and well-vegetated. Parcel 49 is mostly buildings and pavement with small portions of mowed and maintained lawns. The site slopes gently to the north and surface runoff is discharged to Parkers Creek. Groundwater underlying Parcel 49 flows to the north toward Parkers Creek.

As indicated on the FTMM utility maps in **Appendix K**, several storm water utility lines may discharge into Parkers Creek in the vicinity of Building 283 (**Section 2.5.1.13**) and Parcel 49. These storm water lines drain the areas around Building 283 and Parcel 49. Several of the storm water utility lines cross through Site FTMM-18 in a northerly direction and may act as preferential contaminant migration pathways for transport from Parcel 49 to Site FTMM-18 and Parkers Creek. Two storm water utility lines discharge northeast of Building 283 directly into Parkers Creek. Storm water, gas, and water lines located around Building 283 and Parcel 49 may also act as contaminant migration pathways from Parcel 49 and not directly to Parkers Creek.

The vegetative cover of the wooded area along Parkers Creek adjacent to Parcel 49 contains red oak, white oak, black locust, and black gum.

GIS digital data available through the NJDEP indicate the presence of mixed high marsh saline wetlands and Phragmites dominated coastal wetlands along Parkers Creek on the western portion of Parcel 49.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. In addition, Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.16 BUILDING 1075 (ECP PARCEL 61)

Parcel 61, located in the south-central portion of the MP, encompasses Patterson Army Health Clinic (Building 1075) and the surrounding land (approximately 15 acres). Constructed in 1961 to house Patterson Army Hospital, Building 1075 has been used continuously since that time, although it was downgraded to a health clinic in 1995. Operations in the 1960s, 1970s, and 1980s included X-ray processing and laboratory operations. Operations in the building extensively used mercury-containing equipment, developing chemicals, and other chemicals and waste associated with medical operations.

In 2007, as part of the ECP SI (Shaw, 2008), sediment and surface soil samples were collected to assess environmental conditions on Parcel 61.

Four sediment samples were collected from two borings to investigate potential historical discharges to stormwater from Building 1075. One sample was collected at the stormwater outfall, MP17, located along the southeast bank of Oceanport Creek directly north of Building 975. The other sample was collected downstream on the southeast bank of the tributary to Oceanport Creek. Oceanport Creek is a tidally influenced water body in this portion of the facility. At each sample location, two samples were collected, one from the 0- to 6-inch bgs interval, and the other from the 18- to 24-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. All samples were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 16 SVOCs, 1 VOC, and 18 metals were detected in Parcel 61 sediment samples.

- Of the 16 SVOCs, 11 [acenaphthene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*k*)fluoranthene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene] were detected at concentrations that exceeded the freshwater sediment criteria in all four sediment samples.
- The VOC toluene was detected at concentrations below the freshwater sediment criteria in one sample.
- Of the 18 metals, 4 (arsenic, chromium, copper, and lead) were detected at concentrations that exceeded the freshwater sediment criteria.

Four surface soil samples were collected from one hand auger location (P61SS-1) and three Geoprobe® boring locations (P61SS-2, 3, and 4). Samples were located along the southeast and northeast corners of Building 1075. Sample P61SS-1 was collected in a grass-covered area near a door at the southeastern corner of Building 1075. Samples P61SS-2 and P61SS-3 were collected near the loading docks of Building 1075. Sample P61SS-4 was collected near the basement door at the northeast corner of Building 1075. Surface soil samples for non-VOC analysis were collected from the 0- to 6-inch interval bgs. For surface soil samples located in paved areas, non-VOC surface soil samples were collected from the 0- to 6-inch interval directly below the pavement sub-base. Surface soil samples collected for VOC analysis were collected from the 18- to 24-inch interval bgs. All samples were analyzed for TCL+30 (without pesticides), TAL metals, and cyanide. No visual or olfactory evidence of soil contamination was noted. The results are as follows:

A total of 19 SVOCs and 18 metals were detected in Parcel 61 soil samples.

- Of the 19 SVOCs, 3 [benzo(*a*)anthracene, benzo(*b*)fluoranthene, and benzo(*a*)pyrene] were detected at concentrations exceeding the non-residential comparison criteria in one surface soil sample.
- All 18 metals identified in soil were detected below the Non-Residential Direct Contact Soil Cleanup Criteria.
- Cyanide was not detected in soil at Parcel 61.

Based upon the resulting data, the SI recommended soil for additional evaluation and inclusion of Parcel 61 in a BEE.

As part of the BEE, one surface water sample from the tributary to Oceanport Creek. This is discussed further in **Section 3.4.2.16**.

Parcel 61 is mostly buildings and pavement with small portions of mowed and maintained lawns. Though no significant habitats are present in the immediate vicinity of Parcel 49, stormwater discharges to a small tributary to Husky Brook.

As indicated on the FTMM utility maps in **Appendix K**, several storm water utility lines drain the area around Building 1075 and Parcel 61. These direct discharges to a small tributary to Husky Brook in the vicinity of Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) (**Sections 2.5.1.6 and 2.5.1.7**). The numerous storm water, gas, and water lines located in and around Parcel 61 may also act as contaminant migration pathways from Parcel 61 to or away from Husky Brook or its tributary.

The vegetative cover along the small tributary to Husky Brook includes boxwood, sweetgum, pin oak, black locust, goldenrod, milkweed, pokeweed, wild rose, black cherry, poison ivy, Asiatic bittersweet, sassafras, and black oak.

GIS digital data available through the NJDEP indicate the presence of deciduous shrub/scrub wetlands along the tributary to Husky Brook.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. In addition, Husky Brook and the adjacent wetlands are listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.1.17 BUILDING 900 (ECP PARCEL 69)

Building 900 is a former tactical motor pool located in the southeastern portion of the MP, which has been utilized for general storage for approximately the last 10 years. It encompasses approximately 0.3 acre. A waste oil tank immediately outside the building was connected by a fill pipe originating from inside the building (since removed). A storm sewer inlet was observed in the parking lot in close proximity to the building during the 2006 Visual Site Inspections (VSIs). A boiler was formerly located outside the building. A 1993 U.S. Army Environmental Hygiene Agency report cites a TCE parts cleaner and 500-gallon waste oil AST being present at the building during the 1993 site visit. The tank has been removed from the building. All TCE parts cleaners were eliminated from use (MP and CWA) in February 1994 under Environmental Program Requirements Project FM0094F088.

Solvents were previously used for cleaning vehicle parts at various locations throughout FTMM. Both the military and the contractors operated solvent parts cleaners. These solvent parts cleaners consisted of a tank and sink with nozzle. The military used Super Agitene for its parts cleaners while the contractor used Siloo Tyme II. Each parts cleaner held about 30 gallons of fluid, which was reused until it needed changing. Fluid changes occurred every 4 months to every 3 years, depending on location and usage.

In 2007, as part of the ECP SI (Shaw, 2008), sediment, soil, and groundwater samples were collected to assess environmental conditions on Parcel 69.

Five sediment samples (including one duplicate sample) were collected from two borings located along the south bank of Oceanport Creek. Oceanport Creek is a tidally influenced water body in this portion of the facility. Sediment samples were collected in order to investigate any potential historical discharges to stormwater from Building 900. One sample was collected directly at a stormwater outfall within Oceanport Creek upstream of Murphy Drive, and the other sample was collected at a stormwater outfall discharging to Oceanport Creek downstream of Murphy Drive. At each sample location, two samples were collected; one from the 0- to 6-inch bgs interval, and the other from the 18- to 24-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted.

All samples collected were analyzed for TCL+30 (without pesticides) and TAL metals.

The results are as follows:

A total of 8 SVOCs, 4 VOCs, and 20 metals were detected in Parcel 69 sediment samples.

- Of the eight SVOCs, seven [acenaphthene, anthracene, benzo(*a*)anthracene, chrysene, fluoranthene, phenanthrene, and pyrene] were detected at concentrations that exceeded the saltwater sediment criteria.
- All four VOCs were detected at concentrations below the saltwater sediment criteria.
- Of the 20 metals, 9 (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc) were detected at concentrations that exceeded the saltwater sediment criteria.

Four surface soil samples and five subsurface soil samples (including one duplicate sample) were collected from four distinct Geoprobe® borings. Three borings, P69SB1, P69SB2, and P69SB3, were

located in the vicinity of the former waste oil AST. The other boring, P69SB-4, was located north of Building 900 to evaluate the absence or presence of contamination downgradient of the building. Surface soil samples for non-VOC analysis were collected from the 0- to 6-inch bgs interval. At borings located in paved areas, non-VOC surface soil samples were collected from the 0- to 6-inch interval directly below the pavement sub-base. Surface soil samples collected for VOC analysis were collected from the 18- to 24-inch bgs interval. Subsurface soil samples were collected from the 6-inch interval directly above the water table. No visual or olfactory evidence of soil contamination was noted. All samples collected were analyzed for TCL+30 (without pesticides), TAL metals, and cyanide. The results are as follows:

- A total of 5 SVOCs, 17 metals, and 2 VOCs were detected in concentrations less than the Non-Residential Direct Contact Soil Cleanup Criteria in Parcel 69 surface soil.

Three groundwater samples (including one duplicate sample) were collected from two distinct temporary wells that were installed with the Geoprobe® rig. One temporary well, P69GW-1, was installed in an area of the former waste oil AST east of Building 900, and the other well, P69GW-4, was installed downgradient (north) of Building 900. Samples were analyzed for TCL+30 (without pesticides/PCBs). The results are as follows:

A total of one SVOC and three VOCs were detected in Parcel 69 groundwater.

- The SVOC bis(2-ethylhexyl) phthalate was detected at concentrations exceeding the NJDEP GWQC in two samples. The contamination was likely the result of the polyethylene sampling tube that is commonly used for sampling wells. Therefore, it is not considered to be a contaminant of concern in groundwater at Parcel 69.
- Of the three VOCs detected, one (PCE) was detected at a concentration that exceeds the NJDEP GWQC in one sample.

Based upon the resulting data, the SI recommended NFA for soil, but additional evaluation for groundwater. In accordance with N.J.A.C 7:26E-3.11 (NJDEP, 2009b), Parcel 69 will be addressed as part of this facility-wide BEE.

As part of the BEE, one surface water sample was collected from Oceanport Creek. This is discussed further in **Section 3.4.2.17**.

Parcel 69 is mostly buildings and pavement with small portions of mowed and maintained lawns. Though no significant habitats are present in the immediate vicinity of Parcel 69, stormwater discharges to Oceanport Creek.

The vegetation at Oceanport Creek near stormwater discharge from Parcel 69 is dominated by common reed.

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated coastal wetlands.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the emergent wetland area along Oceanport Creek is habitat Rank 4, which is assigned to patches with one or more occurrences of a state endangered species, in this case the Least Tern. Oceanport Creek and the adjacent wetlands are also listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

2.5.2 CHARLES WOOD AREA

2.5.2.1 LANDFILL, SITE CW-3A (FTMM-25)

The CW-3A site (3.1 acres) was identified as a suspected landfill area during the Preliminary Assessment (PA) phase study under the IRP as IRP Site FTMM-25. Interviews with long-term DPW employees suggested that a former landfill might be present at the site in question. The suspected landfill is located north of the Pulse Power facility (Building 2707), which is also located in the southwestern part of the CWA.

On September 25, 1997, several test pits were excavated at the CW-3A site (FTMM-25) to ascertain whether the site was previously utilized as a landfill. Upon excavating the test pits, waste materials, mostly in the form of construction debris, were observed within the test pits. The debris itself consisted of concrete, asphalt, brick, wood, glass, and assorted scrap metals. Coal ash was also observed within each of the test pits. To evaluate the potential impact the landfill may have had on site soils and groundwater, four shallow monitoring wells were installed on-site. During monitoring well construction, continuous split-spoon soil samples were collected in 4-foot increments. Based upon field observations and measurements, soil samples were collected at the following depth intervals bgs: 0 to 6 inches, 18 to 24 inches, and immediately above the water table. Samples collected at the 18- to 24-inch interval were collected solely for VOCs to include a gas chromatography/mass spectrometry (GC/MS) library search. Samples collected at the 0- to 6-inch interval were analyzed for TCL+30 minus the VOC parameters, TAL metals, and cyanide. Samples collected just above the water table were analyzed for TCL+30 parameters, TAL metals, and cyanide. The results are as follows:

- Benzo(a)anthracene, benzo(*a*)pyrene, and cadmium were detected at concentrations exceeding NJDEP Residential Direct Contact Soil Cleanup Criteria.

A coal ash sample was also collected on December 17, 1997, and was analyzed for TCL+30, TAL metals, and cyanide.

During the week of January 12, 1998, groundwater samples were collected from each of the four monitoring wells. A second round of groundwater samples was collected during the week of January 26, 1998. All groundwater samples were analyzed for TCL+30, TAL metals, and cyanide. The results are as follows:

- Benzene and lead were detected in three downgradient monitoring wells at concentrations exceeding the NJDEP GWQC.
- Arsenic, chromium, and lead were detected in one upgradient monitoring well at concentrations exceeding the NJDEP GWQC.

As of 2002, eight consecutive quarterly rounds of groundwater samples had been collected for chemical analysis. A second RI that evaluated the potential for the presence of environmental contaminants within the existing landfill cover material also was completed.

The IRP recommended NFA for the site (Versar, Inc., 2004h, 2005b). Subsequently, it was determined that the CW-3A Landfill (FTMM-25) required additional evaluation through the BEE process.

As part of the BEE, two surface water samples and six sediment samples were collected from Shrewsbury Creek in the area of Landfill CW-3A (FTMM-25), and one surface water and one sediment sample were collected from Shrewsbury Creek immediately upstream of Landfill CW-3A (FTMM-25). These are discussed further in **Section 3.4.3.1**.

Shrewsbury Creek borders Landfill CW-3A (FTMM-25) along its northern boundary. In this area, Shrewsbury Creek is narrow (less than 5 feet) and is non-tidal freshwater. The banks of Shrewsbury Creek are fairly steep and have not undergone stabilization. The southern portion of the site is generally flat with greater slopes to the north and east and groundwater underlying Landfill CW-3A (FTMM-25) flows toward Shrewsbury Creek.

As indicated on the FTMM utility maps in **Appendix K**, several storm water utility lines drain the area of Parcel 27 around Buildings 2707 and 2713 which discharges to Shrewsbury Creek at the western end of Landfill CW-3A (FTMM-25). The storm water and water lines that cross through the southern end of Landfill CW-3A (FTMM-25) may also act as contaminant migration pathways from Landfill CW-3A.

The southwestern portion of Landfill CW-3A (FTMM-25) is mowed and maintained lawn surrounded by trees including black locust, black walnut, red cedar, Virginia creeper, and Asiatic bittersweet; the largest portion of Landfill CW-3A, though, is heavily wooded. Along Shrewsbury Creek the vegetation includes wild grape, honeysuckle, wild rose, goldenrod, coastal sweet pepperbush (*Clethra alnifolia*), arrowwood, greenbrier, jewelweed, smartweed, Asiatic dayflower, and poison ivy. The upland areas are forested with a closed canopy and sparse vegetation on the forest floor; dominant species include beech, chestnut oak, sassafras, American holly, black oak, and red maple.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along Shrewsbury Creek.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.2.2 FORMER PESTICIDE STORAGE AREA, SITE CW-6 (FTMM-28)

Building 2044 was part of a small complex of buildings located in the southwest section of the CWA golf course. The complex also included Building 2070, a large metal shed, and two smaller metal igloos. Currently, Buildings 2070, 2071, and 2046 are located in the area as confirmed by the VSI. Building 2070 is used to store golf course maintenance and landscaping equipment, such as mowers and tractors. Building 2071 is used as the equipment repair facility. Building 2046 is used as a golf cart and equipment wash area (closed loop) and was also used for pesticide mixing until 2001. The golf course maintenance complex may predate the purchase of the golf course by the Army. Pesticides and herbicides may have been stored and mixed in this area prior to Army ownership of the property. The 1980 IA report (USATHAMA, 1980) contains a 1979 inventory of pesticides and herbicides that were used on the golf course and stored in Building 2044. Pesticides that were present in significant quantities include malathion, sevin, resmethrin, Borocel IV, chlordane, and Dibrom. The IA also discusses a pest control program that was in effect in 1979. The compounds that were used in large quantities include carbaryl (sevin), malathion, chlordane, and diazinon. Some of the herbicides identified in the IA include 2,4-dichlorophenoxyacetic acid, Dacthal, 2,4,5-trichlorophenoxyacetic, and sodium arsenite (USATHAMA, 1980).

The course groundskeeper, who had been part of the grounds crew for 33 years (1960 to 1993), was interviewed during the PA phase. The groundskeeper stated that pesticides and herbicides also were stored inside the two metal igloos and that former mixing activities generally took place directly outside the two igloos. Pesticides and herbicides are not currently stored or mixed on site. The facility has hired an outside contractor to apply pesticides and herbicides.

Under the IRP SI, soil borings were completed at two locations where pesticide mixing was documented to occur within the 0.6-acre site. Two soil samples were collected from each boring, one surface sample and the other sample from the interval just above the water table. In addition, each boring was converted to a monitoring well in order to evaluate groundwater quality. Both soil and groundwater samples were analyzed for TCL+30. The results are as follows:

- Dieldrin was identified in one soil sample at concentrations exceeding the NJDEP Residential Direct Contact Soil Cleanup Criteria.
- Benzene was detected in one groundwater sample at concentrations exceeding the NJDEP GWQC.

Two additional monitoring wells were installed during the IRP RI phase. As of 2002, 15 consecutive quarterly rounds of groundwater samples had been collected for subsequent analysis. The results are as follows:

- Heptachlor epoxide and arsenic were initially detected in two of the four site monitoring wells at concentrations exceeding the NJDEP GWQC. Alpha-chlordane, gamma-chlordane, and 4,4′-DDD also were detected in the two monitoring wells; however, these contaminants were identified at concentrations less than the NJDEP GWQC.

The IRP recommended NFA for the site (Versar, Inc., 2005c). Subsequently, Site CW-6 (FTMM-28) was considered to require additional evaluation through the BEE process.

As part of the BEE, four soil samples were collected from the forested area to the west of the building complex and four sediment samples were collected from the wetlands south-southwest of the building complex in the vicinity of Wampum Brook. These are discussed further in **Section 3.4.3.2**.

Though the building complex is primarily paved areas and buildings, the area immediately west is forested wetland with Wampum Brook to the south of the site. Groundwater underlying Site CW-6 (FTMM-28) flows toward Wampum Brook.

As indicated on the FTMM utility maps in **Appendix K**, storm water, gas, and water utility lines in the area of FTMM-28 may act as additional contaminant migration pathways from Landfill CW-3A away from the direction of Wampum Brook.

The forested areas are dominated by black gum with some red oak and sweet gum. Milkweed is present along the roads. Ferns are present on the forest floor and there are few forbs and grasses. Coastal sweetpepperbush and poison ivy present and skunk cabbage (*Symplocarpus foetidus*) is prevalent in the wetter areas to the southwest.

GIS digital data available through the NJDEP indicate that the area west and south of Site CW-6 is deciduous wooded wetlands.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 2, which is assigned to patches containing one or more occurrences of a species of special concern, in this case the Wood Thrush.

2.5.2.3 BUILDING 2700 (ECP PARCEL 15)

The Myer Center facility (Building 2700) is located in the CWA of FTMM at the intersection of Pearl Harbor Avenue and Corregidor Road. Parcel 15 encompasses an area of approximately 70 acres of which the Building 2700 footprint is 171,000 square feet. It was built in 1954 and has an extensive history of laboratory operations, photoprocessing, and paint spraying booths. Operations included electrochemical research, growing and shaping of crystals, various plating operations, mixing of magnetic powders, machining, welding, spray painting, use of solvents for equipment cleaning, and other miscellaneous laboratory operations utilizing standard laboratory chemicals. By 1959, additional operations included shock and vibration testing of certain components; glass blowing; a plastics laboratory that made plastic castings, laminates, and forms sprayed with polyester resins; and a ceramics laboratory. A satellite dispensary and dental clinic was present in 1972 that serviced 2,610 employees. During the 2006 VSI performed as part of the Phase I ECP, the Dental Clinic was no longer operational at Building 2700. According to FTMM personnel, no chemical wastes have been discharged to the sanitary sewer since the mid-1980s. Activities at Building 2700 have since been converted primarily to administrative functions. Current waste management practices prohibit the discharge of any materials, other than water and biodegradable soaps, into the sanitary sewer system.

In 2007, as part of the ECP SI (Shaw, 2008), sediment, soil, groundwater, soil gas, and indoor air samples were collected to assess environmental conditions on Parcel 15. Geophysical surveys were conducted to determine if USTs remained on site.

Seven sediment samples (including one duplicate sample) were collected from three sample borings located adjacent to three stormwater outfalls within Shrewsbury Creek. These sample locations were south of the walking bridge, near the southwest portion of Building 2525 on the western side of Shrewsbury Creek. Samples were collected to investigate any potential historical discharges from Building 2700 into Shrewsbury Creek. Shrewsbury Creek is a non-tidal water body in this portion of the facility located southeast of Building 2700 in the CWA.

At each sample location, two samples were collected: one from the 0- to 6-inch bgs interval and the other from the 18- to 24-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. Samples collected were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 12 SVOCs and 18 metals were detected in Parcel 15 sediment samples.

- Of the 12 SVOCs, 2 (acenaphthene and fluorene) were detected at concentrations that exceeded the freshwater sediment criteria in one sample.
- Of the 18 metals, 2 (chromium and copper) were detected at concentrations that exceeded the freshwater sediment criteria in three samples.

Fifty-three surface soil samples and 59 subsurface soil samples (including 6 duplicate samples) were collected from 53 distinct Geoprobe® borings in order to investigate any potential releases associated with former barracks located north of Building 2700. Surface soil samples for non-VOC analysis were collected from the 0- to 6-inch interval bgs. For borings located in paved areas, non-VOC surface soil samples were collected from the 0- to 6-inch interval directly below the pavement sub-base. Surface soil samples collected for VOC analysis were collected from the 18- to 24-inch bgs interval. Subsurface soil samples were collected from the 6-inch interval directly above the water table from each boring. Samples were analyzed for TPH and VOC+10. The results are as follows:

- TPH was detected in 7 of the 53 surface soil samples and in 2 of the 59 subsurface soil samples. None of the TPH results exceeded regulatory standards; therefore, VOCs were not analyzed.

Seven groundwater samples (including one duplicate sample) were collected from six distinct temporary wells that were installed. Temporary wells were installed along the downgradient boundary of the parcel (along Shrewsbury Creek). Groundwater samples were collected to investigate any potential release from possible former heating oil USTs associated with former barracks, as well as other potential discharges from historical activities at Building 2700. Samples were analyzed for TCL+30 (without pesticides or PCBs) and TAL metals. The results are as follows:

A total of 1 SVOC, 1 VOC, and 19 metals were detected in Parcel 15 groundwater samples.

- One SVOC, bis(2-ethylhexyl) phthalate, was detected at concentrations that exceeded the NJDEP GWQC. The contamination was most likely the result of the polyethylene sampling tube that is commonly used for sampling wells. Therefore, it is not considered to be a concern in groundwater at Parcel 15.
- One VOC, toluene, was detected at a concentration less than the NJDEP GWQC.
- Of the 19 metals detected, 6 (aluminum, arsenic, iron, lead, manganese, and sodium) were detected at concentrations exceeding the NJDEP GWQC.

A total of 15 soil gas and 15 indoor air samples were collected in and around Building 2700. A total of 32 VOCs were detected in Parcel 15 soil gas samples and a total of 22 VOCs were detected in Parcel 15 indoor air samples. The results are as follows:

- Of the 32 VOCs detected, 4 (benzene, PCE, TCE, and vinyl chloride) were detected at concentrations that exceeded the NJDEP generic vapor intrusion non-residential soil gas screening levels in 14 soil gas samples.
- Twenty-two VOCs were detected at concentrations less than the NJDEP generic vapor intrusion non-residential indoor air screening levels in indoor air samples.

As part of the geophysical survey, an electromagnetic induction (EMI) survey was conducted throughout the area of the parcel where former barracks were identified to determine if USTs are present. Follow-up ground-penetrating radar surveys were conducted where anomalies were identified during the EMI surveys. No suspected USTs were identified as a result of the geophysical survey.

Based upon the resulting data, the SI recommended that NFA be taken for soil and groundwater within Parcel 15 and surface water and sediment be further evaluated within a BEE.

As part of the BEE, two surface water samples were collected from Shrewsbury Creek in the vicinity of the stormwater outfalls. These are discussed further in **Section 3.4.3.3**.

Shrewsbury Creek is east of Building 2700. In this area, Shrewsbury Creek is narrow and is non-tidal freshwater. Both banks of Shrewsbury Creek are steep and have not undergone stabilization. Though the banks are heavily vegetated, the surrounding area is predominantly pavement and buildings.

As indicated on the FTMM utility maps in **Appendix K**, several storm water lines drain the area of Parcel 15 around Building 2700, as well as the area of Parcel 27 around Building 2525, which discharges to Shrewsbury Creek. Numerous storm water, gas, and water utility lines in the area of Parcel 15 may act

as additional contaminant migration pathways from Parcel 15 with direction dependent on the utility gradients.

Vegetation along the banks of Shrewsbury Creek is thick and includes common reed, black walnut, pin oak, wild grape, wild morning glory, pokeweed, Asiatic bittersweet, poison ivy, wild rose, sweet gum, milkweed, goldenrod, Virginia creeper, red cedar, Norway maple, white mulberry, black cherry, sassafras, and winged sumac.

GIS digital data available through the NJDEP indicate the presence of deciduous scrub/shrub wetlands along the narrow corridor of Shrewsbury Creek.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.2.4 BUILDINGS 2507 AND 2704 (ECP PARCEL 27)

Parcel 27 is located in the southwest portion of CWA and includes the Environmental Test Facility (Building 2704), former Pulse Power Center (Building 2707), Sheet Metal Shop (Building 2502), Machine Shop (2503), Paint and Fabrication Facility (2506), and a Former Motor Pool (2501). Parcel 27 encompasses an area of approximately 30 acres.

Building 2704 has been used as an environmental test chamber since 1965. Chemical use in this building is limited to hydraulic fluid and standard shop chemicals (i.e., petroleum-based solvents, oils, and greases). While current waste handling practices are modern, historical waste handling practices are unknown. The building has multiple floor drains which, according to engineering drawings, are connected to the storm sewer.

Building 2507 is the Tactical Vehicle Repair Shop where petroleum and solvent use would be common during vehicle maintenance operations.

In 2007, as part of the ECP SI (Shaw, 2008), sediment and surface soil were collected to assess environmental conditions on Parcel 27. Geophysical surveys were conducted to determine if a former debris burial area remained on site.

Four sediment samples were collected from two sample borings located within Shrewsbury Creek. One sample was located adjacent to a stormwater outfall and the other was located downstream. At each sample location, two samples were collected; one from the 0- to 6-inch interval bgs, and the other from the 12- to 18-inch interval bgs. No visual or olfactory evidence of sediment contamination was noted. All samples were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 8 SVOCs and 20 metals were detected in Parcel 27 sediment samples.

- Of the eight SVOCs, none were detected that exceeded the freshwater sediment criteria.
- Of the 20 metals, 8 (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc) were detected at concentrations that exceeded the freshwater sediment criteria in all four samples.

Two surface soil samples were collected from two sample borings located in the wooded area to the northeast of Building 2507. At each location, the sample was collected from the 0- to 6-inch bgs interval, and a sample for VOC analysis was collected from the 18- to 24-inch bgs interval. No visual or olfactory evidence of soil contamination was noted. All samples collected were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

- A total of 8 SVOCs and 18 metals were detected in Parcel 27 surface soil samples below the Non-Residential Direct Contact Soil Cleanup Criteria.

An EMI survey was conducted over the area identified as a possible debris burial area.

- No anomalies indicative of debris burial areas were identified.

Based upon the resulting data, the SI recommended that NFA be taken for soil within Parcel 27 and surface water and sediment be further evaluated within a BEE.

As part of the BEE, two surface water samples were collected from Shrewsbury Creek in the vicinity of the stormwater outfalls. These are discussed further in **Section 3.4.3.4**.

Shrewsbury Creek is north of Building 2704. In this area, Shrewsbury Creek is narrow and is non-tidal freshwater.

Along Shrewsbury Creek the vegetation includes wild grape, honeysuckle, wild rose, goldenrod, coastal sweet pepperbush, arrowwood, greenbrier, jewelweed, smartweed, Asiatic dayflower, and poison ivy.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along Shrewsbury Creek.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

2.5.2.5 BUILDING 2525 (PARCEL 28)

Parcel 28, with an area of approximately 30 acres, is located in the CWA and encompasses Building 2525 – the former Eatontown Laboratory complex. Building 2525 was constructed between 1941 and 1942. The Eatontown Signal Laboratory was renamed Watson Laboratories in 1945 and subsequently moved to Rome, New York, in 1951.

Three separate septic tanks and leach fields and one underground transformer vault are within the Building 2525 area. The main sanitary sewer line from the building is shown to discharge to a septic tank and leach field east of the building. A review of the DPW map and engineering drawings repository indicated a 2-inch “acid proof drain” leading from Bay 1 to a dry well southeast of the building. Floor drains were shown to discharge to the brook northwest of the building. Building revitalization plans show all floor drains were later connected to the sanitary sewer system. Building 2525 was included in the Watson Laboratory complex in the mid-1940s. Crystal growing and processing operations were conducted in the Watson Laboratory building located in the southwest portion of the CWA in the early 1950s. Operations included cleaning of crystals, quartz etching, soldering, and gold (and other metal) plating, which was conducted in Building 2532. These operations involved chemicals such as carbon tetrachloride, ammonium bifluoride, cadmium sulfate, and sulfuric acid. Crystal etching using ammonium bifluoride was also noted in Building 2538. Other processes associated with the Watson Laboratories included machining of metals and remelting lead in Building 2533, growing of crystals and physical chemistry in Building 2534, and machining of crystals in Building 2538.

Following the 1951 Watson Laboratories move, the Aviation Research and Development Command Laboratory was moved from the Myer Center to Building 2525. This laboratory operation occupied the building until 1978. A 1978 industrial hygiene survey reported ozalid reproduction in Room 5101 of Building 2525. Building revitalization plans show all floor drains connected to the sanitary sewer system. No sumps or floor drains were noted during the 2006 VSI. The use of the building has been strictly administrative since the late 1990s, as confirmed during the VSI.

Parcel 28 also contains the CECOM laboratory and radiological testing facility housed in Building 2540. This building contains a gamma irradiator, Radiac calibrators, a storage room for low-level RAM with multiple radioactive sources from the demilitarization of commodities, a nuclear counting laboratory, and several health physics laboratories. A survey of the interior of Building 2540 will be performed as part of the radiological scoping surveys.

According to the 1993 Environmental Research, Inc., Aerial Photographic Site Analysis, there are a fenced open storage area and possible tank pads in the northern portion of Parcel 28, to the northeast of Building 2525.

In 2007, as part of the ECP SI (Shaw, 2008), sediment, soil, and groundwater samples were collected to assess environmental conditions on Parcel 28. Geophysical surveys were conducted to

determine the absence or presence of formerly utilized septic tanks, associated leaching fields, and USTs.

A total of four sediment samples were collected from two sample borings located along the southeast bank of Shrewsbury Creek adjacent to Building 2525. Samples were located directly downgradient of potential former discharge pipes observed on the southeast bank of the creek. Samples were collected to investigate any potential historical discharges from former floor drains to outfalls that were associated with Building 2525 into Shrewsbury Creek. Shrewsbury Creek is a non-tidal water body in this portion of the facility located southeast of Building 2700 in the CWA. At each sample location, two samples were collected: one from the 0- to 6-inch bgs interval and the other from the 12- to 18-inch bgs interval. No visual or olfactory evidence of impacted sediment was noted. All samples were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 5 SVOCs, 1 VOC, and 17 metals were detected in Parcel 28 sediment samples.

- All SVOCs and the one VOC (acetone) were detected at concentrations less than the freshwater sediment criteria.
- Of the 17 metals, 1 (chromium) was detected at a concentration that exceeded the freshwater sediment criteria in all for samples.

A total of three surface soil samples and three subsurface soil samples were collected from three distinct Geoprobe® borings in order to investigate potential septic system discharges and former storage pads that were identified through aerial analysis. An additional two surface soil samples were collected from hand-augered borings. Surface soil samples for non-VOC analysis were collected from the 0- to 6-inch bgs interval. Surface soil samples collected for VOC analysis were collected from the 18- to 24-inch bgs interval. Subsurface soil samples were collected from the 6-inch interval directly above the water table from each boring. No visual or olfactory evidence of soil contamination was noted during field operations. Samples were analyzed for TCL+30 (without pesticides) and TAL metals. The results are as follows:

A total of 12 SVOCs, 1 VOC, and 17 metals were detected in Parcel 28 surface and subsurface soil samples. The results are as follows:

- The 12 SVOCs and 1 VOC (acetone) were detected at concentrations less than the Non-Residential Direct Contact Soil Cleanup Criteria.
- Of the 17 metals, 1 (arsenic) was detected at a concentration in excess of the Non-Residential Direct Contact Soil Cleanup Criteria in one sample.

Four test pits located in an open field east of Building 2525 and Heliport Drive, and one test pit northeast of Building 2525, were excavated to determine if any contamination exists from former septic tank and leach fields that once serviced Building 2525. Soil sample depths were contingent upon field observations (e.g., depth to water table, thickness of layered engineered gravel) and field screening results. A total of eight subsurface soil samples (including two duplicate samples) were collected from the five test pits. No visual or olfactory evidence of impacted soil was noted. All samples were analyzed for TCL+30 (minus pesticides) and TAL metals. The results are as follows:

- A total of 12 SVOCs, 1 VOC, and 17 metals were detected in concentrations less than the Non-Residential Direct Contact Soil Cleanup Criteria in soil samples collected from test pits.

A total of five groundwater samples (including one duplicate sample) were collected from four distinct temporary wells that were installed with the Geoprobe® rig. Three temporary wells were installed downgradient of former drainage fields, and one temporary well was installed downgradient of a former storage pad area located in an open field west of Building 2290 and Guam Lane. Samples were analyzed for TCL+30 (without pesticides/PCBs), TAL metals, ammonia, nitrate, and nitrite.

A total of 1 SVOC, 3 VOCs, and 13 metals were detected in Parcel 28 groundwater samples. The results are as follows:

- One SVOC, bis(2-ethylhexyl) phthalate, was detected at concentrations less than the NJDEP GWQC.

- Three VOCs (acetone, chloroform, and toluene), were detected at concentrations less than the NJDEP GWQC in Parcel 28 groundwater samples.
- Two metals (aluminum and manganese) were detected at concentrations exceeding the NJDEP GWQC.
- Nitrite and nitrate were detected at concentrations less than the GWQC.

The geophysical survey was conducted to investigate the location of former septic tanks, USTs, and drywells. The results are as follows:

- No drywell was identified within Parcel 28; however, one possible UST (P28-8), one suspected septic holding tank, and one suspected septic distribution box and associated piping were identified.

Based upon the resulting data, the SI recommended that NFA be taken for soil within Parcel 28 and surface water and sediment be further evaluated within a BEE.

As part of the BEE, four surface water samples were collected from Shrewsbury Creek in the vicinity of the stormwater outfalls. These are discussed further in **Section 3.4.3.5**.

Shrewsbury Creek is north of Building 2525. In this area, Shrewsbury Creek is narrow and is non-tidal freshwater. Both banks of Shrewsbury Creek are steep and have not undergone stabilization. Though the banks are heavily vegetated, the surrounding area is predominantly pavement and buildings.

As indicated on the FTMM utility maps in **Appendix K**, several storm water lines drain the area of Parcel 28 around Building 2525, as well as the area of Parcel 15 around Building 2700, which discharges to Shrewsbury Creek. Numerous storm water, gas, and water utility lines in the area of Parcel 28 may act as additional contaminant migration pathways from Parcel 28 with direction dependent on the utility gradients.

Vegetation along the banks of Shrewsbury Creek is thick and includes common reed, black walnut, pin oak, wild grape, wild morning glory, pokeweed, Asiatic bittersweet, poison ivy, wild rose, sweet gum, milkweed, goldenrod, Virginia creeper, red cedar, Norway maple, white mulberry, black cherry, sassafras, and winged sumac.

GIS digital data available through the NJDEP indicate the presence of deciduous scrub/shrub wetlands along the narrow corridor of Shrewsbury Creek.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

Table 2-2
Ambient Levels of Selected Metals and Other Analytes in Soil

Parameter	N	Detects	MDL (mg/kg)	Mean (mg/kg)	Median (mg/kg)	Minimum (mg/kg)	Maximum (mg/kg)	90th Percentile (mg/kg)	95th Percentile (mg/kg)	Geometric Mean (mg/kg)
Metals										
Aluminum	95	95	20	6734	6800	424	23100	10800	12300	5425
Antimony	95	0	6	NA	NA	NA	NA	NA	NA	NA
Arsenic	95	86	1	7.9	5.2	0.50	83.1	13.6	15.7	4.7
Barium	95	62	20	36.0	28.3	10.0	154	65.8	83.7	27.3
Beryllium	95	15	0.5	0.36	0.29	0.25	1.80	0.68	0.76	0.33
Cadmium	95	5	0.5	0.36	0.29	0.25	2.70	0.32	0.85	0.32
Calcium	95	61	500	1312	995	250	21600	2000	3810	797
Chromium	95	95	1	18.7	11.8	1.1	171	34.7	39.8	12.9
Cobalt	95	7	5	3.5	2.9	2.5	32.0	3.2	6.7	3.1
Copper	95	86	2.5	15.0	9.3	1.3	93.0	33.3	41.3	9.7
Iron	95	95	10	11909	8830	735	68900	21100	35700	8448
Lead	95	86	10	59.7	37.6	5	344	144	179	37.5
Magnesium	95	56	500	1056	673	250	13800	1870	2660	664
Manganese	94	94	1.5	111	62.4	2.6	1030	206	423	60.1
Mercury	95	40	0.1	0.18	0.06	0.05	6.10	0.21	0.33	0.09
Nickel	94	42	4	5.2	2.4	2.0	16.9	12.3	13.9	4.1
Potassium	94	45	500	1022	310	250	22300	1750	2090	568
Selenium	94	0	1	NA	NA	NA	NA	NA	NA	NA
Silver	94	3	1	0.68	0.6	0.50	6.30	0.65	0.65	0.61
Sodium	94	0	500	NA	NA	NA	NA	NA	NA	NA
Thallium	94	2	1	0.67	0.6	0.50	1.70	1.15	1.25	0.64
Vanadium	94	89	5	21.1	16	2.5	202	35.5	46.3	15.8
Zinc	94	91	2	53.4	39.9	1.0	259	106	157	36.4
PAHs										
Benzo(a)anthracene	94	54	0.029	0.14	0.04	0.01	1.82	0.43	0.57	0.04
Benzo(a)pyrene	94	48	0.037	0.14	0.02	0.01	1.8	0.42	0.67	0.04
Benzo(b)fluoranthene	94	49	0.04	0.35	0.19	0.05	4.09	0.66	1.24	0.23
Benzo(b+k)fluoranthene	95	47	0.08	0.35	0.19	0.05	4.1	0.66	1.2	0.23
Dibenzo(a,h)anthracene	94	9	0.037	0.03	0.01	0.01	0.29	0.02	0.13	0.01
Indeno(1,2,3-c,d)pyrene	94	33	0.018	0.07	0.01	0.01	0.57	0.23	0.37	0.02
Chrysene	94	53	0.022	0.15	0.05	0.01	1.78	0.47	0.7	0.05

Notes:
Source - BEM Systems, Inc., 1998
N = Number of samples
MDL = Method detection limit

Table 2-7
Charles Wood Area
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Site Name	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
1	2600, 3001 - 3052, 3216	Pine Brook residential housing area, General Storage Warehouse	63.14	No	This is the Pine Brook residential housing area in the southeast portion of Charles Wood Area (CWA) and includes one general storage warehouse (2600). No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. Tank AST-2070-a (500-gallon capacity for gasoline) and tank AST-2070-b (500-gallon capacity for diesel fuel) are in use; secondary containment is in place; and no evidence of a release was identified. Former residential fuel oil storage tanks have been either removed or closed in place and no contamination was identified during closure. No evidence of release or contamination has been detected; a Baseline Ecological Evaluation (BEE) is not required.
2	IRP Site FTMM-63 (Bldg 2603)	Sewage Lift Station	0.19	No	This parcel is a sewage lift station at which a 275-gallon underground storage tank (UST) and 225 cubic yards of potentially contaminated soil were removed in 1998. No contaminants remain at the site in soil or groundwater at concentrations above New Jersey Department of Environmental Protection (NJDEP) cleanup criteria. Tank AST-2603 (500-gallon capacity for diesel) and an emergency generator are present for the lift station; secondary containment is in place; and no evidence of a release was identified. Though Wampum Brook runs past Parcel 2, potentially contaminated soil was removed and no contamination remains in soil or groundwater. No migration pathway exists to environmentally sensitive areas. A BEE is not required. BEEs and sampling being conducted related to CW-6 also addresses Parcel 2 and Wampum Brook.
3	3050	Former UST	0.05	No	This is the location of a former residential UST for #2 fuel oil (UST-3050-30). The UST and 23 cubic yards of potentially contaminated soil have been removed. A Closure Report was submitted to NJDEP on 06/01/00, and a No Further Action (NFA) approval letter was received from the NJDEP on 8/29/00. Contaminated soils have been removed and no migration pathway exists to environmentally sensitive areas, so a BEE is not required.
4	3027	Former UST	0.05	No	This is the location of a former residential UST for #2 fuel oil (UST-3027-28). The UST and 8.7 cubic yards of petroleum-contaminated soil have been removed. A closure report was submitted to the NJDEP requesting an NFA determination on 10/17/2001; however, no regulatory concurrence is required for former residential USTs. Contaminated soils have been removed and no migration pathway exists to environmentally sensitive areas, so a BEE is not required.
5	3021	Former UST	0.08	No	Former Residential UST-3021-27 (#2 fuel oil) and 113 tons of contaminated soil were removed from this parcel. No contamination above NJDEP criteria remains in groundwater. A Closure Report was submitted to the NJDEP, and an NFA approval letter was received from the NJDEP on 10/17/00. Though Wampum Brook runs past Parcel 5, potentially contaminated soil was removed and no contamination remains in soil or groundwater; a BEE is not required. No migration pathway exists to environmentally sensitive areas. BEEs and sampling being conducted related to CW-6 also addresses Parcel 5 and Wampum Brook.
6	FTMM-31 (CW-9)	Former Sludge Disposal	1.60	No	This parcel was investigated under the Fort Monmouth Installation Restoration Program (IRP). Sludge generated from Fort Monmouth sewage treatment plants was historically stored in this area before being used as a soil conditioner and fertilizer on the golf course. This parcel is located on the CWA Golf Course southeast of Building 2070. No contaminants were identified above NJDEP Direct Contact Soil Cleanup Criteria or groundwater quality standards during the Site Investigation. An NFA determination was approved by the NJDEP in 1996. Since no contaminants are present, a BEE is not required.
7	IRP Site FTMM-28 (CW-6)	Former Pesticide Storage Building 2044 UST-2044-24 UST-2044-32 UST-2044-33	0.67	Yes	This parcel was investigated under the Fort Monmouth IRP. Use of pesticides and herbicides prior to and as part of Army ownership have occurred in this parcel. The pesticide dieldrin was detected in one soil sample slightly above NJDEP Direct Contact Soil Cleanup Criteria; pesticides - heptachlor epoxide and chlordane as well as arsenic were historically detected above criteria in groundwater but have been at concentrations below criteria in recent rounds of sampling. A Remedial Investigation (RI) report requesting an NFA determination from the NJDEP was submitted in May 2005. Three former USTs and potentially contaminated soil were removed in 1993. Fuel-related contaminants were initially detected in groundwater above NJDEP criteria and a long term monitoring program was initiated. No fuel-related contaminants were detected subsequent to 1997, and an NFA approval letter for all three former USTs was received from the NJDEP on 1/10/2003. A BEE is recommended to address potential contamination related to CW-6 in soils and sediment/soils in adjacent deciduous wooded wetlands as well as Wampum Brook.
8	2043	UST-2043-36	0.05	No	This is the location of a former UST for diesel fuel (UST-2043-36). The UST and potentially contaminated soil have been removed. No contaminants were detected in groundwater above the NJDEP groundwater criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 10/23/2000. Contaminated soils have been removed and no migration pathway exists to environmentally sensitive areas, so a BEE is not required.

Table 2-7
Charles Wood Area
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Site Name	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
9	2068 Golf Course Pesticide Mixing Area Outdoor Pool & Chlorination facilities Residential housing	Golf Course Pesticide Mixing Area Outdoor Pool & Chlorination facilities Residential housing	161.27	No	This parcel is inclusive of the CWA Golf Course (including clubhouse, maintenance facilities, and current pesticide mixing facilities), residential housing along Megill Drive (Buildings 2022 - 2042), and the outdoor pool and associated chlorination facilities. The current pesticide mixing facilities are state-of-the-art and include secondary containment. No storage of pesticides occurs on Fort Monmouth property. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. Tanks AST-2021, AST-2043, and AST-2044 are in use; secondary containment is in place; and no evidence of a release was identified. Twenty-one (21) former residential fuel oil USTs have been removed, no contamination was identified during closure, and no regulatory concurrence is required. Four non-residential USTs have been removed; no contamination was identified during closure; and NFA approval letters were received from the NJDEP in 2000. No contamination or releases have been identified; a BEE is not required.
10	2000	Former UST	0.04	No	Former Residential UST-2000-38 (#2 fuel oil). Petroleum-related contaminants were detected in post-excavation soil samples at concentrations below the NJDEP cleanup criteria. A Closure Report was submitted to the NJDEP, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soils were removed and no migration pathways are present to environmentally sensitive areas; a BEE is not required.
11	2067	UST-2067-37	0.08	No	This is the location of a former UST for #2 fuel oil (UST-2067-37). The UST and 90 cubic yards of potentially contaminated soil have been removed. A closure report was submitted to the NJDEP requesting an NFA determination in 2002, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soils were removed and no migration pathways are present to environmentally sensitive areas; a BEE is not required.
12	FTMM-29 (CW-7)	Former Polychlorinated Biphenyl (PCB) Transformer Location	0.10	No	This parcel was investigated under the Fort Monmouth IRP. A PCB transformer, formerly located in front of the Officers Club in Building 2000, was removed from service in 1990 and disposed off site; PCB contamination in the soil was removed in 1998. An RI report requesting an NFA determination from the NJDEP was submitted in September 2004. Subsequent to NJDEP's response to the NFA request, additional surface water, sediment, and soil samples were collected and concentrations were below criteria. An additional request for an NFA determination will be submitted to NJDEP. Though Parkers Creek is within 300 feet of Parcel 12, PCB contaminated soil has been removed and migration pathways to Parkers Creek are not present; a BEE is not required.
13	Former Residential Bldgs 2004 - 2016	Potential USTs associated with former residential housing	6.42	No	A 1956 fuel distribution plan displays fuel oil USTs associated with former residential dwellings in this area. Due to the age of these USTs, there is no documentation regarding whether they have been removed. This area is currently paved. No contamination has been detected and no suspected USTs were identified during a geophysical survey conducted as part of the 2008 Site Investigation; a BEE is not required.
14	NW Area of CWA	Former Residential Housing in NW Area of CWA Former #2 Fuel oil UST Former wash rack, vehicle storage area	77.47	No	Former residential area in northwest portion of CWA. Based on the timeframe in which these early structures existed (buildings were demolished prior to 1960), it is likely that USTs were utilized for fuel storage. No documentation exists confirming whether USTs have been removed. One suspected UST was identified during a geophysical survey conducted as part of the 2008 Site Investigation and is currently being addressed. This parcel also includes a former UST for #2 fuel oil (UST-2275-12) at which a release was noted during removal activities. The UST and contaminated soils have been removed. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 8/29/2000. This parcel includes the area identified in a 1947 aerial photograph as a vehicle wash rack and vehicle storage area. Contaminated soil has been removed, evidence of a release to groundwater has not been detected, and there are no migration pathways to environmentally sensitive areas; a BEE is not required. BEEs and sampling being conducted related to Parcel 15 and Parcel 28 also address Parcel 14 and Shrewsbury Creek.

Table 2-7
Charles Wood Area
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Site Name	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
15	2700 (Myer Center) 2705 FTMM-23 (CW-2)	Industrial and Laboratory Activities	37.99	Yes	This parcel encompasses current and former laboratory and industrial processes within Building 2700 and the surrounding area. Building 2705 is a former photo processing facility and night vision laboratory. Chemical and hazardous susbstance use has been extensively documented in association with the historic and current research and industrial activities in this parcel. Due to groundwater volatile organic compound contamination identified in adjacent parcel 16, vapor intrusion is a potential recognized environmental condition in this area. The former wastewater treatment lime pit located northwest of Building 2700 was investigated under the Fort Monmouth IRP as Site FTMM-23 (CW-2). The lime pit was demolished and disposed of in 2002. An NFA determination has been requested from the NJDEP. No response has been received from the NJDEP. Tank AST-2700A (500-gallon capacity for diesel fuel) and tank AST-2700B (500-gallon capacity for diesel fuel) are in use; secondary containmen is in place; and no evidence of a release was identified. A 1999 freon release due to a ruptured disc on equipment in Building 2706 is listed in the New Jersey Hazardous Material Incident Database. Acenaphthene, fluorene, chromium, and copper were identified as constituents of concern in sediment during the 2008 Site Investigation. A BEE is recommended for Parcel 15 to address potential discharges through stormwater outfalls into Shrewsbury Creek.
16	FTMM-22 (CW-1)	Former Wastewater Treatment Lime Pit	0.62	No	The former wastewater treatment lime pit located in the courtyard of Building 2700 and is being addressed under the Fort Monmouth IRP as Site FTMM-22 (CW-1). Volatile organic compounds are present in groundwater at concentrations above NJDEP Groundwater Quality Criteria. At present, the contaminant plume has not encroached upon Building 2700. However, the downgradient migration pathway is in the direction of the referenced building and vapor intrusion is a potential recognized environmental condition. A contaminant treatment system (soil vapor extraction and air sparging) was in place until 2005. Treatment of the groundwater through enhanced bioremediation (Hydrogen Release Compound [HRC] injection) will commence in FY 07 with the goal of achieving groundwater compliance by FY10. No migration of contaminants towards Parker Creek is occurring and a BEE is not recommended.
17	UST-2700-36 UST-2700-37 UST-2700-38 UST-2700-39	Former #6 Fuel oil USTs	0.16	No	Five former #6 fuel oil tanks (UST-2700-35, UST-2700-36, UST-2700-37, UST-2700-38, and UST-2700-39) and a total of 500 cubic yards of potentially contaminated soil were removed in 1998. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 10/23/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
18	UST-2700-61	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST and potentially contaminated soil were removed in 1994. Petroleum-related contaminants were detected in confirmatory soil samples at concentrations below the NJDEP cleanup criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 2002, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required. BEEs and sampling being conducted related to Parcel 15 and Parcel 28 also address Parcel 18 and Shrewsbury Creek.
19	UST-2337-65	Former #2 Fuel oil UST	0.17	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1994. Petroleum-related contaminants were detected in confirmatory soil samples at concentrations below the NJDEP cleanup criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 2002, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required. BEEs and sampling being conducted related to Parcel 15 and Parcel 28 also address Parcel 19 and Shrewsbury Creek.
20	along SW portion Parkers Creek	SW portion Parkers Creek	8.30	No	This is the undisturbed, wooded area surrounding Parkers Creek in the southwest portion of the CWA. No release or disposal of hazardous substances or petroleum products has occurred; a BEE is not required.
21	FTMM-25 (CW-3A)	Suspected former landfill	2.08	Yes	The suspected former landfill located in the southwestern portion of the CWA north of Building 2707 is being addressed under the Fort Monmouth IRP as Site FTMM-25 (CW-3A). Construction debris and coal ash were identified during the excavation of exploratory test pits. No contaminants of concern were identified in soil or groundwater at this site during RIs conducted under the IRP, and an NFA determination was submitted for NJDEP approval. A BEE is recommended since a potential migration pathway may exist for contaminants to enter Shrewsbury Creek.
22	UST-2707-40	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1998. A closure report was submitted to the NJDEP requesting an NFA determination in 1999, and an NFA approval letter was received from the NJDEP on 2/24/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
23	UST-2500-53 UST-2500-54 UST-2500-55	Former Gasoline USTs	0.05	No	Five former gasoline USTs and petroleum-contaminated soil were removed in 1993. A closure report was submitted to the NJDEP requesting an NFA determination in 1996, and an NFA approval letter was received from the NJDEP on 4/20/2001. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.

Table 2-7
Charles Wood Area
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Site Name	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
24	UST-2502-13	Former #2 Fuel oil UST	0.03	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1996. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 8/29/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
25	UST-2503-14	Former #2 Fuel oil UST	0.03	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1996. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 7/10/1998. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
26	UST-2504-15	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1995. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 10/23/00. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
27	2501 2503 2506 2507 2624 2625 2630 2632 2704 2707 2708 2709 2710 2713 Former Watson Laboratories	Southwest portion of CWA that includes the former Pulse Power Center, Machine Shop, Paint and Fabrication facility, Former Motor Pool, and portions of the former Watson laboratories	29.83	Yes	This parcel in the southwestern portion of CWA includes numerous current and former industrial and research operations. This area formerly housed the Pulse Power Center (2707, 2708, 2709, 2710, 2713), a paint shop (2506), a machine shop (2503), motor pool (2501), hazardous waste storage locations, and portions of the former Watson laboratories. 2501 - Former motor pool. 2503 - This facility is a machine shop and formerly contained a parts cleaner that utilized solvents. 2506 - Former paint and fabrication shop that utilized solvents and petroleum products. 2507 - Tactical Vehicle Repair Shop where petroleum and solvent use would be common during vehicle maintenance operations. 2624 - Former Hazardous Waste Storage Facility; 1980 U.S. Army Toxic and Hazardous Materials Agency reported that this facility was used for storage of bulk research chemicals. 2704 - Environmental testing of electronic equipment. Floor drains shown as connected to storm sewer. Former Watson Laboratories - this former complex of laboratories included Buildings 2532, 2533, 2534, and 2538. Operations at these former facilities occurred in the early to mid-1950s. The buildings have been demolished. Four aboveground storage tanks currently in use. Twelve (12) USTs removed from 1993 to 2002. No releases noted. NJDEP Closure Approval Letters received for seven closures. Awaiting NJDEP response for five tanks closed in 2002. Metals were identified as constituents of concern in sediment during the 2008 Site Investigation. A BEE is recommended to address potential discharges from floor drains and storm sewers from Buildings 2507 and 2704 into Shrewsbury Creek.
28	2525 2535 2539 2540 Former Motor Pool NW of 2566	Former Eatontown Laboratory, Battery Test Facility, Safety calibration laboratory office, Former Motor Pool	37.78	Yes	This parcel encompasses Buildings 2525, 2535, 2539, 2540, and all land within this area. Numerous demolished buildings located to the east and southeast of 2525. Industrial operations include the battery test facility (2535), former Eatontown laboratory (2525), and the Safety office calibration laboratory. Outdoor storage and ground staining were identified in the area of the former motor pool in aerial photographs from 1947, 1957, 1963, 1974, and 1991. Ten (10) former fuel oil USTs have been removed; no contamination was identified during closure; and NFA approval letters were received from the NJDEP. Chromium was identified as a constituent of concern in sediment during the 2008 Site Investigation. A BEE is recommended to address potential historic discharges from former floor drains to outfalls that were associated with Building 2525 into Shrewsbury Creek.
29	UST-2561-31	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1995. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 7/10/98. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
30	UST-2562-41	Former gasoline UST	0.05	No	A former gasoline UST and potentially contaminated soil were removed in 1993. All confirmatory soil analytical results were below NJDEP criteria. Methyl-tertiary-butyl ether (MTBE) and lead were previously detected in groundwater above NJDEP criteria, but have been below the standards since November 1998. A closure report requesting NFA was submitted to the NJDEP on 01/02/02. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
31	UST-2537-27	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST and 15 cubic yards of petroleum-contaminated soil were removed in 1997. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 8/29/00. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
32	Former Indoor Small Arms Range (Bldg T-2537) FTMM-26 (CW-4)	Former Indoor Small Arms Range (Bldg T-2537)	0.33	No	The former indoor small arms firing range located west of Building 2566 was investigated under the Fort Monmouth IRP as Site FTMM-26 (CW-4). Lead identified in soil above NJDEP Direct Contact Soil Cleanup Criteria, spent rounds, and casings were removed in 1997. An RI report requesting an NFA determination from the NJDEP was submitted in October 2005. An NFA was issued on April 26, 2007. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas. A BEE is not required.

Table 2-7
Charles Wood Area
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Site Name	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
33	UST-2534-24	Former #2 Fuel oil UST	0.05	No	A former #2 fuel oil UST was removed in 1994. Petroleum-related contaminants were detected in post-excavation soil samples at concentrations below the NJDEP cleanup criteria. A Closure Report was submitted to the NJDEP, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
34	2567 FTMM-58	Army & Air Force Exchange Service (AAFES) Gasoline Station (FTMM-58)	1.26	No	This parcel is being addressed under the Fort Monmouth IRP as Site FTMM-58 (Building 2567). Site FTMM-58 is an active gasoline service station operated by the AAFES organization. Three modern gasoline USTs are in use at Building 2567. The station is located at the corner of Hope Road and Laboratory Road. Five single-walled steel USTs and 1,000 cubic yards of petroleum-contaminated soil were removed as part of a renovation project that was initiated in 1991. Gasoline-related contaminants were detected in groundwater above NJDEP groundwater quality criteria. Due to groundwater contamination from volatile organic compounds, vapor intrusion is a recognized environmental condition in this area. A Classification Exception Area was filed with the NJDEP; and in situ bioremediation (Oxygen Release Compound [ORC] injection) and monitored natural attenuation, including groundwater monitoring, were selected as the remedial approach. Groundwater contamination is restricted to the immediate vicinity of Building 2567 and no evidence of migration to environmentally sensitive areas has been detected; a BEE is not required.
35	Child Development Center (2290) Residential Housing (2231-2240, 2260) FTMM-27 Former sewage treatment plant	2290, 2231 - 2240, 2260	58.88	No	This parcel includes the Child Development Center (2290), existing residential housing (2231 - 2240, 2260), the former sewage treatment plant, and the wooded portion of CWA south of 2566. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. The former Charles Wood Sanitary Treatment Plant (STP) is addressed under the Fort Monmouth IRP as Site FTMM-27 (CW-5). The former STP was located in the center of the CWA, bounded by Hope Road to the east, Corregidor Road to the north, Guam Lane to the west, and Laboratory Road to the south. The STP was closed on October 29, 1975, and demolished in 1983. No compounds of concern were detected above NJDEP criteria, and an NFA determination was approved by the NJDEP in 1994. Eleven former residential fuel oil USTs have been removed; no contamination was identified during closure; and no regulatory concurrence is required. Since no contamination is present, a BEE is not required.

Table 2-8
Main Post, Fort Monmouth, New Jersey
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
36	1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1230 1231 1152 170 200 FTMM-09, 47	Current use is administrative and government tenant activities, electrical substation (1231), Military Academy Prep School (1204, 1230), former Signal School (1200)	118.54	No	This parcel is the western portion of Main Post. Batteries associated with Uninterrupted Power Supplies (UPSs) are present in association with electrical substations and computer/mission activities throughout the area. Two aboveground storage tanks (ASTs), one located at Building 200 and one located at Building 127, are in use with secondary containment in place. One underground storage tank (UST) with leak detection and secondary containment in place is located at Building 1203. FTMM-09 (M-9 Former Polychlorinated Biphenyl [PCB] Transformer Site) and FTMM-47 (Buildings 1002, 1208, and 1209 former PCB transformer site) were investigated under the Intallation Restoration Program (IRP) and it was determined no transformers were leaking and all transformers are considered non-PCB class equipment. Staining of concrete and elevated concentrations of PCBs in concrete samples collected below existing transformers at Buildings 1208 and 1209 were determined to be minor in nature and will be addressed accordingly upon removal or replacement of existing transformers. A No Further Action (NFA) determination was approved by the New Jersey Department of Environmental Protection (NJDEP) in 1994. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas; therefore, no Baseline Ecological Evaluation (BEE) is required.
37	1220 FTMM-10	Boiler Plant	1.06	No	This parcel includes the boiler plant (Building 1220), small amounts of various chemicals utilized during operation of the facility, and associated current and former petroleum storage locations. Ten former fuel oil USTs and petroleum-contaminated soil were removed, and NFA approval letters were received from the NJDEP in 2000 and 2003. FTMM-10 (Asbestos Storage Area) was inspected under the IRP, no asbestos containing material was found, and an NFA determination was approved by the NJDEP in 1994. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
38	Former Outdoor Firing Range (1940-1955 Pistol Range) FTMM-21	Former Outdoor Small Arms Firing Range	0.59	No	This parcel is the 1940-1955 Small Arms Training Range and is included in the Fort Monmouth Military Munitions Response Program (MMRP). The area has been a maintained grass-covered area for over 40 years. Due to the historic use of this site as a small arms firing range, metals contamination in soil was investigated and no metals were found above NJDEP soil criteria. The former pistol range is overlain by maintained grass areas and asphalt pavement. No contaminants were identified during the 2008 Site Investigation; therefore, no BEE is required.
39	1150	Vail Hall - Communications back up and administrative offices	0.60	Yes	This parcel is the area between Building 1150 and Parkers Creek. Floor drains and a sump pump are present in the basement of 1150 for high water table intrusion and ultimately discharge to Parkers Creek via a basin behind the building. Building 1150 houses a large UPS room in the basement for communications backup and previous activities included film developing. Base/Neutrals (B/Ns) and metals were identified as constituents of concern in sediment during the 2008 Site Investigation. A BEE is recommended to address potential discharges to Parkers Creek.
40	FTMM-02	Former Landfill	8.10	Yes	This parcel was investigated under the Fort Monmouth IRP as Site FTMM-02. This is the location of former landfill M-2. An NFA recommendation was submitted to the NJDEP for near surface soil; NJDEP's response in June 2009 included a request for additional sediment samples from Mill Creek and a BEE. An equivalent to a Declaration of Environmental Restriction has been incorporated into the Fort Monmouth Master Plan for PCB contamination in below grade soil. A Groundwater CEA was established with the NJDEP. Volatile organic compounds present in groundwater at concentrations above NJDEP Groundwater Quality Criteria (NJ GWQC) are being remediated via enhanced bioremediation (Oxygen Release Compound [ORC] injection) through FY08. Long-term monitoring of groundwater and surface water continues on a quarterly basis. Potential migration pathways may exist for contaminants to enter Mill Creek from the Landfill; a BEE is recommended.
41	FTMM-59	Groundwater in vicinity of Building 1122	0.34	No	This parcel was investigated under the Fort Monmouth IRP as IRP Site FTMM-59. A Groundwater Classification Exception Area (CEA) was submitted to the NJDEP. Volatile organic compounds present in groundwater at concentrations above NJ GWQC are being remediated via enhanced bioremediation (Hydrogen Release Compound [HRC] injection). Long-term monitoring of groundwater and surface water continues on a quarterly basis. The identification of volatile organic compounds in the groundwater in excess of criteria and the potential for migration into overlying buildings qualifies vapor intrusion as a recognized environmental concern in this area. The contaminated groundwater will be evaluated through the BEE for Parcel 43 (Building 1122).
42	UST-1122-171	Former UST	0.02	No	A fuel oil tank and potentially contaminated soil were removed in 1994. Metals were detected in groundwater above criteria. Agreement was reached with the NJDEP in 1998 to conduct 4 rounds of sampling and close out the groundwater monitoring due to high background metals. Report was submitted and no response has been received from the NJDEP; monitoring is ongoing. The metals in groundwater will be evaluated through the BEE for Parcel 43 (Building 1122).
43	1122	Do-it-Yourself Auto Repair and Craft Shop	1.54	Yes	This parcel encompasses Building 1122 (Do-it-yourself auto repairs) and Building 1124 (Car wash). Building 1122 is a hazardous waste generator and numerous areas of patched asphalt and old concrete pads have been noted. An oil/water separator (w/vessel) and floor drains confirmed to be connected to sanitary system per 1993 floor plans. Surface drainage from this area may have had the potential to allow contaminants to migrate into Mill Creek and B/Ns and metals were identified as constituents of concern in sediment during the 2008 Site Investigation. A BEE is recommended.

Table 2-8
Main Post, Fort Monmouth, New Jersey
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
44	Former Skeet Range FTMM-03, 04, 05, 06, and 08	Former Skeet Range and Former Landfills	25.30	Yes	This parcel includes one MMRP site (1940-1955 Skeet Range) and IRP sites FTMM-03, 04, 05, 06, and 08. The IRP sites are former landfill areas (M-3, M-4, M-5, M-8) and a post burning area (M-6). Extensive soil evaluation has been conducted throughout this parcel, and an NFA determination has been requested from the NJDEP in relation to near surface soils throughout the parcel. No response has been received from the NJDEP. The Department of Public Works incorporated an equivalent to a Declaration of Environmental Restriction into the Fort Monmouth Master Plan for PCB below grade soil contamination at M-8. FTMM-03 - Groundwater - CEA currently being prepared for subsequent submission to the NJDEP. A Monitored Natural Attenuation (MNA) program is approved by the NJDEP and is currently under way. Long-term monitoring of groundwater and surface water continues on a quarterly basis. FTMM-05 - Groundwater - CEA currently being prepared for subsequent submission to the NJDEP. An HRC injection program is approved by the NJDEP and is currently under way through FY08 to address volatile organic compounds in groundwater. Long-term monitoring of groundwater and surface water continues on a quarterly basis throughout the parcel. BEE recommended for Former Landfills since a potential migration pathway may exist for contaminants to enter either Lafetra Creek, Mill Creek or Parkers Creek from the Landfills.
45	UST-697-194 UST-697-195 UST-697-195	Former USTs	0.04	No	Three 1,000-gallon waste oil tanks were removed on June 1, 1990. No documentation existed on condition of tanks or adjacent soils during removal. A site assessment was initiated at the suspected locations of the former USTs in November 1992. Petroleum-related compounds were detected in soil samples below State criteria. Initial groundwater samples exceeded NJ GWQC for chlorinated volatile organic compounds and pesticides. Closure Report submitted to NJDEP on 02/26/96 recommending additional groundwater sampling. Quarterly groundwater samples were collected from August 1997 to December 2001. Groundwater concentrations in the 2001 samples were below the NJ GWQC. Revised Closure Report submitted to NJDEP on 5/15/02. NJDEP closure approval letter received 01/10/2003. No contamination remains at the site and no migration to environmentally sensitive areas has been detected; therefore, no BEE is required. BEEs and sampling being conducted related to M-8 and M-18 also address Parcel 45 and Parkers Creek.
46	FTMM-07	Former Incinerator	0.03	No	This parcel was investigated under the Fort Monmouth IRP as Site FTMM-07 (M-7 Burning Area). The M-7 burning area was a former incinerator located within Building 697. The incinerator was used until 1990 for burning classified documents. The Incinerator was dismantled in 1993; NFA determination approved by NJDEP in 1994. There is no contamination present at Parcel 46 or evidence of migration to environmentally sensitive areas; therefore, no BEE is required. BEEs and sampling being conducted related to M-8 and M-18 also address Parcel 46 and Parkers Creek.
47	FTMM-19	Former Pistol Range	2.23	No	This parcel includes a former pistol range and the former sanitary treatment plant (FTMM-19). The firing range was used from 1935 to 1940 for small arms. The sewage treatment plant closed in 1975. No compounds of concern detected above NJDEP criteria for soil or sediment. NFA approved by NJDEP in 1996. Since no contaminants were found at Parcel 47, no BEE is required.
48	FTMM-18	Former Training Area	4.85	Yes	This parcel was investigated under the Fort Monmouth IRP as Site FTMM-18 - Near Surface Soils (Cover Soil). A geophysical survey and subsequent trenching identified buried waste materials at the site. A BEE is recommended since a potential migration pathway may exist for contaminants to enter Parkers Creek.
49	283, 288, 291, 292, 293, 295	Former Squier Laboratory Complex, Museum, Battery Test Facility	9.09	Yes	Building 283 is currently administrative space. Previous use included the Squier laboratory - primary R&D laboratory until 1954 (when the laboratory operations were transferred to Building 2700). Former repair/experimental work within this parcel included photographic equipment, a battery test facility (which was destroyed by fire in the 1980s and subsequently rebuilt), climatic testing lab, plastics research and development. Numerous former buildings existed in this parcel that were associated with Squier laboratory operations in the 1950s. B/Ns and PCBs were identified as constituents of concern in soil and metals were identified as constituents of concern in sediment during the 2008 Site Investigation. Migration of contaminants from UST at Building 283 or discharges from former septic and sump systems associated with Squier Complex to Parkers Creek may have occurred, so a BEE is recommended.
50	FTMM-54 Building 296) FTMM-55 (Building 290) FTMM-61 (Building 283)	Former fuel distribution facility, Former USTs	2.18	No	Three sites within this parcel are included in the Fort Monmouth IRP. Site FTMM-54 is a former abandoned fuel distribution facility that was removed during a renovation project at Building 296. Benzene and lead are present in groundwater above criteria and are being addressed through the implementation of MNA, which includes quarterly groundwater monitoring. Site FTMM-55 is the site of a former UST system which was located at Building 290. Petroleum-contaminated soil has been removed; lead and arsenic detections in groundwater are being addressed through MNA (including quarterly groundwater monitoring), while a request for an NFA determination is under review by the NJDEP. FTMM-61 is a former 3,000-gallon UST site at which petroleum-contaminated soil was removed and petroleum-related contaminants are present in groundwater. In situ bioremediation (ORC injection) is being conducted through FY08 to address groundwater, long-term monitoring of groundwater is ongoing. In total within this parcel, 15 USTs that were removed had evidence of petroleum release during closure and were properly addressed via removal of contaminated soil, and NFA approval letters were received for all 15 USTs. Contaminated groundwater is addressed through the Fort Monmouth IRP as summarized above. The identification of volatile organic compounds in the groundwater in excess of criteria indicates vapor intrusion is a potential recognized environmental concern in this area. Contaminated soils have been removed and no pathways to environmentally sensitive areas are present; no BEE is required. BEEs and sampling being conducted related to M-8 and M-18 also address Parcel 50 and Parkers Creek.

Table 2-8
Main Post, Fort Monmouth, New Jersey
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
51	750 Area 787, 788, 789 500 Area 600 Area 1100 former Barracks FTMM-11	Motor Pool Administrative Barracks Former USTs	87.00	No	This parcel includes the 750 motor pool; the area around Buildings 787, 788, and 789; the 600 Area Buildings; 500 Area Buildings; former barracks along Semaphore Ave, and IRP Site FTMM-11. Per communications with facility personnel involved with the 750 Motor Pool construction project in the 1980s, multiple former USTs associated with former barracks in the area were removed during construction. Extensive soil sampling and three UST removals were conducted in the area of Buildings 787, 788, and 789 as part of the U.S. Army's Residential Communities Initiative (RCI) and Enhanced Use Leasing (EUL) programs. Soil grid sampling was conducted throughout the area. Locations at which contaminated soil was identified above NJDEP residential cleanup criteria were excavated and disposed off site. Numerous UST removals and extensive investigation of the 600 Area were conducted under the 600 Area Work Plan that was approved by the NJDEP. A petroleum release was documented to have potentially occurred at 24 of the removed USTs in this parcel. An NFA approval letter was obtained from the NJDEP for all 24 locations where evidence of a petroleum release was identified. Current operations in the 600 Area include dry metal fabrication of vehicle equipment shelters (no solvents used). Small amounts of chemicals are utilized in this area, and lead acid batteries are present in association with emergency generators and UPSs. FTMM-11 (M-11 Elevated Water Tank) was investigated unde the IRP. Site reconnaissance work revealed no visible stains, stressed vegetation or soil at the site and an NFA determination was approved by the NJDEP in 1994. Eleven suspected USTs were identified during a geophysical survey conducted as part of the 2008 Site Investigation and are currently being addressed. This parcel consists of maintained grass and pavement associated with residential housing and the 750 motor pool. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
52	FTMM-53, Bldg 699	gasoline service station	1.38	No	This parcel was investigated under the Fort Monmouth IRP as FTMM-53 (Building 699). Site FTMM-53 is an active gasoline service station operated by the Army & Air Force Exchange Service (AAFES) organization. On November 5, 1984, a tank tightness test identified a leak in two USTs. No action was taken until 1989 when a line leak was identified; subsequently, the piping was excavated and replaced. Volatile organic compounds were identified in soil and groundwater at concentrations exceeding NJDEP cleanup criteria. Since that time, a groundwater treatment system (to recover free product and to control plume migration) has been operating in conjunction with a quarterly groundwater monitoring program. The cleanup strategy is to continue remedial action activities and monitoring efforts at the Building 699 site. Shut-down of the treatment system is expected in FY08 and quarterly groundwater monitoring of 13 wells will be performed for 2 years after shut-down. A CEA is currently being prepared for subsequent submission to the NJDEP. The identification of volatile organic compounds in the soil and groundwater in excess of criteria indicates vapor intrusion is a potential recognized environmental concern in this area and tetrachloroethene was identified as a constituent of concern in soil gas during the 2008 Site Investigation. Contaminated soil has been removed and contaminated groundwater is contained in the immediate vicinity of Building 699; no migration to environmentally sensitive areas had been detected; a BEE is not required.
53	700 Area	former housing	11.53	No	Extensive soil sampling and numerous UST removals were conducted as part of the U.S. Army's RCI and EUL programs. Soil grid sampling was conducted throughout the area. Locations at which contaminated soil was identified above NJDEP residential cleanup criteria were excavated and disposed off site and there are no migration pathways to environmentally sensitive areas; therefore, no BEE is recommended.
54	700 Area 800 Area	Lane Hall (Social events and food service) Former Dental Clinic	44.74	No	This parcel includes a sewage lift station (Building 752) at which antifreeze is stored for an emergency generator, former dental clinic and photoprocessing facility currently utilized as a locker room (Building 814); and Lane Hall (Building 702) which is utilized for social events and food service. No release or disposal of hazardous substances or petroleum products has occurred; therefore, no BEE is required.
55	876 FTMM-47	Former Motor Pool Former Medical and Veterinarian Laboratory	11.80	No	Medical and veterinarian laboratories were previously located in former Building 876 and a 1999 Chemical Inventory recorded storage of hazardous substances in this former building. A motor pool formerly existed within this parcel. FTMM-47 (Buildings 1002, 1208, and 1209 former PCB transformer site) was investigated under the IRP and it was determined the staining of concrete and elevated concentrations of PCBs in concrete samples collected below existing transformers at Building 1002 was minor in nature and will be addressed accordingly upon removal or replacement of existing transformers. An NFA determination was approved by the NJDEP. There are no migration pathways to environmentally sensitive areas; a BEE is not required.
56	800 Area RCI Project	Former housing	15.18	No	Extensive soil sampling and numerous UST removals were conducted as part of the U.S. Army's RCI and EUL programs. Soil grid sampling was conducted throughout the area. Locations at which contaminated soil was identified above NJDEP residential cleanup criteria were excavated and disposed off site. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
57		Former Coal Storage and RR Unloading area	8.71	No	Former coal storage and unloading area along former railroad in south central portion of Main Post. B/Ns were identified as constituents of concern in soil and metals were identified as constituents of concern in groundwater during the 2008 Site Investigation and are being further evaluated. No migration pathway to ecological receptors has been identified. There are no migration pathways to environmentally sensitive areas; a BEE is not required. BEE and sampling being conducted related to M-14 also addresses Parcel 57 and Husky Brook.

Table 2-8
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ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
58	UST-800-127 UST-801-129	Former #2 fuel oil USTs	1.04	No	Two #2 fuel oil USTs and associated petroleum-contaminated soil were removed. Initial groundwater results showed one semi-volatile organic compound exceeded the NJ GWQC. A monitoring well was installed and no compounds were detected above NJ GWQC in four rounds of sampling. Closure Reports requesting NFA were submitted to the NJDEP, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
60	1077, 1078	Residential Housing	4.22	No	Residential housing area southwest of Patterson Army Health Clinic. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. Since no contaminants are present and no release has occurred, no BEE is required.
61	810, 1075, 1076	Medical Facility Veterinary Clinic	14.66	Yes	This parcel includes the veterinary clinic (Building 810), Patterson Army Health Clinic (Building 1075), and former Patterson Boiler Plant (former Building 1076). Former X-ray operations were conducted with film development at 1075; over the counter medicines stored on site; medical waste disposed through 1075. Based on extensive previous medical activities within this parcel, potential for historic release of developing chemicals and other waste associated with medical operations exists. B/Ns were identified as constituents of concern in soil and B/Ns and metals were identified as constituents of concern in sediment during the 2008 Site Investigation. Stormwater discharges to a tributary to Oceanport Creek from Building 1075 may have occurred; a BEE is recommended.
62	FTMM-13	Former Pathogenic Waste Incinerator	0.13	No	This parcel was investigated under the Fort Monmouth IRP as FTMM-13 (M-13 Pathogenic Waste Incinerator). The pathogenic waste incinerator formerly located on the west side of former Building 1076 was constructed in 1975. The pathogenic waste incinerator was taken out of service in December 1992. Site reconnaissance work revealed no ash or debris in or around the incinerator unit and the incinerator was dismantled in November 1993. An NFA determination was approved by the NJDEP in 1994. No contaminants have been identified and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
63	UST-810-131	Former #2 fuel oil UST	0.12	No	A former #2 fuel oil UST was removed in 1998. Visible petroleum contamination of soil was observed during the removal of the UST, and potentially contaminated soil was removed. No detections in groundwater or soil samples were above NJDEP criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 8/29/2000. No pathway to environmentally sensitive areas is present, so no BEE is required.
64	FTMM-64 (Building 812)	former gasoline distribution area	3.18	No	This parcel was investigated under the Fort Monmouth IRP as FTMM-64 (Building 812). This parcel is a former gasoline distribution area. Volatile organic compounds and metals are present in groundwater above the NJ GWQC; no contaminants identified in soil above criteria. Treatment of groundwater is underway via enhanced bioremediation (HRC/ORC injection). A CEA was submitted with the NJDEP, awaiting response. Long-term monitoring of groundwater continues on a quarterly basis. The identification of volatile organic compounds in the groundwater in excess of criteria indicates vapor intrusion is a potential recognized environmental concern in this area. There is no migration pathway to environmentally sensitive areas, so no BEE is required.
65	FTMM-66 (Building 886)	former fuel oil storage area	3.15	No	This parcel is addressed under the Fort Monmouth IRP as FTMM-66 (Building 886). Based upon historical records, Site FTMM-66 was identified as a former fuel oil storage area. Aerial photos indicate a former AST was located adjacent to Building 886, located off Murphy Drive on the Main Post. The AST had a storage capacity of 250,000 gallons and stored #2 fuel oil. The AST was removed in the 1970s. Soil contamination was identified at the site during the removal of a 1,000-gallon steel, fuel oil UST located on the west side of Building 886. Soils contained petroleum contamination exceeding NJDEP residential direct contact soil cleanup criteria, and free product was observed in groundwater. 4,000 tons of soil were removed in February 2003. A CEA was filed with the NJDEP and MNA, including groundwater monitoring, was selected as the remedial approach. Long-term groundwater monitoring continues on a quarterly basis. There is no migration pathway to environmentally sensitive areas, so no BEE is required.
66	900 Building Area	Electrical Substation General Storage Police Station	28.92	No	This parcel includes general storage (Buildings 908, 975 and 976), the police station (977), and an electrical substation (Building 978). The electrical substation (Building 978) houses 18 lead acid batteries and non-PCB transformers, all contained within secondary containment. Building 977 houses lead acid batteries associated with an emergency generator. Building 901, currently used in an administrative capacity, formerly housed radar training. Chemicals utilized in this operation included alcohols and freon 113. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. Therefore, no BEE is required.
67	UST-949-203	Former #2 fuel oil UST	0.12	No	A former diesel UST and potentially contaminated soil were removed in 1998. One volatile organic compound was detected above the NJ GWQC during the initial round of groundwater sampling. Subsequent quarterly samples collected in 9/2000, 10/2000, 1/2001, and 4/2001 showed no compounds above NJ GWQC. Closure Report requesting NFA submitted to NJDEP on 07/17/2001. NJDEP Closure Approval Letter received on 01/10/2003. No contaminants remain at the site and there is no pathway to environmentally sensitive areas, so no BEE is required.
68	900 Building Area former USTs	Former #2 fuel oil USTs	4.74	No	This parcel includes 12 former USTs. Petroleum discharges were identified at five of the USTs and associated petroleum-contaminated soil was remediated. NFA approval letters were received in 2000 (UST-909-147, UST-914-152, UST-977-204, and UST-979-205) and 2003 (UST-905-145). Lead acid batteries associated with an emergency generator are present at Building 979. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.

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Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
69	900	Former vehicle repair/motor pool	0.31	Yes	This facility is a former vehicle repair/motor pool facility where solvent-based parts cleaners were previously utilized as part of routine vehicle maintenance activities. This building has been used as general storage for the past 10 years. Metals and B/Ns were identified as constituents of concern in sediment during the 2008 Site Investigation. Stormwater outfalls discharging into Oceanport Creek may have the potential to have led to migration of contaminants to Oceanport Creek, so a BEE is recommended.
70	551	Classroom, former (early 1950s) photoprocessing	1.73	No	Former industrial processes included the use of carbon tetrachloride, benzol, acids, and photographic chemicals in an adjacent Quonset hut in the early 1950s. This facility is currently used for administrative and classroom activities. No constituents of concern were identified in sediment or soil during the 2008 Site Investigation. Though Husky Brook is adjacent to Parcel 70, no contaminants have been found in environmental media, so a BEE is not required.
71	FTMM-12, FTMM-14	Former Landfill	14.65	Yes	This parcel was investigated under the Fort Monmouth IRP as FTMM-12 (M-12 Landfill) and FTMM-14 (M-14 Landfill). A remedial action that addressed soil erosion problems along Husky Brook was completed in June of 2001. An NFA recommendation for near surface soil was submitted to the NJDEP; NJDEP's response in July 2007 included a request for additional sediment samples from Husky Brook and a BEE. Metals and volatile organic compounds have been detected in groundwater slightly above the NJ GWQC. Long-term monitoring of groundwater and surface water continues on a quarterly basis, and a CEA request has been submitted to the NJDEP for groundwater. An NFA recommendation was submitted to the NJDEP. A BEE is recommended since a potential migration pathway may exist for contaminants to enter Husky Brook.
72	200 Area 300 Area	Residential Housing Parade Grounds Administrative	101.38	No	This parcel is located in the north-central portion of Main Post and includes residential housing along Gosselin Ave., Sherrill Ave., Allen Ave., and Signal Ave.; the parade grounds; administrative offices in Building 286 (Russell Hall), and electronic research facilities in the northeastern portion of the parcel. Hospital facilities were formerly located in Building 209 prior to the construction of Patterson Army Health Clinic. Building 209 is now used for administrative purposes. No release or disposal of hazardous substances or petroleum products has occurred, and there has been no migration of such substances from adjacent areas. Forty-five (45) former fuel oil USTs have been removed and no contamination was identified during closure. Approval of an NFA recommendation was received from the NJDEP for six USTs, the remaining 39 removed USTs were residential USTs for which no regulatory concurrence is required. Since no contamination is present related to Parcel 72, no BEE is required.
73	UST-286-60	Former #2 fuel oil UST	0.12	No	A former #2 fuel oil UST and 3 cubic yards of petroleum-contaminated soil were removed. A closure report was submitted to the NJDEP requesting an NFA determination in 1999, and an NFA approval letter was received from the NJDEP on 2/24/2000. Additionally, there are no migration pathways to environmentally sensitive areas, so no BEE is required.
74	205, 206, 207, 208, 257, 282, 287	Residential Housing, Fire House, and former fuel oil USTs	10.74	No	This parcel includes the fire house and existing housing southeast of Hidreth Ave. Eight former residential fuel oil USTs and associated petroleum-contaminated soil have been removed. No regulatory concurrence is required for residential USTs. Despite no requirement for regulatory concurrence, an NFA approval letter was obtained for 7 of the 8 USTs. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
75	FTMM-20	Pre-1941 Sewage Treatment Plant	0.28	Yes	This parcel is addressed under the Fort Monmouth IRP as FTMM-20 (Pre-1941 Sewage Treatment Plant). During the RI, metals were detected in sediment samples above criteria. Though these metals may be comparable to background levels; a BEE is recommended.
76	200 Area 300 Area	Residential Housing Former Barracks	12.06	No	This parcel includes the existing residential housing buildings north of Housing Ave. and the former 300 Area Barracks. Numerous USTs are illustrated on historic maps associated with the 300 Area Barracks that are not documented to have been removed. Thirteen (13) residential USTs and associated petroleum-contaminated soil (for which no NJDEP closure approval is required) were removed in association with existing residential housing in this parcel as well. Seven suspected USTS were identified during a geophysical survey conducted as part of the 2008 Site Investigation; however, no constituents of concern were identified in soil or groundwater. The 7 suspected USTs are currently being investigated. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
77	UST-210-8	Former #2 fuel oil UST	0.37	No	A former #2 fuel oil UST and 10 cubic yards of petroleum-contaminated soil were removed in 1994, and no contaminants were detected in groundwater above NJDEP criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 1996. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
78	FTMM-15	Elevated Water Tank	0.30	Yes	This parcel is addressed under the Fort Monmouth IRP as Site FTMM-15 (M-15 Water Tank). Two pesticides and three metals were identified above NJDEP direct contact soil cleanup criteria. A corrective action was implemented in 1999 involving the removal of the contaminated soil from the site. A Remedial Action report will be submitted to NJDEP with an NFA recommendation from the Army. RI sampling had confirmed that horizontal migration towards Parkers Creek had occurred prior to Remedial Action, so BEE is recommended.

Table 2-8
Main Post, Fort Monmouth, New Jersey
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
79	142 494 Bldg 75 Former Tank Farm	Box/Crate Shop Marina Former Bulk Petroleum Storage Tanks	43.64	No	This parcel includes the Box/Crate shop (all hazmat packaged and shipped through this building, but not stored at this location), the water supply treatment building (Building 494), former Building 75 Tank Area adjacent to the railroad, the marina, and the former 400 area housing. There were 38 USTs removed from this parcel. Eight of the tanks had leaked and soil removals were conducted. Some of the USTs were residential and did not require closure documentation. Twenty-five (25) approval letters for the UST removals were received from the NJDEP. Four suspected USTs were identified during a geophysical survey conducted as part of the 2008 Site Investigation; however, no constituents of concern were identified in soil or groundwater. The four suspected USTs are currently being investigated. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
80	Former Buildings 105 and 106		0.93	No	This parcel includes former Buildings 105 and 106 - former photoprocessing facilities located northeast of Oceanport Ave., directly southeast of the current credit union (Building 495). These building served as photoprocessing facilities from the 1940s until they were demolished in the 1980s. No constituents of concern wer idetified during the 2008 Site Investigation and the parcel consists of maintained lawn, pavement, and buildigns. No migration pathway to sensitive environmental resource is present; a BEE is not required.
81	FTMM-16 (Bldg 498)	Former Pesticide Storage Area	0.12	Yes	A former pesticide storage and mixing area was located at the M-16 site on Main Post. The facility (Building 498) is a brick structure and was constructed in 1939. Pesticide management practices were conducted at the site until the late 1950s. Remedial actions were completed in 1999 under the Fort Monmouth IRP to remove pesticide-contaminated soil. A Remedial Action report will be submitted to NJDEP with an NFA recommendation from the Army. Sampling prior to Remedial Action confirmed that migration horizontally in the direction of Oceanport Creek had occurred, so a BEE is recommended.
82	400 Area RCI	Remediated soil contamination in 400 Area	0.13	No	PCB-contaminated soil was excavated to below NJDEP cleanup criteria and disposed off site in 2005 as part of the U.S. Army's RCI and EUL programs. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
83	109	Former photoprocessing Current and former maintenance shops (carpentry, plumbing, heating, HVAC, electrical) Former coal storage	35.34	No	This parcel is located in the northeastern portion of the Main Post and is associated with numerous current and former industrial processes and vehicle operations including former vehicle wash platforms, former photoprocessing and printing plants, current and former vehicle maintenance areas, former heating plants, former refrigerant repair, former coal storage, and current and former carpentry, plumbing, and electrical shops. Three modern USTs are currently in use at Building 273 (Garrison Motor Pool), three waste oil ASTs are present at Building 484, one waste oil AST is present at Building 481, and one waste oil AST is present at Building 121. All existing USTs and ASTs have secondary containment in place. Numerous former USTs have been removed throughout this parcel, and petroleum-contaminated soil was addressed when encountered at each UST location. Lead and B/Ns were identified as constituents of concern in surface soil during the 2008 Site Investigation. The entire parcel consists of maintained lawn, pavement, and buildings. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
84	FTMM-56 (Former Building 80)	Former #2 fuel oil UST	0.29	No	This parcel is addressed under the Fort Monmouth IRPas Site FTMM-56 (Building 80). A former #2 fuel oil UST and 56 cubic yards of petroleum-contaminated soil were removed in 1993. Although a discharge was identified during the UST closure, the discharge is believed to have come from activities prior to and not related to the UST removal (pre-1984). Gasoline-related constituents and one pesticide were detected at concentrations above the NJ GWQC. MNA (which includes quarterly groundwater monitoring) has been implemented as the remedial approach for this parcel pending approval of an NFA recommendation by the NJDEP. An RI report requesting an NFA determination was submitted to the NJDEP in May 2005. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
85	UST-116-9	Former #2 fuel oil UST	0.13	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1994. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 10/23/00. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
86	UST-117-72	#2 fuel oil UST	0.13	No	A former #2 fuel oil UST was removed in 1994. Petroleum-related contaminants were detected in confirmatory soil samples at concentrations below the NJDEP cleanup criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 1998. There are no migration pathways to environmentally sensitive areas; a BEE is not required.
87	UST-64-4 (#2 fuel oil) UST-65-5 (#2 fuel oil) UST-161-14 (#2 fuel oil) UST-161-68 (waste oil) UST-173-19 (#2 fuel oil)	5 former USTs	0.45	No	This parcel includes 5 former USTs and associated petroleum-contaminated soil that were removed. Closure Reports requesting NFA have been submitted for all 5 USTs. NFA approval letters were received from NJDEP for UST-64-4 on 10/23/00, UST-65-5 on 8/29/2000, and UST-173-19 on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
88	FTMM-17 (Former Building 65)	Former Pesticide Storage Area	0.27	No	This parcel was included in the Fort Monmouth IRP under Site FTMM-17 (M-17 Former Pesticide Storage Area, Bldg 65). Building 65 has been demolished; chlordane was detected in the soil 6-12 inches below grade consistent with termite control practices in the 1980s; no chlordane was detected in groundwater. An NFA determination was approved by the NJDEP in 1994. There are no migration pathways to environmentally sensitive areas; a BEE is not required.

Table 2-8
Main Post, Fort Monmouth, New Jersey
ECP Parcel and IRP Site Summary

Parcel Number	Building No. / Associated IRP Site / Associated UST	Design Use Description	Size of Parcel (Acres)	Selected for BEE	Basis/Remarks
89	UST-64-3 'UST-485-57	2 former #2 fuel oil USTs	0.14	No	Two former #2 fuel oil tanks (UST-64-3, UST-485-57) and petroleum-contaminated soil were removed. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 8/29/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
90	FTMM-57 (Former Bldg 108 USTs)	5 former #2 fuel oil USTs	0.38	No	Five former USTs associated with former Building 108 are addressed under the Fort Monmouth IRP as Site FTMM-57. The 5 USTs were removed in 1993; volatile organic compounds and metals have been detected in groundwater above NJ GWQC. A CEA for site groundwater, which restricts the use of groundwater within a defined area until such time that contaminants of concern achieve compliance with the NJ GWQC, was filed with the NJDEP. An RI report requesting an NFA determination has been submitted to the NJDEP. Currently, as part of a monitoring program, four groundwater monitoring wells are sampled on a quarterly basis. Contaminated groundwater is restricted to the area in the vicinit of the former USTs and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
91	UST-280-25	Former #2 Fuel oil UST	0.14	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1997. A closure report was submitted to the NJDEP requesting an NFA determination in 2000, and an NFA approval letter was received from the NJDEP on 10/23/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
92	UST-484-56	Former #2 Fuel oil UST	0.04	No	A former #2 fuel oil UST and 13 cubic yards of petroleum-contaminated soil were removed in 1995. Petroleum-related contaminants were detected in confirmatory soil samples at concentrations below the NJDEP cleanup criteria. A closure report was submitted to the NJDEP requesting an NFA determination in 1998, and an NFA approval letter was received from the NJDEP on 8/29/2000. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
93	UST-482-54	Former #2 Fuel oil UST	0.04	No	A former #2 fuel oil UST and petroleum-contaminated soil were removed in 1994. Petroleum-related contaminants were detected in confirmatory soil samples at concentrations below the NJDEP cleanup criteria and groundwater results were below the NJ GWQC. A closure report was submitted to the NJDEP requesting an NFA determination in 2002, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
94	UST-164-15 UST-277-24	Former #2 Fuel oil USTs	0.17	No	Two former #2 fuel oil tanks (UST-164-15, UST-277-24) and petroleum-contaminated soil were removed. A closure report was submitted to the NJDEP requesting an NFA determination in 2002, and an NFA approval letter was received from the NJDEP on 1/10/2003. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.
95	PCB Transformer leak near Bldgs 454 and 456	Pole Mounted PCB Transformer leak	0.44	No	This parcel is located northeast of Oceanport Ave. in the vicinity of Buildings 454 and 456. Three pole-mounted 50 KVA transformers (PCB-contaminated class) were knocked to the ground as a result of a storm in 1992 and the contents of two of the transformers leaked onto the ground. The transformers were properly disposed of along with 50 cubic yards of PCB-contaminated soil. Final post-excavation samples were non-detect for PCBs and showed levels of total petroleum hydrocarbons (TPH) below the NJDEP standard. An additional 20 surface soil samples were collected from the perimeter of the entire excavation. These samples were analyzed for TPH. None of these samples contained TPH in excess of the NJDEP soil standard. Contaminated soil has been removed and there are no migration pathways to environmentally sensitive areas; a BEE is not required.

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_021_Fig2-1_High_Tide_Salinity_BEE_rpt.mxd (4/20/2011)

LEGEND

- **Surface Water Sampling Point** — High Tide Salinity Measurements (ppt)
- **BEE Sampling Location** — High Tide Salinity Measurement (ppt)
- Water Feature
- Road Centerline
- IRP Site
- ECP Parcel
- Building
- Water Body
- Installation Boundary
- Municipal Boundary

N

0 500 1,000 2,000

Scale: Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

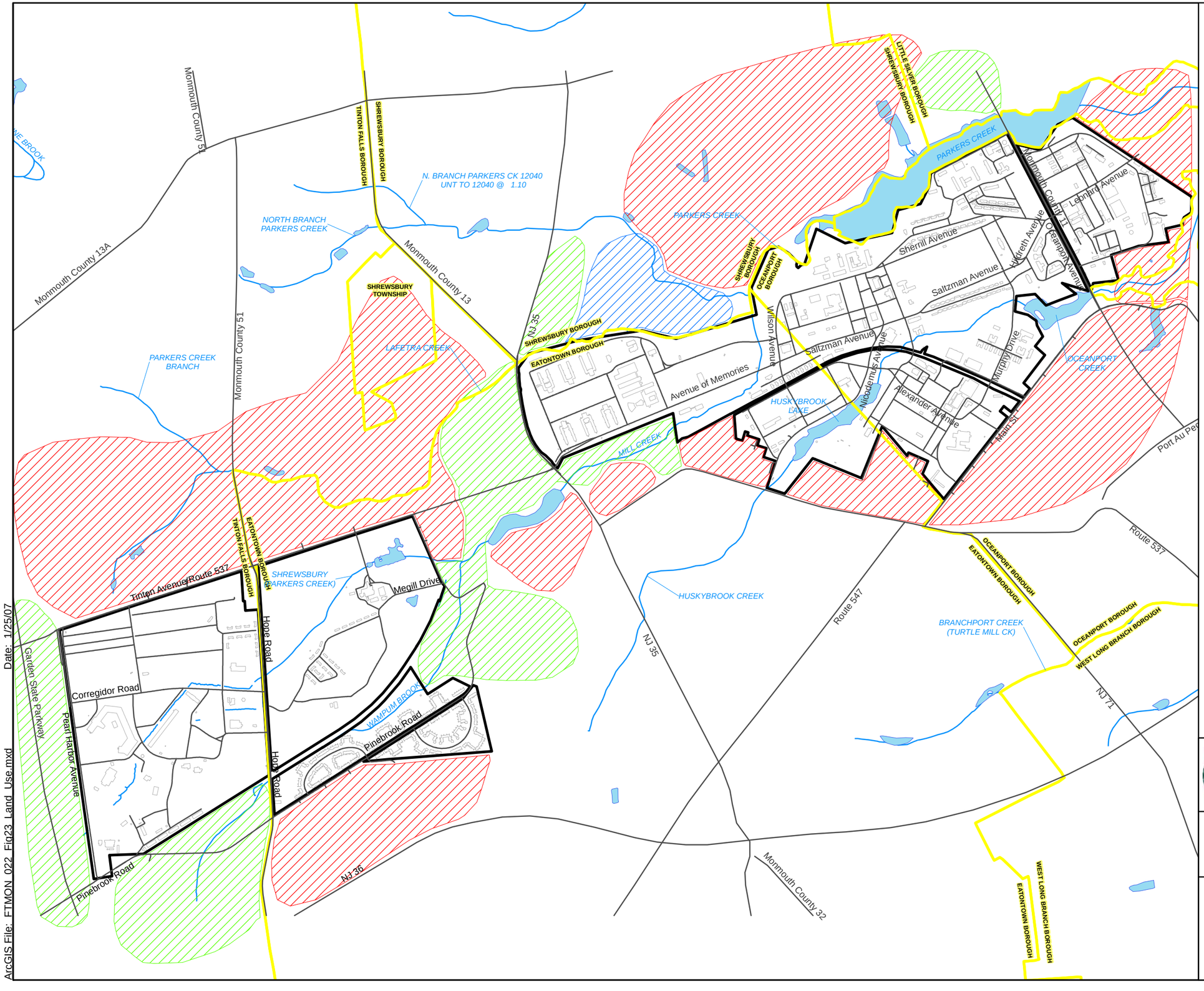
Shaw® Shaw Environmental, Inc.

FIGURE 2-1

FORT MONMOUTH
BASELINE ECOLOGICAL
EVALUATION REPORT

HIGH TIDE SALINITY RESULTS

MAIN POST
FORT MONMOUTH
NEW JERSEY



LEGEND

- Road Centerline
- Water Feature
- Building
- Water Body
- Installation Boundary
- Municipal Boundary

Land Use

- Industrial/Commercial
- Residential/Recreational
- Undeveloped

N

Scale:

0 750 1,500 3,000 Feet

Note: Schematic representation of prevalent surrounding land use only. Boundaries of surrounding land use designations are not exact.

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 2-2

ADJACENT LAND USE MAP

FORT MONMOUTH
NEW JERSEY

Date: 1/25/07

ArcGIS File: FTMON_022_Fig23_Land_Use.mxd

3.0 DATA EVALUATION

In order to evaluate the nature of contaminants detected at the FTMM sites and to identify the COPECs, several steps were followed. The first step was a review of the analytical data collected from the environmental media with regards to the sites and selection of the data appropriate for use in the BEE. The second step was the identification of the most appropriate and applicable criteria or benchmarks for comparison to data. The third step was the identification of the COPECs at the sites and an evaluation of these COPECs in terms of potential ecological impact, including the use of conservative wildlife exposure models. The following sections describe these steps in detail.

3.1 REVIEW OF AVAILABLE SITE DATA

Site data addressed in this BEE include data previously collected for RIs (e.g., near surface soil data for former landfills), ECP SIs, and routine environmental monitoring (e.g., groundwater data) and data collected specifically to fill data gaps for the BEE. The data evaluated in this BEE appear in **Appendix A** (RI data), **Appendix B** (ECP SI data), **Appendix C** (groundwater monitoring data), and **Appendix D** (BEE investigation data).

Exposure of ecological receptors to contaminants in soil predominantly occurs within the surface soils. Ecological receptors are not frequently exposed to subsurface soils; therefore, subsurface soils collected at 2 feet bgs and below are not evaluated in this BEE. Near-surface soil data are available for most IRP sites in RI reports [Landfill 2 (FTMM-2), Landfill 3 (FTMM-3), Landfill 4 (FTMM-4), Landfill 5 (FTMM-5), Landfill 8 (FTMM-8), Landfill 12 (FTMM-12), Landfill 14 (FTMM-14), Former Training Area/Landfill (FTMM-18), and Landfill CW-3A (FTMM-25)] and most ECP Parcels in the SI report (Parcel 15, Parcel 27, Parcel 5, Parcel 39, Parcel 49, Parcel 61, Parcel 69). Contaminated soils have been excavated and removed and the areas backfilled and graded at Building 283, Building 1122, the Water Tank FTMM-15, the pre-1941 STP (FTMM-20), and Building 498 (FTMM-16); soils at these sites are not addressed in the BEE. Only subsurface soil sample data was previously available for the Former Pesticide Storage Area, CW-6 (FTMM-28); soils samples were collected as part of the BEE investigation from this site to support the BEE.

Though ecological receptors are not exposed directly to contaminants in groundwater, pathways may exist by which groundwater may flow to potential exposure points (e.g., discharge of groundwater into surface water bodies). Therefore, the most recent 2-year period of readily available groundwater data from routine environmental monitoring are evaluated in this BEE to best represent current conditions; this constitutes the 2008 and 2009 calendar years. Though groundwater may discharge to surface water bodies, groundwater contaminant concentrations are not meant to represent potential surface water concentrations. It should be noted also that, though the CEAs are meant to minimize the potential human health exposure to contaminants in groundwater, they do not inhibit potential ecological exposures. Groundwater data are available from the routine environmental monitoring for applicable IRP sites [Landfill 2 (FTMM-2), Landfill 3 (FTMM-3), Landfill 4 (FTMM-4), Landfill 5 (FTMM-5), Landfill 8 (FTMM-8), Landfill 12 (FTMM-12), Landfill 14 (FTMM-14), Building 498/FTMM-16, Former Training Area/Landfill FTMM-18, Landfill CW-3A (FTMM-25), Former Pesticide Storage Area/CW-6 (FTMM-28), Building 1122 (FTMM-59), and Building 283 (FTMM-61)] and from the SI Report (Shaw, 2008) for applicable ECP sites (Parcel 15, Parcel 28, Parcel 49, and Parcel 69). No groundwater samples were collected as part of the BEE.

Ecological receptors may be exposed directly to contaminants in surface water and sediment of the various creeks and ponds that drain the sites. As with soils, ecological receptors are not frequently exposed to contaminants in subsurface sediments. The top 6.0 inches of sediment is usually considered to be the biotic zone, and only data from the top 6 inches of sediments is evaluated in this BEE. Previous sediment data for most IRP sites addressed only PCBs. Sediment samples were collected as part of the BEE from applicable IRP sites for an expanded analytical program [Landfill 2 (FTMM-2), Landfill 3 (FTMM-3), Landfill 4 (FTMM-4), Landfill 5 (FTMM-5), Landfill 8 (FTMM-8), Landfill 12 (FTMM-12), Landfill 14 (FTMM-14), Water Tank/FTMM-15, Building 498/FTMM-16, Former Training Area/Landfill FTMM-18, Pre-1941 STP/FTMM-20, Landfill CW-3A (FTMM-25), Former Pesticide Storage Area/CW-6 (FTMM-28), Building 1122 (FTMM-59), and Building 283 (FTMM-61)]. The data from the samples collected as part of this BEE, and not the previous IRP sediment samples, are evaluated in this BEE. The previous IRP

sediment data, though not quantitatively addressed in the BEE, are provided in **Appendix L** and are consistent with the current BEE investigation data. Sediment data are also available from the SI Report (Shaw, 2008) for applicable ECP sites (Parcel 15, Parcel 27, Parcel 28, Parcel 39, Parcel 43, Parcel 49, Parcel 61, and Parcel 69) and are evaluated in this BEE.

As with sediment, surface water analysis in previous samples, particularly for IRP sites, has been for a limited suite of parameters. Surface water samples evaluated in this BEE were collected as part of the BEE for an expanded analytical program; surface water samples were collected for applicable IRP and ECP sites [Landfill 2 (FTMM-2), Landfill 3 (FTMM-3), Landfill 4 (FTMM-4), Landfill 5 (FTMM-5), Landfill 8 (FTMM-8), Landfill 12 (FTMM-12), Landfill 14 (FTMM-14), Water Tank/FTMM-15, Building 498/FTMM-16, Former Training Area/Landfill FTMM-18, Pre-1941 STP/FTMM-20, Landfill CW-3A (FTMM-25), Former Pesticide Storage Area/CW-6 (FTMM-28), Building 1122 (FTMM-59), Building 283 (FTMM-61), Parcel 15, Parcel 27, Parcel 28, Parcel 39, Parcel 43, Parcel 49, Parcel 61, and Parcel 69).

3.2 BEE SITE INVESTIGATION METHODOLOGIES

This section describes the methods utilized in conducting the BEE field activities. This work included the following:

- Surface soil sampling.
- Sediment sampling.
- Surface water sampling.

This section also describes the collection procedures for field quality control (QC) samples, the decontamination procedures for sampling equipment, and the management procedures for investigation-derived wastes (IDW). **Table 3-1** and **Table 3-2** present a list of all samples collected and parameters analyzed as part of the BEE field activities. The sample locations are presented on **Figure 3-1** for the MP and on **Figure 3-2** for the CWA. The 2010 sampling and analysis activities were conducted to meet NJDEP requirements (N.J.A.C. 7:26E-3.11; NJDEP, 2009b) for a BEE. Though a BEE is often performed as part of an SI, this work is not intended to satisfy the general requirements of an SI or RI as presented in the TRSR (N.J.A.C. 7:26E; NJDEP, 2009b) nor is it intended to provide data necessary for a sediment quality evaluation (NJDEP, 1998). Previous reports and comments were reviewed to identify previous data gaps and data needs, and surface water, sediment, and surface soil samples were collected to fill data gaps and gather enough information to satisfy the requirements of a BEE.

3.2.1 SURFACE SOIL SAMPLING

Surface soil samples collected during the BEE were collected from the top 6 inches of the soil. Soil samples were collected from the surface through use of a decontaminated hand trowel. The surficial vegetative material was first removed from the sampling location prior to sample collection. A decontaminated stainless steel trowel was than manually inserted in the soil to extract the sample and transfer it into a decontaminated stainless steel bowl for homogenization.

Once collected all surface soil samples were field screened with a properly calibrated photoionization detector (PID) instrument. To field screen the soil sample, a decontaminated stainless-steel trowel was used to make a cross-sectional slice of the soil sample in order to expose the porous surface.

During the sampling, samples collected for VOCs analysis were collected in accordance with TRSR, N.J.A.C. 7:26E-2.1(a)4 (NJDEP, 2009b) and NJDEP sampling procedures (NJDEP, 2005) using the En Core® method. For this method, laboratory prepared sample bottles are used but do not contain preservatives, and the following procedures were followed:

- Surface soil was trimmed away from the soil boring and the sample was collected immediately from the exposed surface using the coring device.
- The En Core® sampler was loaded according to manufacturer's instructions.
- The lid was secured immediately and the container was placed within the designated resealable bag.

- No additional tape/adhesive labels were affixed to the sample container but the resealable bags were properly labeled.
- Samples were placed upright into an iced cooler.
- An additional aliquot was collected from each sample location to determine percent moisture content.

The remaining soil was used for other analyses, which included SVOCs, pesticides, PCBs, metals, grain size, and organic carbon content. The procedure for homogenizing and sampling for these analyses was as follows:

- Any rocks or large organic matter was removed from the sample.
- The sample was thoroughly mixed within the stainless steel bowl by turning the entire sample over at least three times using a stainless steel trowel or scoop.
- The entire sample was then homogenized using the coning and quartering procedure.
- The required soil volume was then placed into the appropriate sample bottles.
- A label containing the applicable sample specific information was affixed to each sample bottle.
- The sample bottles were placed into an iced cooler.

The latitude and longitude of each sample location was recorded with a hand-held global positioning system (GPS) unit. Disposable latex gloves were used during all sampling activities and were changed between each sample location. The chain-of-custody (COC) was completed after sample collection and sealed in a plastic bag and taped to the lid inside the sample cooler for transport to the analytical laboratory.

3.2.2 SURFACE WATER SAMPLING

The collection of surface water samples proceeded from downstream to upstream locations so that disturbances related to prior sampling would not affect sample quality. In tidal waters where downstream and upstream is dependent on the predominant direction of flow of the surface water at the time of collection, surface water samples were collected during outgoing tides for consistency between samples. At each location, the surface water sample was collected prior to sediment sample collection to reduce sediment load in the samples.

Surface water samples were collected by simple immersion of laboratory cleaned sample bottles in accordance with the Field Sampling Procedures Manual (FSPM) (NJDEP, 2005). This was accomplished by gently dipping an unpreserved, pre-cleaned bottle in the water with the mouth of the bottle facing the upgradient direction to eliminate the collection of resuspended sediments from lowering the bottle. Where sample bottles could not be dipped without disturbing underlying sediment, an extendable pole was used to dip the sample bottles. The sample water was then transferred to the appropriate (preserved, if applicable) sample containers.

The following steps were taken during the sample water collection:

- For samples taken from a boat, the boat was anchored or secured in an appropriate location to enable the boat to drift over the desired sample location.
- The water depth was measured and the state of the tide was estimated.
- The probe of the calibrated multi-parameter water quality meter was lowered to mid-depth of the water column and the field parameters were recorded after stabilization of the readings.
- A clean, sample-dedicated bottle was then dipped below the surface.
- All appropriate sample containers were carefully filled by pouring the surface water from the sampling bottle into the appropriate sample containers.

- For dissolved metals, a peristaltic pump equipped with dedicated tubing and an in-line 0.45 micrometer filter was used to transfer surface water samples directly into appropriate preserved sample containers.
- A label containing the applicable sample specific information was affixed to each sample bottle.
- The sample bottles were placed into an iced cooler.

The latitude and longitude of each sample location was recorded with a hand-held GPS unit. Disposable latex gloves were used during all sampling activities and were changed between each sample location. The COC was completed after sample collection and sealed in a plastic bag and taped to the lid inside the sample cooler for transport to the analytical laboratory.

3.2.3 SEDIMENT SAMPLING

The collection of sediment samples proceeded from downstream to upstream locations so that disturbances related to prior sampling would not affect sample quality. The sampling of tidal waters was completed from the predominant downgradient flow of the surface water at the time of collection. Sediment samples were collected from previous sample locations, depositional zones, or potential migration pathways. Areas where stream bank stabilization efforts disturbed sediments were avoided during sediment sampling; in these areas, sediment sampling was conducted when tides were low enough to visually identify undisturbed sediments. At each location where applicable, sediment samples were collected after surface water samples.

Sediment sampling was conducted, whenever possible, from the shoreline. Sediment samples were collected from the 0- to 6-inch interval. Sediment samples from wetland areas without overlying water (e.g., sediments in the wetlands near the Former Pesticide Storage Area/CW-6) were collected with a hand trowel. Submerged sediments were collected with a hand auger. All sampling locations were GPS located.

The following steps were taken during sample collection:

- For samples taken from a boat, the boat was anchored or secured in an appropriate location to enable the boat to drift over the desired sample location.
- The water depth was measured and the state of the tide was estimated.
- The probe of the calibrated multi-parameter water quality meter was lowered to mid-depth of the water column and the field parameters were recorded after stabilization of the readings.
- The sediment sample was collected and the top 6 inches of material was transferred to a stainless steel bowl.
- Once collected, the sediment samples were field screened with a properly calibrated PID.
- The sample for VOC analysis was immediately collected from the stainless steel bowl using En Core methods previously described for soil samples.
- The remaining sample was then homogenized using the coning and quartering method described for soil samples.
- All appropriate sample containers were carefully filled using a dedicated soil sampling scoop.
- A label containing the applicable sample specific information was affixed to each sample bottle.
- The sample bottles were placed into an iced cooler.

3.2.4 DECONTAMINATION PROCEDURES

All equipment that came into contact with potentially contaminated material was decontaminated prior to use at each sampling location. Given that surface water samples were collected through immersion of dedicated sampling bottles and filtered samples used dedicated tubing and in-line filters,

decontamination was not applicable to surface water sampling. Decontamination procedures for field equipment were in accordance with the NJDEP FSPM (NJDEP, 2005) three-step decontamination procedure for non-aqueous samples, which is detailed below. All equipment was thoroughly decontaminated before use and between sampling locations.

All decontaminated equipment was stored on plastic sheeting or wrapped in aluminum foil. Stainless steel hand augers, bowls, trowels, and other sampling equipment were decontaminated as follows:

- Equipment was cleaned with a brush in a tap water and Alconox wash.
- Equipment was rinsed with tap water.
- Equipment was rinsed with distilled and deionized water.

3.2.5 INVESTIGATION-DERIVED WASTE

Sampling activities performed as part of the BEE generated a variety of IDW including used person protective equipment (PPE), decontamination fluids, and disposable sampling equipment. The procedures and practices of handling IDW generated during the BEE site activities were consistent with the NJDEP FSPM (NJDEP, 2005) and the guide "Management of Investigation-Derived Waste During Site Inspections" (USEPA, 1991).

Decontamination of sampling equipment generated IDW consisting of decontamination waters. Decontamination water was re-applied to the ground surface since all of the following criteria were met:

- The water was not permitted to migrate off site.
- There was no potential for contaminating a previously uncontaminated aquifer.
- The discharge would not cause contamination to the ground surface soil.
- There was no immediate threat to human health or the environment.
- There was no indication from field instrumentation or visual observations to indicate that the material is a potential RCRA hazardous waste.

IDW was also generated from use of PPE (e.g., gloves) and disposable equipment (filters, tubing, soil scoops) during the BEE. This material was stored in plastic garbage bags and taken off site for proper disposal.

3.2.6 QUALITY CONTROL

To ensure the quality of the data collected during the 2010 BEE sampling event, all field procedures were conducted in accordance with methodologies outlined in **Section 3.1** and the BEE WP (Shaw, 2010). The field sampling methodologies utilized were developed based on the NJDEP FSPM, N.J.A.C. 7:14 – Technical Requirements for Site Remediation, and N.J.A.C 7:14B – USTs. All laboratory analyses were conducted by NJDEP certified and National Environmental Laboratory Accreditation Program approved laboratories. Included within **Appendix E** is a table that provides the minimum of ESC for each contaminant included in the analytical program and the subcontract laboratory's expected Method Detection Limits (MDLs).

3.2.6.1 COMPLETENESS

Completeness is a measure of the amount of information that must be collected during a field investigation to allow for a successful achievement of the sampling activities. Sampling completeness for this BEE was assessed through the evaluation of the total number of samples proposed in the WP versus the actual number of samples collected and analyzed. A total of 151 samples were proposed for collection in the WP and 152 samples were collected. Thus, the resulting sampling completeness for this project was 100.6 percent for all matrices. One proposed surface water sample (CW3-SW8) was not collected because there was no water existing in Shrewsbury Creek at the proposed location. The furthest upgradient location on Shrewsbury Creek at which surface water existed and a sample was able to be collected was location CW3-SW8. One surface water and one sediment sample (CWA-SD1 and

CWA-SW1) were added to the sampling and analysis program during field operations. The samples added were collected within Shrewsbury Creek at the furthest point downstream on the CWA property.

3.2.6.2 REPRESENTATIVENESS AND DOCUMENTATION QUALITY REVIEW

Representativeness is a measure of the degree to which the results accurately reflect the media that were sampled. Procedures based on NJDEP protocol were utilized to ensure that samples collected were representative of their respective media. These procedures contained sampling protocols (e.g., sediment sampling) and field handling protocols (e.g., storage, shipping) which were designed to protect the representativeness of the collected samples. Field activities were audited and documentation of sample collection, shipment, and receipt activities were reviewed for accuracy and completeness and to ensure the implementation of standard operating procedures (SOPs).

Review of accuracy, precision, and completeness of sample documentation and observations from field audits suggest that the designed sampling program for the BEE was followed and resulted in the collection of representative samples.

3.2.6.3 REVIEW OF QC SAMPLES

Standard QC checks were implemented during all field and laboratory activities conducted during the 2010 BEE. These included field checks such as the collection of field/rinse blanks, trip blanks, and duplicate samples for laboratory analysis, as well as laboratory QC checks such as method blanks. Laboratory reports included in **Appendix F** contain a full description of the final results, methods of analysis, levels of detection, and method blank data.

Analytical data were evaluated against method blank, trip blank, and field blank data in order to evaluate the contribution of constituents detected in QC samples to the analytical results. Results of the analyses of field/rinse blanks were used to assess the effectiveness of equipment decontamination procedures in preventing cross-contamination between samples and to determine if compounds detected in the collected samples were attributable to the sampling equipment. One field/rinse blank was collected on each day of sampling and analyzed for all parameters.

Trip blanks were used to determine if any on-site atmospheric contaminants were seeping into the sample bottles, or if cross-contamination of samples was occurring during shipment or storage of the sample containers. Trip blanks are applicable to aqueous VOC samples. The trip blanks accompanied the samples into the field prior to sampling, remained with the collected samples during the sampling sequence, accompanied all aqueous VOC sample bottles shipped to the laboratory, and remained with the samples at the off-site laboratory prior to analysis. Trip blanks were analyzed from each day of sampling and analyzed for VOCs, except for on the second day of sampling when a trip blank was not supplied by the laboratory with the sample bottles. Due to the low frequency and concentrations of VOCs detected in aqueous samples, this did not impact the analyses; in most instances, the trip blanks were demonstrated analyte-free. Results of method blank analyses were used to determine if constituents detected in samples were introduced during sample extraction and analysis.

A summary of constituents detected in blank samples (field/rinse blanks and trip blanks) is included in **Appendix F**. Most of the analytes detected in blank samples are common laboratory contaminants and were likely introduced into the samples during laboratory extraction/analysis. The low concentrations of constituents identified in field/rinsate blanks indicate that no significant cross-contamination occurred between samples.

Field duplicates were collected to identify the cumulative precision of the sampling and analytical process and sent to the laboratory blind. The Relative Percent Difference (RPD) was calculated only for those analytes which were detected in both samples of the duplicate pair. Analytes that were non-detect in either or both of the samples of the duplicate pair were excluded from the duplicate assessment. Precision control criterion was established at 50% RPD for the aqueous and solid samples. All analytes exceeding criteria are treated as estimated (“J” qualified) for the field duplicate pair based upon high RPD(s). Most of the high RPDs were observed for analytes that were detected at very low concentrations that were laboratory qualified as estimated due to low concentrations at or below the MDL. The poor precision is probably due to sample non-homogeneity and/or sample matrix effects with the given

analysis. A summary of RPDs for duplicate sample pairs collected during the 2010 BEE is included in **Appendix F**.

Full data validation was not required to achieve the BEE objectives.

3.2.6.4 WORK PLAN VARIANCES

Overall, the sampling and analyses performed were sufficient to meet project objectives and comply with the WP. Variances that occurred during implementation of the field and laboratory efforts were minimal. One proposed surface water sample (CW3-SW8) was not collected because there was no water existing in the creek at the proposed location. The furthest upgradient location at which surface water existed was sampled (location CW3-SW8) as prescribed in the WP. One surface water and one sediment sample (CWA-SD1 and CWA-SW1) were added to the sampling and analysis program during field operations. The two samples were collected within Wampum Brook at the furthest point downstream on the CWA property.

3.2.6.5 REVIEW OF TENTATIVELY IDENTIFIED COMPOUNDS

The VOC+15 and SVOC+15 lists of organic compounds designated for analysis included up to 30 non-targeted organic compounds as detected by GC/MS analysis. A summary of total TICs in samples collected during the 2010 BEE sampling event is provided in **Appendix F**. All detected non-targeted compounds are reported as TICs in the laboratory deliverables, also included in **Appendix F**.

A qualitative review was conducted and TICs were identified at low concentrations in one or more soil, sediment, and surface water samples. TICs are commonly observed in soil, surface water, and sediment samples and are likely attributable to naturally-occurring organic constituents due to elevated carbon content. The majority of observed TICs are commonly detected constituents that were present at low concentrations.

3.2.6.6 METHOD DETECTION LIMITS

In order to accurately identify COPECs in environmental media, it is useful to be able to detect potential contaminants that are present at concentrations greater than the ESC. Thus, one data quality objective (DQO) of the analytical program is to have MDLs at concentrations at or less than the ESC wherever possible. Unfortunately, for some parameters, the conservative benchmarks used as ESC are less than normal laboratory MDLs. The DQO for surface water samples was set at the lower of the freshwater ESC and the saltwater ESC, the DQO for sediment samples was set at the lower of the freshwater sediment ESC and the saltwater sediment ESC, and the DQO for soil was set at the soil ESC (**Section 3.3**). Included within **Appendix E** is a table that provides the minimum of ESC for each contaminant included in the analytical program and the subcontract laboratory's expected MDLs.

In surface water, MDLs for hexachlorobenzene, toxaphene, 4,4′-DDE, cadmium, copper, and silver were greater than the DQOs in all samples. The MDL for benzo(*a*)anthracene was greater than the DQO in one sample and the MDLs for Aroclor 1016 and Aroclor 1254 were greater than the DQOs in some of the samples.

In sediments, MDLs for acrylonitrile, methylene bromide, diethyl phthalate, 2-chlorophenol, 2,4-dichlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, pentachlorophenol, 4-nitrophenol, and toxaphene were greater than the DQOs in all samples. The MDLs for several PAHs [acenaphthene, acenaphthylene, benzo(*a*)pyrene, benzo(*k*)fluoranthene, dibenzo(*a,h*)anthracene, fluorene, 2-methylnaphthalene, and naphthalene], phthalates [bis(2-ethylhexyl) phthalate, butyl benzyl phthalate, and di-*n*-butyl phthalate)], phenolic compounds (phenol and 2-4-dimethylphenol), other SVOCs (2,4-dinitrotoluene, hexachlorobutadiene, hexachloroethane, and nitrobenzene), pesticides (toxaphene, 4,4′-DDT, and heptachlor), PCBs (Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1248, Aroclor 1260), and metals (antimony, selenium, and silver) were greater than the DQOs in some of the samples.

It should be noted that a MDL greater than the DQO does not imply that the MDL is greater than the media-specific ESC. Additionally, many of the elevated MDLs were in samples in which the parameter was detected; thus, the elevated MDL has no impact on the ability to detect the parameter. The evaluation of COPECs with regard to elevated MDLs is discussed in more detail in **Section 3.4**.

3.3 IDENTIFICATION OF STANDARDS AND BENCHMARKS

The TRSR references several sources for ESC for use in a BEE. This includes ESC sources for sediment, surface water, and soil. The NJDEP also maintains a table of current recommended ESC based on those aforementioned sources as well as others (NJDEP, 2009c). The SRP's Environmental Toxicology and Risk Assessment Unit has developed this table from various sources to allow ease of reference for selection of ESC for surface water, sediment, and soil.

Not all contaminants have listed ESC for all media; contaminants detected in environmental media without ESC are identified in this BEE report, but the development of ESC is beyond the scope of the BEE. The most recent version of the cited ESC is used in this BEE. The NJDEP ESC table, which was last updated on March 10, 2009, is presented in **Appendix E**. Also included within **Appendix E** is a table that provides the minimum of those ESC for each contaminant and the subcontract laboratory's MDLs.

Some contaminants for some media have multiple values provided. The following sections describe the process used in selection of appropriate ESC for this BEE and is meant to provide a systematic approach which maintains appropriate conservativeness in this screening level assessment.

3.3.1 IDENTIFICATION OF STANDARDS AND BENCHMARKS FOR SEDIMENT

For sediments, the TRSR referenced sources are the following:

- USEPA Briefing Report to the EPA Science Advisory Board on the Equilibrium Partitioning Approach to Generate Sediment Quality Criteria (USEPA, 1989b).
- USEPA Technical Basis for Deriving Sediment Quality Criteria for Nonionic Organic Contaminants for the Protection of Benthic Organisms by Using Equilibrium Partitioning (USEPA, 1993a).
- Effects Range-Low (ER-L) and Effects Range-Median (ER-M) values (Long et al., 1995).
- Lowest Effect Level (LEL) and Severe Effect Level (SEL) values (Persaud et al., 1993).

The first two sources provide a method for determining screening criteria based on the equilibrium partitioning approach which uses applicable surface water screening criteria organic carbon partitioning coefficients. As such, these criteria are a function of the site-specific organic carbon content in the sediment and are usually presented based on 1% total organic carbon content.

The ER-L and ER-M values were developed for marine environments and are based on evaluation of data from numerous studies including equilibrium partitioning modeling, laboratory bioassays, and field studies. The ER-L values represent a concentration at which adverse effects are only found in approximately 10% of the studies. The ER-M values represent a concentration at which adverse effects are found in approximately 50% of the studies.

The LEL and SEL values were developed for freshwater environments and are also based on evaluation of data from numerous studies and include equilibrium partitioning modeling, laboratory bioassays, and field studies, as well as sediment background levels. The LEL values represent a level of contamination that has no effect on the majority of sediment-dwelling organisms. The SEL values represent a level of contamination which is likely to affect the health of sediment-dwelling organisms.

NJDEP (1998) recommends using benchmarks listed in the TRSR from Long et al. (1995) and Persaud et al. (1993) as well as chronic values from MacDonald et al. (1992) for several VOCs.

The NJDEP maintains a table of current recommended ESC based on these aforementioned sources as well as others (NJDEP, 2009c). This table often has more than one value for a given parameter and a given medium (e.g., sediment, surface water, soil). For this BEE, the three sources listed above (Long et al., 1995; Persaud et al., 1993; MacDonald et al., 1992) as presented in the NJDEP table (NJDEP, 2009c) are used as the primary source of ESC.

For saltwater sediments, the ER-L (Long et al., 1995) is used as the ESC. If an ER-L is not available, but a chronic value based on equilibrium partitioning (MacDonald et al., 1992) is available, then the chronic value is used. If no values are provided from one of these two primary sources, then values

available from secondary sources [e.g., USEPA Region V ecological screening values (USEPA Region 5, 2003)] are used.

For freshwater sediments, the LEL (Persaud et al., 1993) is used as the ESC. If an LEL is not available, but the table recommends the use of either the saltwater chronic value based on equilibrium partitioning (MacDonald et al., 1992) or the saltwater ER-L (Long et al., 1995), then the saltwater chronic value or saltwater ER-L is used. It should be noted that though the table may list a value as an LEL it may not actually be the LEL as determined by Persaud et al. (1993). If no values are provided from one of these three primary sources, then values available from secondary sources [e.g., USEPA Region V ecological screening values (USEPA Region 5, 2003), NOAA Quick Screening Reference Tables (Buchman, 2008)] are used.

3.3.2 IDENTIFICATION OF STANDARDS AND BENCHMARKS FOR SURFACE WATER

For surface water, the TRSR referenced sources are the following:

- USEPA Ambient Water Quality Criteria, 40 CFR Part 131 (USEPA, 2006a; 2010).
- New Jersey Surface Water Quality Standards (N.J.A.C., 2010).

These sources contain values for freshwater and saltwater and include values for the protection of human health and protection of aquatic organisms from effects due to both acute and chronic exposures. The NJDEP table (NJDEP, 2009c) includes values from these sources and they are used as the primary source of surface water ESC. Values developed for the protection of human health are never used as ESC for an ecological evaluation. If provided, values used for the protection from chronic effects are used as ESC. Acute values are only used as ESC if, values used for the protection of aquatic life from chronic effects are not available.

The freshwater surface water ESC for several metals are functions of site-specific hardness. The equations used for these calculations are provided with the NJDEP table (**Appendix E**). The minimum hardness detected in a surface water body during the BEE investigation near an individual site where freshwater criteria are potentially applicable was used to calculate the site-specific ESC for the individual site. Freshwater hardness-dependent criteria were not calculated for individual sites where only saltwater criteria are applicable and the magnitude of the measured hardness render the calculated criteria irrelevant.

For chromium, values may be presented for total chromium, trivalent chromium, or hexavalent chromium. When available from primary sources, the value for total chromium is used as the ESC for this BEE. If not available from a primary source for total chromium, then the value for trivalent chromium is used for this BEE. Values provided for hexavalent chromium are used as ESC in this BEE if, and only if, values from primary sources for total chromium and trivalent chromium are not available. The freshwater ESC used in this BEE is based on total chromium and the saltwater ESC is based on hexavalent chromium.

The freshwater surface water ESC for pentachlorophenol is a function of pH. A pH value of 6 was used to determine an ESC for surface water bodies at the MP and a value of 5.76 was used at the CWA; these represent the minimum pH values measured during the BEE investigation.

If no values are provided from one of these primary sources, then values available from secondary sources [e.g., USEPA Region V ecological screening values (USEPA Region 5, 2003)] are used. The NJDEP table also provides some values that were developed specific to Shell Oil at an active remediation site. These values are not used as ESC in this BEE, since other sources were available.

3.3.3 IDENTIFICATION OF STANDARDS AND BENCHMARKS FOR SOIL

For soil, the TRSR referenced sources are the following:

- Fish and Wildlife Service Contaminant Hazard Reviews (Eisler, 1999).
- Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants (Will and Suter, 1995).

The contaminant hazard reviews available from the Fish and Wildlife Service do not necessarily provide values to use as soil ESC but provide information related to toxicity, bioaccumulation, and bioavailability of contaminants to wildlife. This information is utilized by others (USEPA, 2005a; Efroymson et al., 1997a; Sample et al.,1996) in developing appropriate values.

The toxicological benchmarks for plants cited above have been revised (Efroymson et al., 1997b) and, like the 1994 revision, were developed for Oak Ridge National Laboratory (ORNL) using a method similar to that used for calculating the ER-L and ER-M values (Long and Morgan, 1990; Long et al., 1995). Other benchmarks for the protection of wildlife for contaminants in soil have also been derived for ORNL (Sample et al., 1996). In this document, several species-specific benchmarks are determined based on food chain modeling for different contaminants. The NJDEP table provides the minimum of the plant toxicity and wildlife benchmarks as wildlife preliminary remediation goals (PRGs) for potential use as soil ESC.

The USEPA (2005a) developed ecological soil screening levels (Eco-SSLs). These represent the result of a multi-stakeholder group consisting of federal, state, consulting, industry, and academic participants performed in order to conserve resources by limiting the need for EPA and other risk assessors to perform repetitious toxicity data literature searches and data evaluations for the same contaminants at every site. The general approach to develop these Eco-SSLs involved a literature search, screening the literature for acceptability, evaluating the results for applicability in deriving the Eco-SSLs, and deriving the value. These values represent a broad spectrum of wildlife and include mammals, birds, plants, and soil invertebrates. The literature screened in this process included that used by ORNL in developing wildlife PRGs.

The USEPA Eco-SSLs (USEPA, 2005a), the ORNL wildlife PRGs (Sample et al., 1996), and the ORNL plant toxicity benchmarks (Efroymson et al., 1997b), are considered the primary source of values for ESC in this BEE. The most conservative (i.e., minimum) values from the NJDEP tables (2009c) that represent either the USEPA Eco-SSLs or the ORNL wildlife PRGs or plant toxicity benchmarks are used as ESC for this BEE. If values are not available from either of these sources, then secondary sources are used for ESC. These include the USEPA Region V ecological screening values (USEPA Region 5, 2003). Though developed from food chain models, as were those for Eco-SSLs and wildlife PRGs, these values did not involve as comprehensive an effort in either the literature review or screening for acceptability and do not provide sufficient supporting documentation.

3.4 IDENTIFICATION OF COPECS

COPECs are defined for the purposes of this BEE as those constituents that were detected at concentrations greater than the appropriate screening benchmarks in any of the samples from a given medium from a site. For some parameters, the conservative benchmarks used as ESC are lower than normal laboratory method detection limits (MDLs). If these parameters are not detected, it is possible that they are present at a concentration exceeding the ESC. This is particularly important for surface water and sediment, the two media to which ecological receptors may be directly and routinely exposed. Therefore, for parameters not detected in samples from either surface water or sediment, the MDLs were also compared to the ESC. These parameters were not identified as possible COEPCs if any of the following were true:

- These parameters were not identified as COPECs in other site media.
- These parameters were not detected exceeding the ESC in samples for which the MDL was not greater than the conservative ESC.
- The MDLs for these parameters were only marginally greater than the conservative ESC, or related parameters (e.g., other chlorinated benzenes, other related pesticides) were not detected above ESC in these samples.
- These parameters are not expected to be found as site-related contaminants.

For surface water, MDLs for a few SVOCs, pesticides, PCBs, and metals were above one or both ESC in some or all samples.

- The MDLs for hexachlorobenzene exceeded the freshwater ESC in all surface water samples; there is no saltwater ESC. However, this organic compound was not identified as a COPEC in other media at the sites and is not considered a COPEC in surface water. The MDL for benzo(*a*)pyrene exceeded the freshwater ESC in one sample at one site; it was, however, detected in that sample and is considered a COPEC at that site.

- The MDLs for toxaphene exceeded the freshwater and saltwater ESC in all surface water samples; however, this pesticide was not identified as a COPEC in other media at the sites and is not considered a COPEC in surface water. The MDLs for 4,4′-DDE exceeded the freshwater ESC in all surface water samples; there is no saltwater ESC. Though 4,4′-DDE was identified as a COPEC in soil, groundwater, or sediment at some sites, 4,4′-DDE is not considered to be mobile in abiotic media and is expected to adsorb strongly to organic matter; however, based on the extremely low ESC for 4,4′-DDE in surface water [0.00000000451 micrograms/liter (µg/L)], 4,4′-DDE is considered a possible COPEC in surface water if it is identified as a COPEC in sediment.

- The MDLs for Aroclor 1016 and Aroclor 1254 were marginally greater than the freshwater ESC at some sites, but less than the saltwater ESC. These Aroclors are considered possible COPECs in surface water only if they are detected at concentrations exceeding the ESC.

- The MDLs for cadmium, copper, and silver were greater than one or both ESC in some or all samples. The MDLs for cadmium and silver exceeded the freshwater ESC in all samples but were below the saltwater ESC. The MDLs for copper exceeded the saltwater ESC but were below the freshwater ESC. Cadmium, copper, and silver are identified as possible COPECs in surface water if they are identified as COPECs in other site media.

For sediment, MDLs for some VOCs, SVOCs, pesticides, PCBs, and metals were greater than one or both ESC in some or all samples. It should be noted that organic parameters that were not detected in the BEE investigation sediment samples were reported at the MDL. Those in the SI data are presented as non-detect at a reporting limit; organic parameters were routinely presented detectable to a detection limit concentration of one-tenth this reporting limit.

- The MDLs for acrylonitrile and methyl bromide exceeded the freshwater sediment ESC in all samples; there are no saltwater sediment ESC. These were not identified as COPECs in other media and are not considered COPECs in sediment. The MDL for 1,1-dichloroethene exceeded the freshwater ESC in one sample at one site in the BEE investigation and in all samples in the SI. It was not detected at the BEE investigation site in the other samples nor was it identified as a COPEC in other media at these sites; and it is not considered a COPEC in sediment at the site. The MDL for 1,2-dichlorobenzene exceeded the saltwater ESC in all SI samples; it was not identified as a COPEC in other media at those sites and is not considered a COPEC in sediment.

- The MDLs for nine PAHs [acenaphthene, acenaphthylene, anthracene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, dibenzo(*a,h*)anthracene, fluorene, 2-methylnaphthalene, and naphthalene] were only marginally greater than the ESC in some or all samples from some sites. In samples where MDLs exceeded applicable ESC in only some samples, these PAHs were either detected in samples at the sites and considered COPECs or not detected in the samples at the site for which MDLs met the ESC and are not considered COPECs. In samples where MDLs exceeded applicable ESC in all samples, these PAHs were considered possible COPECs in sediment if identified as COPECs in other site media.

- The MDLs for four phthalates [bis(2-ethylhexyl) phthalate, butyl benzyl phthalate, diethyl phthalate, and di-*n*-butyl phthalate) exceeded the ESC in some or all samples at some sites. Most of these MDLs were only marginally greater than the ESC, and these phthalates were not detected in sediment samples for which the MDLs met the ESC or identified as COPECs in other site media. These phthalates are not considered COPECs in sediment.

- The MDLs for several phenolic compounds (phenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, pentachlorophenol, 2,4-dimethylphenol,

4-nitrophenol, and 2,4-dinitrophenol) exceeded the ESC in some or all samples at some sites. Of these, only 2,4-dintirophenol was detected in any sediment samples and it is considered a COPEC at those sites. The other phenolic compounds were not identified as COPECs in other media at these sites and were not detected in other samples for which the MDLs met the ESC; these phenolic compounds are not considered COPECs at the sites.

- The MDLs for four other SVOCs (2,4-dinitrotoluene, hexachlorobutadiene, hexachloroethane, 1,2,4-trichlorobenzene, hexachlorobenzene, and nitrobenzene) exceeded the ESC in some or all samples at some sites. Of these, hexachlorobutadiene was detected in sediment at one site and it is considered a COPEC at that site and was identified as a COPEC in surface water at another site; it is considered a possible COPEC in sediment at that site. The other SVOCs were not identified as COPECs in other media at these sites, were not detected in other samples for which the MDLs met the ESC, and related compounds were not identified as COPECs at the sites; these SVOCs are not considered COPECs at the sites.
- The MDLs for three pesticides (toxaphene, 4,4′-DDT, and heptachlor) exceeded the ESC in some or all samples at some sites. The MDLs for toxaphene exceeded the freshwater sediment ESC in all samples; there is no saltwater sediment ESC for toxaphene. Toxaphene was not identified as a COPEC in other media and it is not considered a COPEC in sediment. The MDL for 4,4′-DDT exceeded the freshwater sediment ESC in one samples; it was, however, detected in that sample and is considered a COPEC at the site. The MDLs for heptachlor only marginally exceeded the saltwater sediment ESC in some samples but were all below the freshwater sediment ESC.
- The MDLs for five PCB mixtures (Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1248, and Aroclor 1260) marginally exceeded the ESC in some or all samples at some sites. The Aroclor 1221 and Aroclor 1232 MDLs slightly exceeded the saltwater ESC in some samples at one site, but were below the freshwater ESC; these Aroclors were not detected in the samples where the MDLs met the ESC and are not considered COPECs at the sites. The MDL for Aroclor 1248 in one sample marginally exceeded the freshwater ESC; Aroclor 1248 was not detected in the other samples and it is not considered a COPEC at the site. The MDLs for Aroclor 1016 and Aroclor 1260 marginally exceeded the ESC in samples at several sites. Aroclor 1260 was detected in samples at three sites and is considered a COPEC at those sites. Aroclor 1016 and Aroclor 1260 were not detected in any of the other sediment samples at the other sites where MDLs met the ESC and they were not identified as COPECs in other media; Aroclor 1016 and Aroclor 1260 are not considered COPECs in sediment at these sites.
- The MDLs of three metals (antimony, selenium, and silver) exceeded the ESC at a few sites. Where selenium MDLs exceeded the ESC, selenium was detected exceeding the ESC and selenium is considered a COPEC. The MDLs for antimony and silver exceeded the ESC in only one sample at one site. Antimony and silver were not detected at concentrations exceeding the ESC in the other samples at the site where the MDLs met the ESC and these metals are not considered COPECs in sediment at the site.

The following sections present the concentrations measured in background media during the BEE investigation and address the identification of COPECs, as well as possible COPECs based on MDL review, for each of the sites and parcels addressed in this BEE.

3.4.1 CONSTITUENTS IN BACKGROUND MEDIA

As noted in **Section 2.4.7**, the local geology and soil types determine the levels of naturally-occurring constituents present in soil. These natural background levels (**Table 2-3**) are meant to be inclusive of naturally-occurring levels in soil as well as those from regional deposition but not those from point source contamination. The local geology and soil types determine the levels of naturally-occurring constituents present in soil (Dooley, 2001; Sanders, 2003; BEM Systems, Inc., 1998).

Background levels for FTMM were reported by Weston (1995) in the SI report (**Appendix H**). FTMM-specific background levels were reported for soil, groundwater, surface water, and sediment, and

background levels were reported for Monmouth County for soil and groundwater for select constituents. In addition to characterizing background levels related to soil geology and regional deposition, the FTMM-specific levels also incorporate effects from local land use (**Section 2.4.9**).

Background concentrations of constituents were also investigated during the BEE investigation. Surface water and sediment samples were analyzed for the same constituents as were site samples. Nine surface water and sediment samples were collected from locations upgradient of the MP on Husky Brook, Mill Creek, Lafetra Creek, and Northern Branch of Parkers Creek. One surface water and two sediment samples were collected from locations upgradient of the CWA on Shrewsbury Creek. One surface water and sediment sample were collected from Wampum Brook in the CWA, but upgradient of site activities. Additionally, one surface water and one sediment sample each were collected from both Shrewsbury Creek and Wampum Brook in the CWA at points near the downgradient (eastern) border of the CWA. The background samples are intended to describe the general background characteristics of surface water and sediment in the FTMM area from natural and regional anthropogenic inputs. Though background samples collected on Mill Creek are downgradient of the CWA, they are intended to provide information regarding the constituents and concentrations that may enter the MP from upgradient natural or anthropogenic sources; the samples collected immediately downgradient of the CWA on Shrewsbury Creek and Wampum Brook provide additional information. All background sampling locations were in freshwater areas, and the following discussions compare results to both freshwater and saltwater criteria since background concentrations can affect both freshwater and saltwater areas on site.

3.4.1.1 MAIN POST BACKGROUND

3.4.1.1.1 Main Post Surface Water Background

Nine surface water samples were collected from locations upgradient of the MP activities. Two were collected from Husky Brook, three were collected from Mill Creek, three were collected from Lafetra Creek, and one was collected from the North Branch of Parkers Creek. Parameters detected in surface water samples are presented in **Table D-1**.

VOCs. Three VOCs were detected in surface water from MP background samples. Chloroform and PCE were detected in one sample each, and *cis*-1,2-dichloroethene was detected in three samples. All detected concentrations were less than the available freshwater and saltwater ESC.

Pesticides/PCBs. No pesticides or PCBs were detected in surface water from MP background samples.

SVOCs. Four SVOCs were detected in surface water from MP background samples. Benzoic acid and 1,2,4-tetrachlorobenzene were detected in one sample each; anthracene and benzo(*a*)anthracene were detected in two samples each. The detected concentrations of anthracene and benzo(*a*)anthracene were greater than the applicable freshwater or saltwater ESC.

Metals. A total of 14 metals were detected in surface water from MP background samples: aluminum, arsenic, barium, calcium, iron, lead, magnesium, manganese, mercury, nickel, potassium, sodium, thallium, and zinc. Only lead was detected at concentrations greater than the applicable freshwater or saltwater ESC.

A summary of the MP background surface water concentrations is presented in **Table 3-3**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.1.1.2 Main Post Sediment Background

Nine sediment samples were collected from locations upgradient of the MP activities. Two were collected from Husky Brook, three were collected from Mill Creek, three were collected from Lafetra Creek, and one was collected from the North Branch of Parkers Creek. Parameters detected in surface sediment samples are presented in **Table D-2**.

VOCs. Four VOCs were detected in sediment from MP background samples. Acetone was detected in six samples, methylene chloride was detected in four samples, toluene was detected in one

sample, and 2-butanone was detected in two samples. All detected concentrations were less than the available freshwater and saltwater sediment ESC.

Pesticides. Two pesticides (4,4′-DDD and 4,4′-DDE) were detected in sediment from MP background samples. 4,4′-DDD and 4,4′-DDE were detected in samples from Mill Creek and Husky Brook and most detected concentrations exceeded the saltwater sediment ESC but not the freshwater sediment ESC.

PCBs. Two PCB mixtures (Aroclor 1242 and Aroclor 1254) were detected in sediment from MP background samples. PCBs were detected in samples from Mill Creek. Most detected concentrations exceeded the fresh water or saltwater sediment ESC.

SVOCs. A total of 20 SVOCs were detected in sediment from MP background samples. Bis(2-ethylhexyl) phthalate, butyl benzyl phthalate, and dimethyl phthalate were detected in some sediment samples, but, as noted elsewhere, phthalates are commonly found in field and laboratory QC samples and may not be representative of actual conditions. Other SVOCs detected in sediment from MP background samples were acenaphthene, acenaphthylene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*b*)fluoranthene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, chrysene, dibenzo(*a,h*)anthracene, dibenzofuran, 3,3′-dichlorobenzidine, fluoranthene, fluorene, indeno(1,2,3-*cd)*pyrene, phenanthrene, and pyrene. Most were found at concentrations that were greater than the freshwater or saltwater sediment ESC.

Metals. A total of 23 metals were detected in sediment from MP background samples: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc. Most of the metals with applicable freshwater or saltwater sediment ESC were found at concentrations in one or more sediment sample exceeding the ESC: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc.

A summary of the MP background sediment concentrations is presented in **Table 3-4**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater sediment ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.1.2 CHARLES WOOD AREA BACKGROUND

3.4.1.2.1 Charles Wood Area Surface Water Background

Two surface water samples were collected from locations upgradient of the CWA activities. One was collected from Shrewsbury Creek and one was collected from Wampum Brook. Parameters detected in surface water samples are presented in **Table D-3**.

VOCs. One VOC was detected in surface water from CWA background samples. Methyl *tert*-butyl ether (MTBE) was detected in one sample. The detected concentration was less than the freshwater and saltwater ESC.

Pesticides. One pesticide was detected in surface water from CWA background samples. 4,4′-DDD was detected in one surface water sample. There are no available freshwater or saltwater ESC for 4,4′-DDD.

PCBs. One PCB mixture was detected in surface water from CWA background samples. Aroclor 1242 was detected in one surface water sample at a concentration greater than both the freshwater and saltwater ESC.

SVOCs. One SVOC was detected in surface water from CWA background samples. Anthracene was detected in one surface water sample; the concentration was greater than the applicable freshwater ESC.

Metals. A total of 19 metals were detected in surface water from CWA background samples: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, sodium, vanadium, and zinc. The detected

concentrations of total cadmium, total chromium, total copper, total lead, total vanadium, and total zinc exceeded the applicable freshwater ESC in one or both samples; however, only the dissolved concentrations of cadmium, cobalt, and lead were above the applicable freshwater ESC. These exceedances of dissolved concentration ESC were all from the surface water sample from Wampum Brook. Concentrations of total nickel and dissolved nickel exceeded the saltwater ESC. Total chromium, copper, lead, and zinc also exceeded the saltwater ESC in at least one sample.

A summary of the CWA background surface water concentrations is presented in **Table 3-5**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.1.2.2 Charles Wood Area Sediment Background

Three sediment samples were collected from locations upgradient of the CWA activities. Two were collected from Shrewsbury Creek and one was collected from Wampum Brook. Parameters detected in surface sediment samples are presented in **Table D-4**.

VOCs. Five VOCs were detected in sediment from CWA background samples. Acetone, methylene chloride, and 2-butanone were detected in one or two samples from Shrewsbury Creek. Styrene and toluene were detected in the sample from Wampum Brook. All detected concentrations were less than the available freshwater and saltwater sediment ESC.

Pesticides. One pesticide (4,4′-DDD) was detected in sediment from CWA background samples. 4,4′-DDD was detected in one sample from Shrewsbury Creek. The detected concentration was less than the applicable freshwater sediment ESC but above the saltwater sediment ESC.

PCBs. No PCBs were detected in sediment from CWA background samples.

SVOCs. A total of 18 SVOCs were detected in sediment from CWA background samples. Dimethyl phthalate was detected in all sediment samples, but, as noted elsewhere, phthalates are commonly found in field and laboratory QC samples and may not be representative of actual conditions. Other SVOCs detected in sediment from CWA background samples were acenaphthene, acenaphthylene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*b*)fluoranthene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-*cd*)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene. Though all 18 were detected in Wampum Brook, dimethyl phthalate and three of the PAHs [anthracene, benzo(*a*)anthracene, and benzo(*a*)pyrene] were also detected in Shrewsbury Creek. Most of the PAHs in Wampum Brook were found at concentrations that were greater than the freshwater or saltwater sediment ESC.

Metals. A total of 20 metals were detected in sediment from CWA background samples: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, sodium, vanadium, and zinc. Seven of the metals with applicable freshwater or saltwater sediment ESC were found at concentrations in one or more sediment sample greater than the ESC: barium, cadmium, chromium, lead, mercury, nickel, and selenium.

A summary of the CWA background sediment concentrations is presented in **Table 3-6**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater sediment ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.1.3 CHARLES WOOD AREA DOWNGRADIENT SURFACE WATER

Two surface water samples were collected from locations downgradient of the CWA activities. One was collected from Shrewsbury Creek and one was collected from Wampum Brook. Parameters detected in surface water samples are presented in **Table D-5**.

VOCs. VOCs were not detected in surface water from CWA downgradient samples.

Pesticides. No pesticides were detected in surface water from CWA downgradient samples.

PCBS. One PCB mixture was detected in surface water from CWA downgradient samples. Aroclor 1242 was detected in the sample from Wampum Brook at a concentration less than that from the Wampum Brook background sample. The detected concentration was above both the freshwater and saltwater ESC.

SVOCs. One SVOC was detected in surface water from CWA background samples. Hexachlorobutadiene was detected in the Shrewsbury Creek downgradient sample at a concentration greater than the applicable freshwater ESC.

Metals. A total of 15 metals were detected in surface water from CWA downgradient samples: aluminum, arsenic, barium, calcium, cadmium, cobalt, iron, lead, magnesium, manganese, nickel, potassium, selenium, sodium, and zinc. The detected concentrations of total cadmium exceeded the freshwater ESC in Wampum Brook but not in Shrewsbury Creek; the dissolved concentrations were below the ESC. Total lead and dissolved lead exceeded the freshwater ESC in both samples. Dissolved selenium also slightly exceeded the freshwater ESC in the Shrewsbury Creek sample.

A summary of the CWA downgradient surface water concentrations is presented in **Table 3-7**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.1.4 CHARLES WOOD AREA DOWNGRADIENT SEDIMENT

Two sediment samples were collected from locations downgradient of the CWA activities. One was collected from Shrewsbury Creek and one was collected from Wampum Brook. Parameters detected in surface sediment samples are presented in **Table D-6**.

VOCs. Two VOCs were detected in sediment from CWA downgradient samples. Acetone was detected in both sediment samples and methylene chloride was detected in the sample from Shrewsbury Creek. All detected concentrations were less than the available freshwater and saltwater sediment ESC.

PCBs. Aroclor 1242 was detected in sediment from CWA downgradient samples. Aroclor 1242 was detected in the sample from Wampum Brook. The detected concentration was below the applicable freshwater sediment ESC but above the saltwater sediment ESC. No other PCBs were detected in sediment from CWA downgradient samples.

SVOCs. A total of eight SVOCs were detected in sediment from CWA downgradient samples. Dimethyl phthalate was detected in both sediment samples, but, as noted elsewhere, phthalates are commonly found in field and laboratory QC samples and may not be representative of actual conditions. Other SVOCs detected in sediment from CWA downgradient samples were anthracene, benzo(*a*)anthracene, and benzo(*a*)pyrene which were detected in both samples, acenaphthene and phenanthrene which were detected in the Shrewsbury Creek sample, and fluoranthene and pyrene which were detected in the Wampum Brook sample. The concentrations of acenaphthene and phenanthrene in the Wampum Brook sample were greater than the freshwater sediment ESC.

Metals. A total of 21 metals were detected in sediment from CWA downgradient samples: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, sodium, vanadium, and zinc. Seven of the metals with applicable freshwater or saltwater sediment ESC were found at concentrations in one or more sediment sample exceeding the ESC: cadmium, chromium, and selenium in both samples; arsenic, mercury, and lead in Shrewsbury Creek; and nickel in Wampum Brook.

A summary of the CWA downgradient sediment concentrations is presented in **Table 3-8**. This table includes the number of detected concentrations, the number of exceedances for freshwater ESC and saltwater sediment ESC, the range of detected concentrations, and the location of the maximum detected concentration.

3.4.2 MAIN POST

3.4.2.1 LANDFILL 2 (FTMM-2)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 2 (FTMM-2).

3.4.2.1.1 COPECs for Soil at Landfill 2 (FTMM-2)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 2 (FTMM-2) as part of the IRP RI investigation (Versar, 2001). A total of 195 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-1**.

SVOCs. A total of 22 SVOCs were detected in near surface soil samples from Landfill 2 (FTMM-2). Of these 22 SVOCs, five were detected at concentrations exceeding the soil ESC in at least one sample. Benzo(*a*)pyrene was detected in five samples at concentrations exceeding the 1.52 mg/kg ESC. Benzo(*a*)anthracene, chrysene, naphthalene and bis(2-ethylhexyl) phthalate were detected at concentrations exceeding the soil ESC in one or two samples each. Bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples, and bis(2-ethylhexyl) phthalate is not considered a COPEC. These four PAHs, benzo(*a*)pyrene, benzo(*a*)anthracene, chrysene, and naphthalene, are considered COPECs in soil at Landfill 2 (FTMM-2).

Pesticides. Eight pesticides were detected in near surface soil samples from Landfill 2 (FTMM-2). Six of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the soil samples and the majority of these contained 4,4′-DDT at concentrations that were greater than the 0.00035 mg/kg ESC. 4,4′-DDD was detected in two samples at concentrations that exceeded the 0.758 mg/kg ESC. 4,4′-DDE was detected in only one sample at a concentration that exceeded the 0.596 mg/kg ESC. Dieldrin was detected in several samples with concentrations exceeding the 0.0049 mg/kg ESC. Endrin was detected in one sample at a concentration exceeding the 0.0101 mg/kg ESC. gamma-BHC was also detected in one sample at a concentration exceeding the 0.005 mg/kg ESC. These six pesticides (4,4′-DDD, 4,4′-DDT, 4,4′-DDE, dieldrin, endrin, and gamma-BHC) are considered COPECs at Landfill 2 (FTMM-2).

PCBs. Four Aroclors were detected in near surface soil samples from Landfill 2 (FTMM-2). These were detected infrequently. Aroclor 1242 and Aroclor 1248 were detected in one sample each. Aroclor 1254 was detected in four samples and Aroclor 1260 was detected in three samples. Most of these concentrations exceeded the ESC. These PCB mixtures (Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260) are considered COPECs in soil at Landfill 2 (FTMM-2).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 2 (FTMM-2) of which most metals were detected in the majority of the samples. Thallium and silver were detected in 1 and 10 samples, respectively. Eighteen metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 2 (FTMM-2). The other 17 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) are considered COPECs in soil at Landfill 2 (FTMM-2).

3.4.2.1.2 COPECs for Groundwater at Landfill 2

Sixteen groundwater monitoring wells at Landfill 2 (FTMM-2) have been monitored during the 2008-2009 time period. Mill Creek could receive groundwater discharge from Landfill 2 (FTMM-2). Mill Creek, in the vicinity of Landfill 2 (FTMM-2), is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-1**.

VOCs. A total of nine VOCs were detected in groundwater samples from Landfill 2 (FTMM-2) during the 2008-2009 time period. Of these 16 VOCs, one (chlorobenzene) was detected at concentrations exceeding the freshwater ESC (47 µg/L); these samples were all collected from one

monitoring well (M2MW03). Mill Creek, in the vicinity of Landfill 2 (FTMM-2), is freshwater. Chlorobenzene is considered a COPEC in groundwater at Landfill 2 (FTMM-2).

SVOCs. A total of four SVOCs were detected in groundwater samples from Landfill 2 (FTMM-2) during the 2008-2009 time period. No SVOCs were detected at concentrations exceeding the freshwater ESC; SVOCs are not considered COPECs in groundwater at Landfill 2 (FTMM-2).

PCBs. No PCBs were detected in groundwater samples from Landfill 2 (FTMM-2) during the 2008-2009 time period. PCBs are not considered COPECs in groundwater at Landfill 2 (FTMM-2).

Pesticides. A total of 19 pesticides were detected in groundwater samples from Landfill 2 (FTMM-2) during the 2008-2009 time period. Of the 19 pesticides, nine pesticides were detected exceeding the freshwater ESC in at least one sample. Aldrin, alpha-chlordane, gamma-chlordane, 4,4′-DDE, 4,4′-DDT, endrin, heptachlor, heptachlor epoxide, and methoxychlor were detected at concentrations above their ESC. Of these, aldrin and endrin were detected exceeding the ESC in only one of the wells, and alpha-chlordane and heptachlor epoxide were detected exceeding the ESC in only two of the monitoring wells. These nine pesticides (aldrin, alpha-chlordane, gamma-chlordane, 4,4′-DDE, 4,4′-DDT, endrin, heptachlor, heptachlor epoxide, and methoxychlor) are considered COPECs in groundwater at Landfill 2 (FTMM-2).

Metals. A total of eight metals were detected in groundwater samples from Landfill 2 (FTMM-2) during the 2008-2009 time period. Of these eight, five (antimony, barium, cadmium, lead, and selenium) were detected in at least one groundwater sample at concentrations exceeding the freshwater ESC. One sample had an antimony concentration exceeding the freshwater ESC of 80 µg/L. Barium concentrations in four of the monitoring wells had concentrations exceeding the 220 µg/L freshwater ESC. Cadmium was detected at a concentration exceeding the freshwater ESC (0.16 µg/L) in one well. Lead and selenium were detected at concentrations exceeding the ESC (5.4 and 5 µg/L, respectively) in most, if not all, of the wells. Antimony, barium, cadmium, lead, and selenium are considered COPECs in groundwater at Landfill 2 (FTMM-2).

3.4.2.1.3 COPECs for Surface Water at Landfill 2 (FTMM-2)

Two surface water samples were collected from Mill Creek adjacent to Landfill 2 (FTMM-2) as part of the 2010 BEE. One sample was collected immediately downstream of a storm water outfall from the area of Building 1150 in Parcel 39 and the other sample was downstream of all storm water outfalls from Parcel 39 (**Appendix K**). Mill Creek, in the vicinity of Landfill 2 (FTMM-2), is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-7**.

Pesticides. No pesticides were detected in surface water samples at Landfill 2 (FTMM-2). Pesticides are not considered COPECs in surface water at Landfill 2 (FTMM-2).

PCBs. No PCBs were detected in surface water samples at Landfill 2 (FTMM-2). PCBs are not considered COPECs in surface water at Landfill 2 (FTMM-2).

VOCs. Three VOCs were detected in at least one of the two surface water samples. PCE, TCE, and *cis*-1,2-dichloroethene were detected at concentrations less than the ESC. VOCs are not considered COPECs in surface water at Landfill 2 (FTMM-2).

SVOCs. Three SVOCs were detected in at least one of the two surface water samples. Anthracene (0.10 and 0.11 µg/L) and benzo(*a*)anthracene (0.22 and 0.23 µg/L) were detected exceeding the freshwater ESC (0.035 and 0.025 µg/L, respectively); 1,2,4-trichlorobenzene was detected in one surface water sample at a concentration less than the ESC. Anthracene and benzo(*a*)anthracene are considered COPECs in surface water at Landfill 2 (FTMM-2).

Metals. A total of 12 metals were detected in surface water samples at Landfill 2 (FTMM-2). One metal was detected at concentrations exceeding the freshwater ESC. Total lead (6.2 and 6.36 µg/L) and dissolved lead (7.86 and 10.1 µg/L) were detected at concentrations exceeding the freshwater ESC for dissolved lead (5.4 µg/L). Lead is considered a COPEC in surface water at Landfill 2 (FTMM-2).

3.4.2.1.4 COPECs for Sediment at Landfill 2 (FTMM-2)

Thirteen sediment samples (including one duplicate sample) were collected from Mill Creek adjacent to Landfill 2 (FTMM-2) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Mill Creek in the vicinity of Landfill 2 (FTMM-2) from the area of Building 1150 and Parcel 39 (**Section 3.4.2.13**). Mill Creek, in the vicinity of Landfill 2 (FTMM-2), is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-8**.

VOCs. Three VOCs (acetone, methylene chloride, and 2-butanone) were detected in at least one sediment sample each, but none were detected at concentrations exceeding the ESC.

Pesticides. Four pesticides (4,4'-DDT, 4,4'-DDE, 4,4'-DDD, and alpha-chlordane) were detected in at least one sediment sample each from Landfill 2. None were detected at concentrations exceeding the freshwater sediment ESC and pesticides are not considered COPECs in sediment at Landfill 2 (FTMM-2).

PCBs. Three PCBs mixtures (Aroclor 1242, Aroclor 1254, and Aroclor 1260) were detected in at least one sediment sample each from Landfill 2 (FTMM-2); each was detected at a concentration greater than the freshwater sediment ESC in at least one sample. Aroclor 1242 was detected in one sample (0.12 mg/kg) greater than the ESC for PCBs of 0.07 mg/kg. Aroclor 1254 was detected in one sample (0.064 mg/kg) greater than the 0.06 mg/kg freshwater sediment ESC for Aroclor 1254, and Aroclor 1260 was detected in two samples (0.01 and 0.04 mg/kg) greater than the 0.005 mg/kg freshwater sediment ESC for Aroclor 1260. Aroclor 1242, Aroclor 1254, and Aroclor 1260 are considered COPECs in sediment at Landfill 2 (FTMM-2).

SVOCs. A total of 20 SVOCs were detected in surface sediment samples at Landfill 2 (FTMM-2). Of the 20 detected SVOCs, six were detected in at least one sediment sample at concentrations exceeding the ESC. Bis(2-ethylhexyl) phthalate was detected in one sediment sample at a concentration (0.28 mg/kg) which exceeds the freshwater sediment ESC of 0.182 mg/kg. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples and is not considered a COPEC in sediment at Landfill 2 (FTMM-2). Chrysene (0.37 mg/kg), dibenzo(*a,h*)anthracene (0.1 mg/kg), 2,4-dinitrophenol (1.1 mg/kg), and pyrene (0.71 mg/kg) were detected in one sample each above the freshwater sediment ESC. Fluoranthene (0 0.92 mg/kg) was detected above the ESC in one sample. All SVOC exceedances were detected in only 2 of the 12 sediment samples (M2-SD7 and M2-SD13). Chrysene, dibenzo(*a,h*)anthracene, 2,4-dinitrophenol, fluoranthene, and pyrene are considered COPECs in sediment at Landfill 2 (FTMM-2).

Metals. Of the 22 metals detected in sediment at Landfill 2 (FTMM-2), seven (arsenic, cadmium, chromium, copper, lead, mercury, and nickel) were detected in at least one sample at concentrations exceeding the freshwater sediment ESC. Arsenic concentrations in one sample (8.09 mg/kg), cadmium concentrations in all 12 samples (1.44 to 2.76 mg/kg), chromium concentrations in all 12 samples (31.8 to 125 mg/kg), copper concentrations in one sample (22.5 mg/kg), lead in four samples (31.2 to 52.8 mg/kg), mercury in one sample (0.21 mg/kg), and nickel in one sample (29.2 mg/kg) exceeded the freshwater sediment ESC (6 mg/kg arsenic, 0.6 mg/kg cadmium, 26 mg/kg chromium, 16 mg/kg copper, 31 mg/kg lead, 0.2 mg/kg mercury, and 16 mg/kg nickel). Though there are no freshwater sediment ESC for barium and selenium, detected concentrations of these metals were detected at concentrations greater than the available saltwater sediment ESC in some sediment samples. These metals were identified as COPECs in soil and groundwater at Landfill 2 (FTMM-2) and are considered COPECs in sediment. Arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, and selenium are considered COPECs in sediment at Landfill 2 (FTMM-2).

3.4.2.1.5 Summary of COPECs for Landfill 2 (FTMM-2)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 2 (FTMM-2) at concentrations greater than the applicable ESC are identified as COPECs for the site. Though cadmium and 4,4′-DDE were not detected in surface water at Landfill 2 (FTMM-2), their MDLs were greater than the freshwater ESC. Given that cadmium is considered a COPEC in soil, groundwater, and sediment and 4,4′-DDE is considered a COPEC in soil and groundwater (though not sediment), they are considered

possible COPECs in surface water. The COPECs, and possible COPECs, identified for Landfill 2 (FTMM-2) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Chlorobenzene	None	None
Pesticides			
Gamma-BHC 4,4′-DDD 4,4′-DDE 4,4′-DDT Dieldrin Endrin	Aldrin gamma-Chlordane alpha-Chlordane DDE DDT Endrin Heptachlor Heptachlor epoxide Methoxychlor	None	None
PCBs			
Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	None	None	Aroclor 1242 Aroclor 1254 Aroclor 1260
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Chrysene Naphthalene	None	Anthracene Benzo(*a*)anthracene	Chrysene Dibenzo(*a,h*)anthracene 2,4-Dinitrophenol Fluoranthene Pyrene
Metals			
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Thallium Vanadium Zinc	Antimony Barium Cadmium Lead Selenium	Lead	Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Selenium
Possible COPECs			
		DDE Cadmium	

3.4.2.2 LANDFILL 3 (FTMM-3)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 3.

3.4.2.2.1 COPECs for Soil at Landfill 3 (FTMM-3)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 3 (FTMM-3) as part of the IRP RI investigation (Versar, 2004a). A total of 205 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-2**.

SVOCs. A total of 23 SVOCs were detected in near surface soil samples from Landfill 3 (FTMM-3). Of these 23 SVOCs, 13 were detected at concentrations exceeding the soil ESC in at least one sample. Phenanthrene, fluoranthene, pyrene, benzo(*b*)fluoranthene, indeno(1,2,3-*cd)*pyrene, dibenzo(*a,h*)anthracene, and benzo(*g,h,i*)perylene were detected exceeding the ESC in one soil sample each; most of these exceedances occurred in the same soil sample. In addition, benzo(*a*)anthracene, naphthalene, and chrysene were detected in several soil samples at concentrations exceeding the ESC. Benzo(*a*)pyrene was detected at concentrations exceeding the ESC in more than 10% of the soil samples. Bis(2-ethylhexyl) phthalate and di-*n*-butyl phthalate were also detected at concentrations greater than the ESC. As noted elsewhere, phthalates are commonly found in field and laboratory QC samples, and these phthalates are not considered COPECs. Benzo(*a*)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(*g,h,i*)perylene, chrysene, dibenzo(*a,h*)anthracene, fluoranthene, indeno(1,2,3-*cd*)pyrene, naphthalene, phenanthrene, and pyrene are considered COPECs in soil at Landfill 3 (FTMM-3).

Pesticides. Ten pesticides were detected in near surface soil samples from Landfill 3 (FTMM-3). Nine of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the samples and the majority of the concentrations exceeded the 0.0035 mg/kg ESC. 4,4′-DDD was detected in two samples at concentrations that were greater than the 0.758 mg/kg ESC. 4,4′-DDE, dieldrin, and gamma-BHC were detected in several samples at concentrations that were exceeding the ESC. Endrin was detected in one sample at a concentration above the 0.0101 mg/kg ESC. Heptachlor was detected in one sample at a concentration above the 0.00598 mg/kg ESC. Gamma- and alpha-chlordane were detected in two samples each above the 0.224 mg/kg chlordane ESC. 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, dieldrin, endrin, gamma-BHC, alpha-chlordane, gamma-chlordane, and heptachlor are considered COPECs at Landfill 3 (FTMM-3).

PCBs. One PCB Aroclor was detected in near surface soil samples from Landfill 3 (FTMM-3). Aroclor 1260 was detected in six samples. These concentrations were above the 0.371 mg/kg ESC. Aroclor 1260 is considered a COPEC in soil at Landfill 3 (FTMM-3).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 3 (FTMM-3) of which most metals were detected in the majority of the samples. Thallium and silver were detected infrequently, being detected in 2 and 25 samples, respectively; antimony was detected in less than half the samples (102 of 205). Sixteen metals (aluminum, antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 3 (FTMM-3). Antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in soil at Landfill 3 (FTMM-3).

3.4.2.2.2 COPECs for Groundwater at Landfill 3 (FTMM-3)

Eight groundwater monitoring wells at Landfill 3 (FTMM-3) have been monitored for VOCs during the 2008-2009 time period. Lafetra Creek could receive groundwater discharge from Landfill 3 (FTMM-3). Lafetra Creek, in the vicinity of Landfill 3 (FTMM-3), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-2**.

VOCs. A total of 11 VOCs were detected in groundwater samples from Landfill 3 (FTMM-3) during the 2008-2009 time period. None of the detected VOCs were at concentrations greater than the applicable saltwater ESC. VOCs are not considered COPECs in groundwater at Landfill 3 (FTMM-3).

3.4.2.2.3 COPECs for Surface Water at Landfill 3 (FTMM-3)

Two surface water samples were collected from Lafetra Creek adjacent to Landfill 3 (FTMM-3) as part of the 2010 BEE. Lafetra Creek, in the vicinity of Landfill 3 (FTMM-3), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-9**.

VOCs. No VOCs were detected in surface water samples at Landfill 3 (FTMM-3). VOCs are not considered COPECs in surface water at Landfill 3 (FTMM-3).

SVOCs. No SVOCs were detected in surface water samples at Landfill 3 (FTMM-3). SVOCs are not considered COPECs in surface water at Landfill 3 (FTMM-3).

Pesticides. No pesticides were detected in surface water samples at Landfill 3 (FTMM-3). Pesticides are not considered COPECs in surface water at Landfill 3 (FTMM-3).

PCBs. No PCBs were detected in surface water samples at Landfill 3 (FTMM-3). PCBs are not considered COPECs in surface water at Landfill 3 (FTMM-3).

Metals. A total of 13 metals were detected in surface water samples at Landfill 3 (FTMM-3). None of these were detected at concentrations exceeding the saltwater ESC. Metals are not considered COPECs in surface water at Landfill 3 (FTMM-3).

3.4.2.2.4 COPECs for Sediment at Landfill 3 (FTMM-3)

Twelve sediment samples (including one duplicate sample) were collected from Lafetra Creek adjacent to Landfill 3 (FTMM-3) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways. Lafetra Creek, in the vicinity of Landfill 3 (FTMM-3), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-10**.

VOCs. A total of seven VOCs were detected in sediment samples at Landfill 3 (FTMM-3). None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Landfill 3 (FTMM-3).

PCBs. No PCBs were detected in sediment samples at Landfill 3 (FTMM-3). PCBs are not considered COPECs at Landfill 3 (FTMM-3).

Pesticides. Three pesticides (4,4'-DDD, 4,4'-DDE, and 4,4'-DDT) were detected in one or two sediment samples each at Landfill 3 (FTMM-3). Only one sample had concentrations exceeding the ESC. Sample M3-SD10 had a concentration of 0.0095 mg/kg 4,4′-DDD, which is greater than the saltwater sediment ESC (0.002 mg/kg) and a concentration of 0.18 mg/kg 4,4′-DDT, which is greater than the saltwater sediment ESC (0.001 mg/kg). 4,4′-DDD and 4,4′-DDT are considered COPECs in sediment at Landfill 3 (FTMM-3).

SVOCs. A total of 15 SVOCs were detected in surface sediment samples at Landfill 3 (FTMM-3). Of the 15 detected SVOCs, one was detected in one sediment sample at a concentration greater than the saltwater ESC. Bis(2-ethylhexyl) phthalate was detected in one sediment sample at a concentration (5.5 mg/kg) exceeding the saltwater sediment ESC of 0.18216 mg/kg. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples and is not considered a COPEC in sediment at Landfill 3 (FTMM-3).

Metals. Of the 23 metals detected in sediment at Landfill 3 (FTMM-3), 13 (arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, vanadium, and zinc) were detected in at least one sample at concentrations greater than the saltwater sediment ESC and are considered COPECs in sediment at Landfill 3 (FTMM-3).

3.4.2.2.5 Summary of COPECs for Landfill 3 (FTMM-3)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 3 (FTMM-3) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 3 (FTMM-3), its MDLs were greater than the saltwater ESC. Given that copper is considered a COPEC in soil and sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 3 (FTMM-3) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
Gamma-BHC	Not Applicable	None	DDD

Soil	Groundwater	Surface Water	Sediment
alpha-Chlordane gamma-Chlordane 4,4′-DDD 4,4′-DDE 4,4′-DDT Dieldrin Endrin Heptachlor			DDT
PCBs			
Aroclor 1260	Not Applicable	None	None
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*b*)fluoranthene Benzo(*g,h,i*)perylene Chrysene Dibenzo(*a,h*)anthracene Fluoranthene Indeno(1,2,3-*cd*)pyrene Naphthalene Phenanthrene Pyrene	Not Applicable	None	None
Metals			
Antimony Arsenic Barium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc	Not Applicable	None	Arsenic Barium Cadmium Chromium Cobalt Copper Lead Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.3 LANDFILL 4 (FTMM-4)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 4 (FTMM-4).

3.4.2.3.1 COPECs for Soil at Landfill 4 (FTMM-4)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 4 (FTMM-4) as part of the IRP RI investigation (Versar, 2004b). A total of 63 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-3**.

SVOCs. A total of 22 SVOCs were detected in near surface soil samples from Landfill 4 (FTMM-4). Of these 22 SVOCs, three were detected at concentrations exceeding the soil ESC in at least one sample. Bis(2-ethylhexyl) phthalate was detected frequently and several samples had concentrations that were greater than the 0.925 mg/kg ESC. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples; therefore, it is not considered a COPEC. Benzo(*a*)pyrene was detected in more than half of the 63 samples and two samples had concentrations (3.5 and 1.6 mg/kg) greater than the 1.52 mg/kg ESC. Naphthalene was detected in four samples at

concentrations exceeding the 0.0994 mg/kg ESC. Benzo(*a*)pyrene and naphthalene are considered COPECs in soil at Landfill 4 (FTMM-4).

Pesticides. Four pesticides were detected in near surface soil samples from Landfill 4 (FTMM-4). Three of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the 63 samples and the majority of these had concentrations that were greater than the 0.0035 mg/kg ESC. 4,4′-DDD was detected in one sample at a concentration that exceeded the 0.758 mg/kg ESC. 4,4′-DDE was detected in three samples at concentrations that were greater than the 0.596 mg/kg ESC. 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT are considered COPECs at Landfill 4 (FTMM-4).

PCBs. No PCBs were detected in near surface soil samples from Landfill 4 (FTMM-4). PCBs are not considered COPECs in soil at Landfill 4 (FTMM-4).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 4 (FTMM-4) of which most metals were detected in the majority of the samples. Cadmium, thallium, selenium, and silver were detected infrequently. Thallium and selenium were detected in one sample each, cadmium was detected in four samples, and selenium was detected in 13 samples. Sixteen metals (aluminum, antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 4 (FTMM-4). Antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc are considered COPECs in soil at Landfill 4 (FTMM-4).

3.4.2.3.2 COPECs for Groundwater at Landfill 4 (FTMM-4)

Four monitoring wells at Landfill 4 (FTMM-4) have been monitored for metals during the 2008-2009 time period. Sampling for SVOCs, pesticides, PCBs, and VOCs was discontinued after the October 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs, pesticides, PCBs, and VOCs are not considered COPECs in groundwater at Landfill 4 (FTMM-4). Mill Creek could receive groundwater discharge from Landfill 4 (FTMM-4). Mill Creek, in the vicinity of Landfill 4 (FTMM-4), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-3**.

Metals. A total of 12 metals were detected in groundwater samples from Landfill 4 (FTMM-4) during the 2008-2009 time period. Of these 12, five were detected at concentrations that exceeded the saltwater ESC in at least one sample. Arsenic was detected at concentrations greater than the saltwater ESC in three monitoring wells. Selenium was detected at concentrations greater than the saltwater ESC in two wells. Cadmium, copper, and lead were detected at concentrations exceeding the saltwater ESC in one sample each. Arsenic, cadmium, copper, lead, and selenium are considered COPECs in groundwater at Landfill 4 (FTMM-4).

3.4.2.3.3 COPECs for Surface Water at Landfill 4 (FTMM-4)

One surface water sample was collected from Mill Creek adjacent to Landfill 4 (FTMM-4) as part of the 2010 BEE. One sample was collected downstream of the storm water outfall at the northern end of Landfill 4 (FTMM-4) and the other sample was collected downstream of the storm water outfall at the southern end of Landfill 4 (FTMM-4) (**Appendix K**). Mill Creek, in the vicinity of Landfill 4 (FTMM-4), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in the surface water sample are presented in **Table D-11**.

PCBs. No PCBs were detected in surface water samples at Landfill 4 (FTMM-4). PCBs are not considered COPECs in surface water at Landfill 4 (FTMM-4).

Pesticides. No pesticides were detected in surface water samples at Landfill 4 (FTMM-4). Pesticides are not considered COPECs in surface water at Landfill 4 (FTMM-4).

VOCs. Two VOCs were detected in the surface water sample. PCE (0.6 µg/L) and *cis*-1,2-dichloroethene (1.1 µg/L) were detected at concentrations less than the ESC. VOCs are not considered COPECs in surface water at Landfill 4 (FTMM-4).

SVOCs. Four SVOCs were detected in the surface water sample. There are no saltwater ESC four these SVOCs; they are not considered COPECs in surface water at Landfill 4 (FTMM-4).

Metals. A total of 12 metals were detected in the surface water sample at Landfill 4 (FTMM-4). None of these were detected at concentrations greater than the saltwater ESC. Metals are not considered COPECs in surface water at Landfill 4 (FTMM-4).

3.4.2.3.4 COPECs for Sediment at Landfill 4 (FTMM-4)

Six sediment samples were collected from Mill Creek adjacent to Landfill 4 (FTMM-4) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Mill Creek in the vicinity of Landfill 4 (FTMM-4) from the surrounding areas including Buildings 689, 1123, and 1221. Mill Creek, in the vicinity of Landfill 4 (FTMM-4), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in the sediment samples are presented in **Table D-12**.

VOCs. A total of two VOCs (acetone and methylene chloride) were detected in sediment samples at Landfill 4 (FTMM-4). None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Landfill 4 (FTMM-4).

PCBs. Three PCB mixtures (Aroclor 1232, Aroclor 1242, and Aroclor 1260) were detected in at least one sediment sample each from Landfill 4 (FTMM-4); all were detected at concentrations greater than the saltwater sediment ESC in at least one sample. Aroclor 1232 was detected in one sample (0.093 mg/kg) and Aroclor 1242 was detected in two samples (0.055 mg/kg and 0.075 mg/kg) greater than the ESC for PCBs in saltwater sediment of 0.023 mg/kg. Aroclor 1260 was detected in five samples (0.010 mg/kg to 0.036 mg/kg) above the 0.005 mg/kg saltwater sediment ESC for Aroclor 1260. These three PCBs are considered COPECs in sediment at Landfill 4 (FTMM-4).

Pesticides. Three pesticides (4,4'-DDD, 4,4'-DDE, and 4,4'-DDT) were detected in one to three sediment samples each at Landfill 4 (FTMM-4). 4,4′-DDD in two samples and 4,4′-DDT in one sample were at concentrations exceeding the saltwater ESC. 4,4′-DDD and 4,4′-DDT are considered COPECs in sediment at Landfill 4 (FTMM-4).

SVOCs. A total of 15 SVOCs were detected in surface sediment samples at Landfill 4 (FTMM-4). Of the 15 detected SVOCs, six were detected in one sediment sample (M4-SD4) at concentrations exceeding the ESC. Acenaphthene (0.12 mg/kg), anthracene (0.15 mg/kg), benzo(*a*)anthracene (0.31 mg/kg), fluoranthene (0.70 mg/kg), fluorene (0.097 mg/kg), and phenanthrene (0.62 mg/kg) were detected above the saltwater sediment ESC at M4-SD4. Acenaphthene, anthracene, benzo(*a*)anthracene, fluoranthene, fluorene, and phenanthrene are considered COPECs in sediment at Landfill 4 (FTMM-4).

Metals. Of the 23 metals detected in sediment at Landfill 4 (FTMM-4), seven (arsenic, cadmium, cobalt, lead, mercury, and selenium) were detected in at least one sample at concentrations greater than the saltwater sediment ESC. Arsenic concentration in one sample (10.2 mg/kg), cadmium concentrations in three samples (1.26 to 1.49 mg/kg), cobalt concentrations in four samples (13.9 to 24.6 mg/kg), lead in two samples (52.3 to 65.1 mg/kg), mercury concentrations in three samples (0.188 to 0.257 mg/kg), and selenium concentrations in all six samples (1.63 to 3.67 mg/kg) exceeded the freshwater sediment ESC (8.2, 1.2, 10, 47, 0.15, and 1 mg/kg, respectively). Arsenic, cadmium, lead, mercury, nickel, and selenium are considered COPECs in sediment at Landfill 4 (FTMM-4).

3.4.2.3.5 Summary of COPECs for Landfill 4 (FTMM-4)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 4 (FTMM-4) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 4 (FTMM-4), its MDLs were greater than the saltwater ESC. Given that copper is considered a COPEC in soil and groundwater (though not in sediment), it is

considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 4 (FTMM-4) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
4,4′-DDD 4,4′-DDE 4,4′-DDT	None	None	DDD DDT
PCBs			
None	None	None	Aroclor 1232 Aroclor 1242 Aroclor 1260
SVOCs			
Benzo(*a*)pyrene Naphthalene	None	None	Acenaphthene Anthracene Benzo(a)anthracene Fluoranthene Fluorene Phenanthrene
Metals			
Antimony Arsenic Barium Cadmium Chromium Cobalt Copper Lead Mercury Nickel Selenium Silver Thallium Vanadium Zinc	Arsenic Cadmium Copper Lead Selenium	None	Arsenic Cadmium Cobalt Lead Mercury Selenium
Possible COPECs			
		Copper	

3.4.2.4 LANDFILL 5 (FTMM-5)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 5 (FTMM-5).

3.4.2.4.1 COPECs for Soil at Landfill 5 (FTMM-5)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 5 (FTMM-5) as part of the IRP RI investigation (Versar, 2004c). A total of 173 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-4**.

SVOCs. A total of 27 SVOCs were detected in near surface soil samples from Landfill 5 (FTMM-5). Of these 27 SVOCs, six were detected at concentrations exceeding the soil ESC in at least one sample. Benzo(*a*)anthracene, 2-methylnaphthalene, and chrysene were detected in one or two samples each at concentrations exceeding the ESC. Benzo(*a*)pyrene was detected in eight samples at concentrations exceeding the 1.52 mg/kg ESC. Naphthalene was detected in 16 samples at concentrations exceeding the 0.0994 mg/kg ESC. Bis(2-ethylhexyl) phthalate was detected in two samples at concentrations exceeding the 0.925 mg/kg ESC. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples; therefore, it is not considered a COPEC.

Benzo(a)anthracene, benzo(a)pyrene, 2-methylnaphthalene, naphthalene, and chrysene are considered COPECs in soil at Landfill 5 (FTMM-5).

Pesticides. Twelve pesticides were detected in near surface soil samples from Landfill 5 (FTMM-5). Eight of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected at concentrations that were greater than the 0.0035 mg/kg ESC in about 20% of the samples. 4,4′-DDD was detected in three samples at concentrations that were greater than the 0.758 mg/kg ESC. 4,4′-DDE was detected in five samples at concentrations that were greater than the 0.596 mg/kg ESC. Dieldrin was detected in one sample at a concentration greater than the 0.0049 mg/kg ESC. Endosulfan sulfate was detected in one sample at a concentration greater than the 0.0358 mg/kg ESC. Endrin aldehyde was detected in one sample at a concentration greater than the 0.0105 mg/kg ESC. Heptachlor was detected in one sample at a concentration greater than the 0.00598 mg/kg ESC. Heptachlor epoxide was detected in one sample at a concentration greater than the 0.152 mg/kg ESC. Gamma- and alpha-chlordane were detected in one sample each at concentrations exceeding the 0.224 mg/kg chlordane ESC. alpha-Chlordane, gamma-chlordane, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, dieldrin, endosulfan sulfate, endrin aldehyde, heptachlor, and heptachlor epoxide are considered COPECs at Landfill 5 (FTMM-5).

PCBs. One PCB mixture (Aroclor 1254) was detected in near surface soil samples from Landfill 5 (FTMM-5). Aroclor 1254 was detected in two samples. One concentration was greater than the 0.371 mg/kg ESC. Aroclor 1254 is considered a COPEC in soil at Landfill 5 (FTMM-5).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 5 (FTMM-5) and most metals were detected in the majority of the samples. Thallium, selenium, and silver were detected infrequently, being detected in 41, 32, and 17 samples, respectively; cadmium was detected in less than half the samples (68 of 173). Eighteen metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 5 (FTMM-5). Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc are considered COPECs in soil at Landfill 5 (FTMM-5).

3.4.2.4.2 COPECs for Groundwater at Landfill 5 (FTMM-5)

Ten groundwater monitoring wells at Landfill 5 (FTMM-5) have been monitored for VOCs during the 2008-2009 time period. Mill Creek could receive groundwater discharge from Landfill 5 (FTMM-5). Mill Creek, in the vicinity of Landfill 5 (FTMM-5), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-4**.

VOCs. A total of six VOCs were detected in groundwater samples from Landfill 5 (FTMM-5) during the 2008-2009 time period. No VOCs were found at concentrations exceeding the available saltwater ESC. VOCs are not considered COPECs in groundwater at Landfill 5 (FTMM-5).

3.4.2.4.3 COPECs for Surface Water at Landfill 5 (FTMM-5)

One surface water sample was collected from Mill Creek adjacent to Landfill 5 (FTMM-5) as part of the 2010 BEE. The surface water sample was collected at an approximate mid-point of Landfill 5 and downstream of potential storm water outfalls located immediately upstream of Landfill 5 (**Appendix K**). Additionally, one surface water sample collected in relation of Landfill 8 (FTMM-8) was collected at the northern end of Landfill 5 just upstream of the confluence of Mill Creek with Lafetra Creek (**Section 3.4.2.5**). Mill Creek, in the vicinity of Landfill 5 (FTMM-5), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in the surface water sample are presented in **Table D-13**.

PCBs. No PCBs were detected in surface water samples at Landfill 5 (FTMM-5). PCBs are not considered COPECs in surface water at Landfill 5 (FTMM-5).

Pesticides. No pesticides were detected in surface water samples at Landfill 5 (FTMM-5). Pesticides are not considered COPECs in surface water at Landfill 5 (FTMM-5).

VOCs. Two VOCs were detected in the surface water sample. PCE (0.69 µg/L) and *cis*-1,2-dichloroethene (0.97 µg/L) were detected at concentrations below the available ESC. VOCs are not considered COPECs in surface water at Landfill 5 (FTMM-5).

SVOCs. Two SVOCs were detected in the surface water sample. None were detected at concentrations exceeding the saltwater ESC. SVOCs are not considered COPECs in surface water at Landfill 5 (FTMM-5).

Metals. A total of 13 metals were detected in the surface water sample at Landfill 5 (FTMM-5). None of these were detected at concentrations exceeding the saltwater ESC. Metals are not considered COPECs in surface water at Landfill 5 (FTMM-5).

3.4.2.4.4 COPECs for Sediment at Landfill 5 (FTMM-5)

Seven sediment samples (including one duplicate sample) were collected from Mill Creek adjacent to Landfill 5 (FTMM-5) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways. Mill Creek, in the vicinity of Landfill 5 (FTMM-5), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in the sediment samples are presented in **Table D-14**.

VOCs. A total of five VOCs were detected in sediment samples at Landfill 5 (FTMM-5). None were detected at concentrations exceeding the available freshwater sediment ESC. VOCs are not considered COPECs in sediment at Landfill 5 (FTMM-5).

PCBs. No PCBs were detected in sediment samples at Landfill 5 (FTMM-5). PCBs are not considered COPECs in sediment at Landfill 5 (FTMM-5).

Pesticides. Four pesticides (alpha-chlordane, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT) were detected in four sediment samples each at Landfill 5 (FTMM-5). Three of these pesticides, 4,4'-DDD (0.0036 to 0.016 mg/kg), 4,4'-DDE (0.003 to 0.0072 mg/kg), and 4,4'-DDT (0.0011 to 0.0021 mg/kg), were detected in three to four sediment samples at concentrations greater than the saltwater sediment ESC of 0.002 mg/kg for 4,4′-DDD, 0.0022 mg/kg for 4,4′-DDE, and 0.001 mg/kg for 4,4′-DDT. 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT are considered COPECs in sediment at Landfill 5 (FTMM-5).

SVOCs. A total of 16 SVOCs were detected in surface sediment samples at Landfill 5 (FTMM-5). Of the 16 detected SVOCs, nine were detected in at least one sediment sample at concentrations exceeding the saltwater sediment ESC. Acenaphthylene (0.15 mg/kg), anthracene (0.15 to 0.23 mg/kg), benzo(*a*)anthracene (0.34 mg/kg), fluoranthene (0.67 mg/kg), fluorene (0.27 mg/kg), 2-methylnaphthalene (0.40 mg/kg), naphthalene (0.26 mg/kg), phenanthrene (0.36 and 0.96 mg/kg), and pyrene (0.58 and 0.70 mg/kg) were detected at concentrations exceeding the freshwater sediment ESC. Acenaphthylene, anthracene, benzo(*a*)anthracene, fluoranthene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene are considered COPECs in sediment at Landfill 5 (FTMM-5).

Metals. Of the 23 metals detected in sediment at Landfill 5 (FTMM-5), 12 (arsenic, barium, cadmium, chromium, cobalt, lead, mercury, nickel, selenium, silver, vanadium, and zinc) were detected in at least one sample at concentrations greater than the saltwater sediment ESC. Arsenic concentrations in three samples (11.0 to 43.5 mg/kg), barium in one sample (50.7 mg/kg), cadmium concentrations in three samples (1.72 to 6.65 mg/kg), chromium in one sample (119 mg/kg), cobalt in one sample (13.3 mg/kg), lead in one sample (62.4 mg/kg), mercury in one sample (0.155 mg/kg), nickel in one sample (27.6 mg/kg), selenium in all seven samples (1.33 to 13.2 mg/kg), silver in one sample (1.29 mg/kg), vanadium in one sample (71.6 mg/kg), and zinc in two samples (150 and 203 mg/kg) exceeded the saltwater sediment ESC (8.2, 48, 1.2, 81, 10, 47, 0.15, 21, 1, 1, 57, and 150 mg/kg, respectively). Arsenic, barium, cadmium, chromium, cobalt, lead, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Landfill 5 (FTMM-5).

3.4.2.4.5 Summary of COPECs for Landfill 5 (FTMM-5)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 5 (FTMM-5) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 5 (FTMM-5), its MDLs were greater than the saltwater ESC.

Given that copper is considered a COPEC in soil (but not in sediment), it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 5 (FTMM-5) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
alpha-Chlordane gamma-Chlordane 4,4′-DDD 4,4′-DDE 4,4′-DDT Dieldrin Endosulfan sulfate Endrin aldehyde Heptachlor Heptachlor epoxide	Not Applicable	None	DDD DDE DDT
PCBs			
Aroclor 1254	Not Applicable	None	None
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Chrysene Naphthalene 2-Methylnaphthalene	Not Applicable	None	Acenaphthylene Anthracene Benzo(*a*)anthracene Fluoranthene Fluorene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene
Metals			
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Thallium Vanadium Zinc	Not Applicable	None	Arsenic Barium Cadmium Chromium Cobalt Lead Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.5 LANDFILL 8 (FTMM-8)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 8 (FTMM-8).

3.4.2.5.1 COPECs for Soil at Landfill 8 (FTMM-8)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 8 (FTMM-8) as part of the IRP RI investigation (Versar, 2004d). A total of 291 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-5**.

SVOCs. A total of 35 SVOCs were detected in near surface soil samples from Landfill 8 (FTMM-8). Of these 35 SVOCs, 20 were detected at concentrations exceeding the soil ESC in at least one sample. Twelve of these SVOCs exceeded the soil ESC in the same two or three samples; these were 2,4-dimethylphenol, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(*b*)fluoranthene, benzo(*k*)fluoranthene, indeno(1,2,3-*cd*)pyrene, dibenzo(*a,h*)anthracene, and benzo(*g,h,i*)perylene. Benzo(*a*)anthracene, chrysene, benzo(*a*)pyrene, and 2-methylnaphthalene were detected exceeding the ESC in less than 5 percent of the soil samples and naphthalene was detected above the ESC in about 10% of the soil samples. The highest concentrations of these four PAHs were detected in the same three samples as the exceedances of the other PAH ESC. Hexachlorobenzene was detected in one sample at a concentration greater than the 0.199 mg/kg ESC. Butyl benzyl phthalate and bis(2-ethylhexyl) phthalate were detected in several samples at concentrations exceeding the ESC of 0.239 and 0.925 mg/kg, respectively. As noted elsewhere, phthalates are commonly found in field and laboratory QC samples, and phthalates are not considered COPECs. Naphthalene, 2-methylnaphthalene, 2,4-dimethylphenol, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(*b*)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-*cd*)pyrene, dibenzo(a,h)anthracene, benzo(*g,h,i*)perylene, benzo(*a*)anthracene, chrysene, and benzo(*a*)pyrene are considered COPECs in soil at Landfill 8 (FTMM-8).

Pesticides. Ten pesticides were detected in near surface soil samples from Landfill 8 (FTMM-8). Each of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the 291 samples and these concentrations greater than the 0.0035 mg/kg ESC. 4,4′-DDD was detected at concentrations greater than the 0.758 mg/kg ESC in less than 5 percent of the samples. 4,4′-DDE was detected in one sample at a concentration that was above the 0.596 mg/kg ESC. Dieldrin was detected at concentrations exceeding the 0.049 mg/kg ESC in about 20% of the samples. Endrin, heptachlor, heptachlor epoxide, alpha-chlordane, gamma-chlordane, and gamma-BHC were detected in one sample each at concentrations that were exceeding the ESC. 4,4′-DDD, 4,4-DDE, 4,4-DDT, dieldrin, endrin, heptachlor, heptachlor epoxide, alpha-chlordane, gamma-chlordane, and gamma-BHC are considered COPECs at Landfill 8 (FTMM-8).

PCBs. Three PCB Aroclors were detected in near surface soil samples from Landfill 8 (FTMM-8) in less than 5% of the samples and most of these concentrations were exceeding the ESC. Aroclor 1016, Aroclor 1254, and Aroclor 1260 are considered COPECs in soil at Landfill 8 (FTMM-8).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 8 (FTMM-8) of which most metals were detected in the majority of the samples. Thallium was detected infrequently, being detected in only two samples; silver was detected in less than half the samples (83 of 291). Eighteen metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 8 (FTMM-8). Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc are considered COPECs in soil at Landfill 8 (FTMM-8).

3.4.2.5.2 COPECs for Groundwater at Landfill 8 (FTMM-8)

Monitoring for VOCs and pesticides have occurred at 14 groundwater monitoring wells at Landfill 8 (FTMM-8) during the 2008-2009 time period. Sampling for SVOCs, PCBs, and metals was discontinued after the March 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs, PCBs, and metals are not considered COPECs in groundwater at Landfill 8 (FTMM-8). Parkers Creek could receive groundwater discharge from Landfill 8 (FTMM-8). Parkers Creek, in the vicinity of Landfill 8 (FTMM-8), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-5**.

VOCs. A total of 15 VOCs were detected in groundwater samples from Landfill 8 (FTMM-8) during the 2008-2009 time period. None of these were detected in concentrations that exceeded the available saltwater ESC. VOCs are not considered COPECs in groundwater at Landfill 8 (FTMM-8).

Pesticides. A total of 12 pesticides were detected in groundwater samples from Landfill 8 (FTMM-8) during the 2008-2009 time period. Eight of these (alpha- and gamma-chlordane, 4,4'-DDT, dieldrin, endosulfan I, endrin, heptachlor, and methoxychlor) were detected in concentrations that exceeded the saltwater ESC, and they are considered COPECs in groundwater at Landfill 8 (FTMM-8).

3.4.2.5.3 COPECs for Surface Water at Landfill 8 (FTMM-8)

Three surface water samples were collected from Parkers Creek adjacent to Landfill 8 (FTMM-8) as part of the 2010 BEE. One surface water sample was collected at the upstream end Landfill 8 (FTMM-8), at the northern end of Landfill 5 (FTMM-5), just upstream of the confluence of Mill Creek with Lafetra Creek. The other two samples were collected adjacent to Landfill M-8 on the west and east side near existing groundwater monitoring well locations. Additionally, another surface water sample was collected in relation to Site FTMM-18 (**Section 3.4.2.10**) to the east of Landfill 8 (FTMM-8) and near potential storm water outfalls (**Appendix K**). Parkers Creek, in the vicinity of Landfill 8 (FTMM-8), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-15**.

PCBs. No PCBs were detected in surface water samples at Landfill 8 (FTMM-8). PCBs are not considered COPECs in surface water at Landfill 8.

Pesticides. No pesticides were detected in surface water samples at Landfill 8 (FTMM-8). Pesticides are not considered COPECs in surface water at Landfill 8 (FTMM-8).

VOCs. No VOCs were detected in surface water samples at Landfill 8 (FTMM-8). VOCs are not considered COPECs in surface water at Landfill 8 (FTMM-8).

SVOCs. One SVOC, dimethyl phthalate, was detected in one surface water sample. There are no available ESC for dimethyl phthalate, and it is not considered a COPEC for surface water at Landfill 8 (FTMM-8).

Metals. A total of 14 metals were detected in surface water samples at Landfill 8 (FTMM-8). None of these were detected at concentrations exceeding the saltwater ESC. Metals are not considered COPECs in surface water at Landfill 8 (FTMM-8).

3.4.2.5.4 COPECs for Sediment at Landfill 8 (FTMM-8)

Twelve sediment samples (including one duplicate sample) were collected from Parkers Creek adjacent to Landfill 8 (FTMM-8) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Parkers Creek in the vicinity of Landfill 8 (FTMM-8) and Site FTMM-18 (**Section 3.4.2.10**). Parkers Creek, in the vicinity of Landfill 8 (FTMM-8), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-16**.

VOCs. A total of seven VOCs were detected in sediment samples at Landfill 8 (FTMM-8). None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Landfill 8 (FTMM-8).

PCBs. Two PCB mixtures (Aroclor 1242 and Aroclor 1260) were detected in one or two sediment samples each at Landfill 8 (FTMM-8). Aroclor 1242 was detected at concentrations greater than the saltwater sediment ESC for PCBs in two samples (0.05 and 0.17 mg/kg) and Aroclor 1260 was detected greater than both the saltwater sediment ESC for Aroclor 1260 in one sample (0.011 mg/kg). Aroclor 1242 and Aroclor 1260 are considered COPECs in sediment at Landfill 8 (FTMM-8).

Pesticides. Two pesticides (4,4'-DDD and 4,4'-DDE) were detected in two to three sediment samples each at Landfill 8 (FTMM-8). Three samples had detected concentrations (0.0021 to 0.0033 mg/kg) of 4,4'-DDD exceeding the saltwater sediment ESC. Detected concentrations of 4,4'-DDE were less than the ESC. Therefore, 4,4'-DDD is considered a COPEC in sediment at Landfill 8 (FTMM-8).

SVOCs. A total of nine SVOCs were detected in surface sediment samples at Landfill 8 (FTMM-8). None of the detected SVOCs exceeded the available saltwater sediment ESC. SVOCs are not considered COPECs in sediment at Landfill 8 (FTMM-8).

Metals. Of the 23 metals detected in sediment at Landfill 8 (FTMM-8), 14 were detected in at least one sample at concentrations greater than the saltwater sediment ESC. Barium in six samples (59.6 to 103 mg/kg), selenium in all 12 samples (2.64 to 13.8 mg/kg), and vanadium in four samples (60.9 to 99.1 mg/kg) exceeded the saltwater sediment ESC of 48, 1, and 57 mg/kg, respectively. One sample had a concentration of manganese (364 mg/kg) greater than the saltwater sediment ESC (260 mg/kg). Concentrations of the other 10 metals (arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, silver, and zinc) exceeded the saltwater sediment ESC in at least three samples each. Arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Landfill 8 (FTMM-8).

3.4.2.5.5 Summary of COPECs for Landfill 8 (FTMM-8)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 8 (FTMM-8) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 8 (FTMM-8), its MDLs were greater than the saltwater ESC. Given that copper is considered a COPEC in soil and sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 8 (FTMM-8) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
gamma-BHC alpha-Chlordane gamma-Chlordane 4,4′-DDD 4,4′-DDE 4,4′-DDT Dieldrin Endrin Heptachlor Heptachlor epoxide	alpha-Chlordane gamma-Chlordane 4,4′-DDT Dieldrin Endrin Endosulfan I Heptachlor Methoxychlor	None	DDD
PCBs			
Aroclor 1016 Aroclor 1254 Aroclor 1260	None	None	Aroclor 1242 Aroclor 1260
SVOCs			
Acenaphthene Anthracene Benzo(*a*)anthracene Benzo(*b*)fluoranthene Benzo(*a*)pyrene Benzo(*g,h,i*)perylene Benzo(*k*)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno(1,2,3-*cd*)pyrene 2-Methylnaphthalene 2,4-Dimethylphenol Naphthalene Phenanthrene	None	None	None

Soil	Groundwater	Surface Water	Sediment
Pyrene			
Metals			
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Thallium Vanadium Zinc	None	None	Arsenic Barium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.6 LANDFILL 12 (FTMM-12)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 12 (FTMM-12).

3.4.2.6.1 COPECs for Soil at Landfill 12 (FTMM-12)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 12 (FTMM-12) as part of the IRP RI investigation (Versar, 2003). A total of 147 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-6**.

SVOCs. A total of 23 SVOCs were detected in near surface soil samples from Landfill 12 (FTMM-12). Of these 23 SVOCs, five were detected at concentrations exceeding the soil ESC in at least one sample. Benzo(*a*)anthracene was detected in four samples at concentrations exceeding the 5.21 mg/kg ESC. Chrysene was detected in four samples at concentrations exceeding the 4.73 mg/kg ESC. Benzo(*a*)pyrene and naphthalene were detected in several samples at concentrations exceeding the ESC of 1.52 and 0.0994 mg/kg, respectively. Bis(2-ethylhexyl) phthalate was detected in one sample at a concentration greater than the 0.925 mg/kg ESC. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples; therefore, it is not considered a COPEC. Benzo(*a*)anthracene, benzo(*a*)pyrene, naphthalene, and chrysene are considered COPECs in soil at Landfill 12 (FTMM-12).

Pesticides. Six pesticides were detected in near surface soil samples from Landfill 12 (FTMM-12). Four of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the 147 samples and the majority of these samples had concentrations that were greater than the 0.0035 mg/kg ESC. 4,4′-DDD, 4,4′-DDE, and dieldrin were detected in a few samples each at concentrations that exceeded the ESC. 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, and dieldrin are considered COPECs at Landfill 12 (FTMM-12).

PCBs. No PCBs were detected in near surface soil samples from Landfill 12 (FTMM-12). PCBs are not considered COPECs in soil at Landfill 12 (FTMM-12).

Metals. A total of 23 metals were detected in near surface soil samples from Landfill 12 (FTMM-12) of which most metals were detected in the majority of the samples. Thallium and silver were detected infrequently, being detected in only one and 11 samples, respectively. Antimony and selenium were detected in less than half the samples. Fourteen metals (aluminum, antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, selenium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils

and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 12 (FTMM-12). Antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, selenium, vanadium, and zinc are considered COPECs in soil at Landfill 12 (FTMM-12).

3.4.2.6.2 COPECs for Groundwater at Landfill 12 (FTMM-12)

Eleven monitoring wells at Landfill 12 (FTMM-12) have been monitored for metals during the 2008-2009 time period. Husky Brook could receive groundwater discharge from Landfill 12 (FTMM-12). Husky Brook, in the vicinity of Landfill 12 (FTMM-12), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-6**.

Metals. A total of 11 metals were detected in groundwater samples from Landfill 12 (FTMM-12) during the 2008-2009 time period. Of these 11, five were detected at concentrations that exceeded the saltwater ESC in at least one sample. Arsenic, cadmium, copper, nickel, and selenium were detected at concentrations exceeding the saltwater ESC. Arsenic, cadmium, copper, nickel, and selenium are considered COPECs in groundwater at Landfill 12 (FTMM-12).

3.4.2.6.3 COPECs for Surface Water at Landfill 12 (FTMM-12)

Five surface water samples (including a duplicate sample) were collected from Husky Brook in relation to Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) as part of the 2010 BEE. One surface water sample was collected at the western end of Landfill 12 near a storm water outfall and drainage from Malterer Avenue and surrounding areas. One sample was collected near the confluence with the small tributary to Husky Brook and a sample related to Parcel 61 (**Section 3.4.2.15**) was collected at the southern end of this tributary near storm water outfalls from the areas to the south. One sample was collected in Husky Brook downstream of all storm water outfalls in the vicinity of Landfill 12 and Landfill 14 (**Appendix K**), and the other sample was collected in Oceanport Creek downstream of both Landfill 12 and Landfill 14. The evaluation of surface water samples is discussed in **Section 3.4.1.6** with respect to Landfill 14 (FTMM-14).

3.4.2.6.4 COPECs for Sediment at Landfill 12 (FTMM-12)

Thirteen sediment samples were collected from Husky Brook in relation to Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Husky Brook in the vicinity of Landfill 12 and Landfill 14 from the surrounding areas including Building 1075 and Parcel 61 (**Section 3.4.2.15**). The evaluation of sediment samples is discussed in **Section 3.4.2.7.4** with respect to Landfill 14 (FTMM-14).

3.4.2.6.5 Summary of COPECs for Landfill 12 (FTMM-12)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 12 (FTMM-12) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 12 (FTMM-12), its MDLs were greater than the saltwater ESC. Given that copper is considered a COPEC in soil, groundwater, and sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 12 (FTMM-12) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin	Not Applicable	None	4,4'-DDD 4,4'-DDE 4,4'-DDT
PCBs			
None	Not Applicable	None	Aroclor 1254

Soil	Groundwater	Surface Water	Sediment
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Chrysene Naphthalene	Not Applicable	None	Acenaphthene Anthracene Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*g,h,i*)perylene Benzo(*k*)fluoranthene Chrysene Fluorene Fluoranthene Indeno(1,2,3-*cd*)pyrene Phenanthrene Pyrene
Metals			
Antimony Arsenic Barium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Selenium Vanadium Zinc	Arsenic Cadmium Copper Nickel Selenium	None	Arsenic Barium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.7 LANDFILL 14 (FTMM-14)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill 14 (FTMM-14).

3.4.2.7.1 COPECs for Soil at Landfill 14 (FTMM-14)

Near surface (6-12 inches bgs) soil samples were collected from Landfill 14 (FTMM-14) as part of the IRP RI investigation (Versar, 2004e). A total of 119 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-7**.

SVOCs. A total of 21 SVOCs were detected in near surface soil samples from Landfill 14 (FTMM-14). Of these 21 SVOCs, five were detected at concentrations exceeding the soil ESC in at least one sample. Phenanthrene was detected in one sample at a concentration above the ESC of 45.7 mg/kg. Naphthalene was detected in six samples at concentrations that were greater than the 0.0994 mg/kg ESC. Benzo(*a*)anthracene and chrysene were detected at concentrations exceeding the soil ESC in the same two samples. Benzo(*a*)pyrene was detected in five samples at concentrations exceeding the 1.52 mg/kg ESC. The highest concentrations of these PAHs were detected in the same soil sample. Benzo(*a*)pyrene, benzo(*a*)anthracene, chrysene, naphthalene, and phenanthrene are considered COPECs in soil at Landfill 14 (FTMM-14).

Pesticides. Six pesticides were detected in near surface soil samples from Landfill 14 (FTMM-14). Four of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in most of the 116 samples and the majority of these had concentrations that were greater than the 0.0035 mg/kg ESC. 4,4′-DDD was detected in one sample at a concentration that exceeded the 0.758 mg/kg ESC. 4,4′-DDE was detected in two samples at concentrations that were greater than the 0.596 mg/kg ESC. Dieldrin was detected in one sample at a concentration that exceeded the 0.049 mg/kg ESC. 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, and dieldrin are considered COPECs at Landfill 14 (FTMM-14).

PCBs. No PCBs were detected in near surface soil samples from Landfill 14 (FTMM-14). PCBs are not considered COPECs in soil at Landfill 14 (FTMM-14).

Metals. A total of 22 metals were detected in near surface soil samples from Landfill 14 (FTMM-14) of which most metals were detected in the majority of the samples. Silver was detected infrequently, being detected in only two samples. Thirteen metals (aluminum, antimony, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill 14 (FTMM-14). Antimony, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, vanadium, and zinc are considered COPECs in soil at Landfill 14 (FTMM-14).

3.4.2.7.2 COPECs for Groundwater at Landfill 14 (FTMM-14)

Monitoring for VOCs and metals have occurred at six groundwater monitoring wells at Landfill 14 (FTMM-14) during the 2008-2009 time period. Sampling for SVOCs was discontinued after the August 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs are not considered COPECs in groundwater at Landfill 14 (FTMM-14). Husky Brook could receive groundwater discharge from Landfill 14 (FTMM-14). Husky Brook, in the vicinity of Landfill 14 (FTMM-14), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-7**.

VOCs. A total of three VOCs were detected in groundwater samples from Landfill 14 (FTMM-14) during the 2008-2009 time period. None of these were detected in concentrations that exceeded the available saltwater ESC. VOCs are not considered COPECs in groundwater at Landfill 14 (FTMM-14).

Metals. A total of 11 metals were detected in groundwater samples from Landfill 14 (FTMM-14) during the 2008-2009 time period. Of these 11, five were detected at concentrations that exceeded the saltwater ESC in at least one sample. Arsenic, cadmium, copper, nickel, and selenium were detected at concentrations exceeding the saltwater ESC. Arsenic, cadmium, copper, nickel, and selenium are considered COPECs in groundwater at Landfill 14 (FTMM-14).

3.4.2.7.3 COPECs for Surface Water at Landfill 14 (FTMM-14)

Five surface water samples (including a duplicate sample) were collected from Husky Brook in relation to Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) as part of the 2010 BEE. One surface water sample was collected at the western end of Landfill 14 near a storm water outfall and drainage from Malterer Avenue and surrounding areas. One sample was collected near the confluence with the small tributary to Husky Brook and a sample related to Parcel 61 (**Section 3.4.2.15**) was collected at the southern end of this tributary near storm water outfalls from the areas to the south (**Appendix K**). One sample was collected in Husky Brook downstream of all storm water outfalls in the vicinity of Landfill 12 and Landfill 14, and the other sample was collected in Oceanport Creek downstream of both Landfill 12 and Landfill 14. Husky Brook, in the vicinity of Landfill 12 (FTMM-12), is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-17**.

PCBs. No PCBs were detected in surface water samples at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). PCBs are not considered COPECs in surface water at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

Pesticides. No pesticides were detected in surface water samples at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). Pesticides are not considered COPECs in surface water at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

VOCs. Two VOCs, chloroform and *cis*-1,2-dichloroethene, were detected in surface water samples but none were detected at concentrations exceeding the available saltwater ESC. VOCs are not considered COPECs in surface water at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

SVOCs. Five SVOCs [anthracene, benzo(*a*)anthracene, benzo(a)pyrene, 3,3′-dichlorobenzidine, and 1,2,4-trichlorobenzene] were detected in surface water samples. There are no saltwater ESC for the detected SVOCs. SVOCs are not considered COPECs in surface water at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

Metals. A total of 14 metals were detected in surface water samples at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). None of these were detected at concentrations exceeding the saltwater ESC. Metals are not considered COPECs in surface water at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

3.4.2.7.4 COPECs for Sediment at Landfill 14 (FTMM-14)

Thirteen sediment samples were collected from Husky Brook in relation to Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) as part of the 2010 BEE. Husky Brook, in the vicinity of Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14), is classified as saline estuarine (**Section 2.4.3**). Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Husky Brook in the vicinity of Landfill 12 and Landfill 14 from the surrounding areas including Building 1075 and Parcel 61 (**Section 3.4.2.15**). Parameters detected in sediment samples are presented in **Table D-18**.

VOCs. A total of four VOCs were detected in sediment samples at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

PCBs. One PCB mixture (Aroclor 1254) was detected in one sediment sample at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). Aroclor 1254 was detected at a concentration greater than the saltwater sediment ESC in one sample (0.23 mg/kg). Aroclor 1254 is considered a COPEC in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

Pesticides. Four pesticides (alpha-chlordane, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT) were detected in 4 to 10 sediment samples each at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). alpha-Chlordane concentrations did not exceed the saltwater sediment ESC. Nine samples had 4,4'-DDD concentrations (0.0031 to 0.0091 mg/kg) greater than the saltwater sediment ESC (0.002 mg/kg). Seven samples had 4,4'-DDE concentrations (0.0025 to 0.0071 mg/kg) greater than the saltwater sediment ESC (0.0022 mg/kg). Four samples had 4,4'-DDT concentrations (0.0014 to 0.013 mg/kg) greater than the saltwater sediment ESC (0.001 mg/kg). Therefore, 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT are considered COPECs in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

SVOCs. A total of 15 SVOCs were detected in surface sediment samples at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). Bis(2-ethylhexyl) phthalate was detected in one sediment sample; the concentration (0.84 mg/kg) was greater than the saltwater sediment ESC (0.18216 mg/kg). As noted previously, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples and is not considered a COPEC in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14). Twelve PAHs were detected at concentrations exceeding the saltwater ESC in one to six samples each. These 12 PAHs, acenaphthene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-*cd*)pyrene, phenanthrene, and pyrene, are considered COPECs in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

Metals. Of the 22 metals detected in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14), 12 were detected in at least one sample at concentrations greater than the saltwater sediment ESC. Barium in one sample (54.0 mg/kg), selenium in 10 samples (1.04 to 5.99 mg/kg), and vanadium in one sample (61.1 mg/kg) exceeded the saltwater sediment ESC of 48, 1, and 57 mg/kg, respectively. One sample had a concentration of cobalt (13.7 mg/kg) greater than the saltwater sediment ESC (10 mg/kg). Concentrations of the other seven metals (arsenic, cadmium, chromium, copper, lead, nickel, silver, and zinc) exceeded saltwater ESC in one or two samples each. Arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14).

3.4.2.7.5 Summary of COPECs for Landfill 14 (FTMM-14)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill 14 (FTMM-14) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Landfill 14 (FTMM-14), its MDLs were greater than the saltwater ESC. Given that copper is considered a COPEC in soil, groundwater, and sediment, it is considered a

possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill 14 (FTMM-14) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin	Not Applicable	None	4,4'-DDD 4,4'-DDE 4,4'-DDT
PCBs			
None	Not Applicable	None	Aroclor 1254
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Chrysene Naphthalene Phenanthrene	None	None	Acenaphthene Anthracene Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*g,h,*i)perylene Benzo(*k*)fluoranthene Chrysene Fluoranthene Fluorene Indeno(1,2,3-*cd*)pyrene Phenanthrene Pyrene
Metals			
Antimony Arsenic Cadmium Chromium Copper Lead Manganese Mercury Nickel Selenium Vanadium Zinc	Arsenic Cadmium Copper Nickel Selenium	None	Arsenic Barium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.8 WATER TANK (FTMM-15)

Surface water and sediment analytical data were evaluated for the identification of COPECs related to the water tank at Site FTMM-15.

3.4.2.8.1 COPECs for Surface Water at Site FTMM-15

Three surface water samples were collected from Parkers Creek in relation to Site FTMM-15 as part of the 2010 BEE. Parkers Creek could receive groundwater discharge from Site FTMM-15. Parkers Creek, in the vicinity of Site FTMM-15, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-19**.

VOCs. No VOCs were detected in surface water samples at Site FTMM-15. VOCs are not considered COPECs in surface water at Site FTMM-15.

Pesticides. No pesticides were detected in surface water samples at Site FTMM-15. Pesticides are not considered COPECs in surface water at Site FTMM-15.

PCBs. No PCBs were detected in surface water samples at Site FTMM-15. PCBs are not considered COPECs in surface water at Site FTMM-15.

SVOCs. Two SVOCs [anthracene and benzo(*a*)anthracene] were detected in surface water samples. There are no available saltwater ESC for the detected SVOCs. PAHs are not considered COPECs in surface water at Site FTMM-15.

Metals. A total of 15 metals were detected in surface water samples at Site FTMM-15. None of these metals were detected at concentrations exceeding the applicable saltwater ESC. Metals are not considered COPECs for surface water at Site FTMM-15.

3.4.2.8.2 COPECs for Sediment at Site FTMM-15

Four sediment samples were collected from Parkers Creek adjacent to Site FTMM-15 as part of the 2010 BEE. Parkers Creek, in the vicinity of Site FTMM-15, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-20**.

VOCs. A total of five VOCs were detected in sediment samples at Site FTMM-15. None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Site FTMM-15.

PCBs. No PCBs were detected in sediment samples at Site FTMM-15. PCBs are not considered COPECs in sediment at Site FTMM-15.

Pesticides. One pesticide (4,4'-DDT) was detected in one sediment sample at Site FTMM-15. The detected concentration (0.0041 mg/kg) exceeded the saltwater sediment ESC (0.001 mg/kg). 4,4'-DDT is considered a COPEC in sediment at Site FTMM-15.

SVOCs. A total of six SVOCs were detected in surface sediment samples at Site FTMM-15. None of these were detected at concentrations exceeding the saltwater sediment ESC. SVOCs are not considered COPECs in sediment at Site FTMM-15.

Metals. A total of 23 metals were detected in sediment at Site FTMM-15. Of these 23 metals, nine were detected in at least one sample at concentrations exceeding the applicable saltwater sediment ESC. Chromium was detected in one sample at a concentration (95.5 mg/kg) greater than the ESC (81 mg/kg). Vanadium was detected in one sample at a concentration (83.2 mg/kg) greater than the ESC (57 mg/kg). Lead was detected in two samples at concentrations (59.7 and 108 mg/kg) greater than the ESC (47 mg/kg). Zinc was detected in two samples at concentrations (178 and 262 mg/kg) greater than the ESC (150 mg/kg). Arsenic was detected in three samples at concentrations (10.6 to 14.9 mg/kg) greater than the ESC (8.2 mg/kg). Mercury was detected in three samples at concentrations (0.16 to 0.293 mg/kg) greater than the ESC (0.15 mg/kg). Silver was detected in three samples at concentrations (1.25 to 1.44 mg/kg) greater than the ESC (1 mg/kg). All four samples had cadmium concentrations (1.31 to 2.97 mg/kg) and selenium concentrations (3.79 to 6.98 mg/kg) exceeding the ESC of 1.2 mg/kg for cadmium and 1 mg/kg for selenium. Arsenic, cadmium, chromium, lead, mercury, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Site FTMM-15.

3.4.2.8.3 Summary of COPECs for Site FTMM-15

Parameters detected in soil, groundwater, surface water, or sediment at Site FTMM-15 at concentrations greater than the applicable ESC were identified as COPECs for the site. Copper was not detected in surface water at Site FTMM-15 and its MDLs were greater than the saltwater ESC. However, since copper was not identified as a COPEC in other site media, it is not considered a COPEC in surface water. The COPECs, and possible COPECs, identified for Site FTMM-15 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
Not Applicable	Not Applicable	None	DDT
PCBs			
Not Applicable	Not Applicable	None	None
SVOCs			
Not Applicable	Not Applicable	None	None

Soil	Groundwater	Surface Water	Sediment
Metals			
Not Applicable	Not Applicable	None	Arsenic Cadmium Chromium Lead Mercury Selenium Silver Vanadium Zinc

3.4.2.9 PESTICIDE STORAGE, BUILDING 498 (FTMM-16)

Surface water and sediment analytical data were evaluated for the identification of COPECs related to the Pesticide Storage, Building 498, at Site FTMM-16. No recent groundwater data is available for evaluation at Site FTMM-16.

3.4.2.9.1 COPECs for Surface Water at Site FTMM-16

Three surface water samples were collected from Oceanport Creek in relation to Site FTMM-16 as part of the 2010 BEE. Oceanport Creek, in the vicinity of Site FTMM-16, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-21**.

VOCs. No VOCs were detected in surface water samples at Site FTMM-16. VOCs are not considered COPECs in surface water at Site FTMM-16.

SVOCs. No SVOCs were detected in surface water samples at Site FTMM-16. SVOCs are not considered COPECs in surface water at Site FTMM-16.

Pesticides. No pesticides were detected in surface water samples at Site FTMM-16. Pesticides are not considered COPECs in surface water at Site FTMM-16.

PCBs. No PCBs were detected in surface water samples at Site FTMM-16. PCBs are not considered COPECs in surface water at Site FTMM-16.

Metals. A total of 14 metals were detected in surface water samples at Site FTMM-16. Metals are not considered COPECs for surface water at Site FTMM-16.

3.4.2.9.2 COPECs for Sediment at Site FTMM-16

Five sediment samples (including one duplicate sample) were collected from Oceanport Creek adjacent to Site FTMM-16 as part of the 2010 BEE. Oceanport Creek, in the vicinity of Site FTMM-16, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-22**.

VOCs. A total of six VOCs were detected in sediment samples at Site FTMM-16. None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Site FTMM-16.

PCBs. No PCBs were detected in sediment samples at Site FTMM-16. PCBs are not considered COPECs in sediment at Site FTMM-16.

Pesticides. One pesticide (4,4'-DDD) was detected in one sediment sample at Site FTMM-16. The detected concentration (0.0014 mg/kg) was not above the saltwater sediment ESC (0.002 mg/kg); 4,4'-DDD is not considered a COPEC in sediment at Site FTMM-16.

SVOCs. A total of seven SVOCs were detected in surface sediment samples at Site FTMM-16. Only one, hexachlorobutadiene, was detected in one sample at a concentration (0.008 mg/kg) greater than the saltwater sediment ESC (0.0013 mg/kg). Hexachlorobutadiene is considered a COPEC in sediment at Site FTMM-16.

Metals. A total of 23 metals were detected in sediment at Site FTMM-16. Of these 23 metals, 12 were detected in three or four samples each at concentrations exceeding the applicable saltwater

sediment ESC. Arsenic was detected in four samples at concentrations (15.1 to 24.5 mg/kg) greater than the ESC (8.2 mg/kg). Cadmium was detected in four samples at concentrations (9.71 to 12.3 mg/kg) greater than the ESC (1.2 mg/kg). Chromium was detected in four samples at concentrations (117 to 144 mg/kg) greater than the ESC (81 mg/kg). Cobalt was detected in three samples at concentrations (12.5 to 13.6 mg/kg) greater than the ESC (10 mg/kg). Copper was detected in four samples at concentrations (42.3 to 124 mg/kg) greater than the ESC (34 mg/kg). Lead was detected in four samples at concentrations (74.5 to 212 mg/kg) greater than the ESC (47 mg/kg). Mercury was detected in three samples at concentrations (0.451 to 0.502 mg/kg) greater than the ESC (0.15 mg/kg). Nickel was detected in three samples at concentrations (30.7 to 35.2 mg/kg) greater than the ESC (21 mg/kg). Selenium was detected in four samples at concentrations (5.32 to 11.0 mg/kg) greater than the ESC (1 mg/kg). Silver was detected in four samples at concentrations (3.78 to 6.44 mg/kg) greater than the ESC (1 mg/kg). Vanadium was detected in three samples at concentrations (81.9 to 106 mg/kg) greater than the ESC (57 mg/kg). Zinc was detected in four samples at concentrations (160 to 500 mg/kg) greater than the ESC (150 mg/kg). Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Site FTMM-16.

3.4.2.9.3 Summary of COPECs for Site M-16

Parameters detected in soil, groundwater, surface water, or sediment at Site FTMM-16 at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Site FTMM-16, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Site FTMM-16 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
Not Applicable	Not Applicable	None	None
PCBs			
Not Applicable	Not Applicable	None	None
SVOCs			
Not Applicable	Not Applicable	None	Hexachlorobutadiene
Metals			
Not Applicable	Not Applicable	None	Arsenic Cadmium Chromium Cobalt Copper Lead Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.10 FORMER TRAINING AREA/LANDFILL (FTMM-18)

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Site FTMM-18.

3.4.2.10.1 COPECs for Soil at Site FTMM-18

Near surface (6-12 inches bgs) soil samples were collected from Site FTMM-18 as part of the IRP RI investigation (Versar, 2004f). A total of 62 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-8**.

SVOCs. A total of 22 SVOCs were detected in near surface soil samples from Site FTMM-18. Of these 22 SVOCs, two were detected at concentrations exceeding the soil ESC: benzo(a)pyrene was detected in two samples at concentrations exceeding the 1.52 mg/kg ESC and naphthalene was detected in five samples at concentrations exceeding the 0.0994 mg/kg ESC. Benzo(a)pyrene and naphthalene are considered COPECs in soil at Site FTMM-18.

Pesticides. Nine pesticides were detected in near surface soil samples from Site FTMM-18. Two of these pesticides was detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in several samples at concentrations that were greater than the 0.0035 mg/kg ESC and endrin aldehyde were detected in a sample at concentrations exceeding the ESC. 4,4′-DDT and endrin aldehyde are considered COPECs at Site FTMM-18.

PCBs. No PCBs were detected in near surface soil samples from Site FTMM-18. PCBs are not considered COPECs in soil at Site FTMM-18.

Metals. A total of 22 metals were detected in near surface soil samples from Site FTMM-18 of which most metals were detected in the majority of the samples. Silver was detected infrequently, being detected in only five samples. Twelve metals (aluminum, antimony, arsenic, cadmium, chromium, copper, lead, mercury, selenium, silver, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Site FTMM-18. Antimony, arsenic, cadmium, chromium, copper, lead, mercury, selenium, silver, vanadium, and zinc are considered COPECs in soil at Site FTMM-18.

3.4.2.10.2 COPECs for Groundwater at Site FTMM-18

Monitoring for VOCs and metals have occurred at three groundwater monitoring wells at Site FTMM-18 during the 2008-2009 time period. Sampling for SVOCs, pesticides, and PCBs was discontinued after the November 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs, pesticides, and PCBs are not considered COPECs in groundwater at Site FTMM-18. Parkers Creek could receive groundwater discharge from Site FTMM-18. Parkers Creek, in the vicinity of Site FTMM-18, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-8**.

VOCs. One VOC, acetone, was detected in groundwater samples from Site FTMM-18 during the 2008-2009 time period. There are no freshwater or saltwater ESC available for acetone. VOCs are not considered COPECs in groundwater at Site FTMM-18.

Metals. A total of 12 metals were detected in groundwater samples from Site FTMM-18 during the 2008-2009 time period. Four of these metals (arsenic, copper, selenium, and cadmium) were detected at concentrations that exceeded the saltwater ESC. Arsenic, cadmium, copper, and selenium are considered COPECs in groundwater at Site FTMM-18.

3.4.2.10.3 COPECs for Surface Water at Site FTMM-18

Two surface water samples were collected from Parkers Creek adjacent to Site FTMM-18 as part of the 2010 BEE. One surface water sample was collected west of Site FTMM-18 between outfalls between Site FTMM-8 and FTMM-18 (**Appendix K**), and the other sample was collected on the western side of Site FTMM-18 downstream of these two outfalls. Additionally, two surface water samples were collected in relation to Building 283 (FTMM-61) and Parcel 49 (**Section 3.4.2.14**) near storm water outfalls at the eastern end of Site FTMM-18 (**Appendix K**). Parkers Creek, in the vicinity of Site FTMM-18, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-23**.

PCBs. No PCBs were detected in surface water samples at Site FTMM-18. PCBs are not considered COPECs in surface water at Site FTMM-18.

Pesticides. No pesticides were detected in surface water samples at Site FTMM-18. Pesticides are not considered COPECs in surface water at Site FTMM-18.

VOCs. No VOCs were detected in surface water samples at Site FTMM-18. VOCs are not considered COPECs in surface water at Site FTMM-18.

SVOCs. No SVOCs were detected in surface water samples at Site FTMM-18. SVOCs are not considered COPECs in surface water at Site FTMM-18.

Metals. A total of 14 metals were detected in surface water samples at Site FTMM-18. None of these metals were detected at concentrations exceeding the applicable saltwater ESC. Metals are not considered COPECs in surface water at Site FTMM-18.

3.4.2.10.4 COPECs for Sediment at Site FTMM-18

Five sediment samples were collected from Parkers Creek adjacent to Site FTMM-18 as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Parkers Creek in the vicinity of Site FTMM-18 from the surrounding areas including Buildings 291 to 296 and Building 283 (FTMM-61) in Parcel 49 (**Section 3.4.2.14**). Parkers Creek, in the vicinity of Site FTMM-18, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-24**.

PCBs. No PCBs were detected in sediment samples at Site FTMM-18. PCBs are not considered COPECs at Site FTMM-18.

Pesticides. No pesticides were detected in sediment samples at Site FTMM-18. Pesticides are not considered COPECs at Site FTMM-18.

VOCs. A total of three VOCs were detected in sediment samples at Site FTMM-18. None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Site FTMM-18.

SVOCs. Four SVOCs were detected in surface sediment samples at Site FTMM-18. None of the detected SVOCs exceeded the available saltwater sediment ESC. SVOCs are not considered COPECs in sediment at Site FTMM-18.

Metals. Of the 23 metals detected in sediment at Site FTMM-18, 12 were detected in at least one sediment sample each at concentrations exceeding the applicable saltwater sediment ESC. Arsenic was detected in two samples at concentrations (11.9 and 22.8 mg/kg) greater than the ESC (8.2 mg/kg). Cadmium was detected in four samples at concentrations (3.38 to 5.65 mg/kg) greater than the ESC (1.2 mg/kg). Chromium was detected in three samples at concentrations (84.6 to 132 mg/kg) greater than the ESC (81 mg/kg). Cobalt was detected in two samples at concentrations (11.6 and 56 mg/kg) greater than the ESC (10 mg/kg). Copper was detected in one sample at a concentration (82.9 mg/kg) greater than the ESC (34 mg/kg). Lead was detected in two samples at concentrations (67.7 and 166 mg/kg) greater than the ESC (47 mg/kg). Mercury was detected in three samples at concentrations (0.591 to 0.669 mg/kg) greater than the ESC (0.15 mg/kg). Nickel was detected in two samples at concentrations (22.3 to 45.1 mg/kg) greater than the ESC (21 mg/kg). Selenium was detected in five samples at concentrations (2.47 to 12.3 mg/kg) greater than the ESC (1 mg/kg). Silver was detected in two samples at concentrations (26.1 to 27.9 mg/kg) greater than the ESC (1 mg/kg). Vanadium was detected in one sample at a concentration (63 mg/kg) which exceeds the ESC (57 mg/kg). Zinc was detected in three samples at concentrations (187 to 358 mg/kg) greater than the ESC (150 mg/kg). Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Site FTMM-18.

3.4.2.10.5 Summary of COPECs for Site FTMM-18

Parameters detected in soil, groundwater, surface water, or sediment at Site FTMM-18 at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Site FTMM-18, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in soil, groundwater, and sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Site FTMM-18 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None

Soil	Groundwater	Surface Water	Sediment
Pesticides			
4,4′-DDT Endrin aldehyde	None	None	None
PCBs			
None	None	None	None
SVOCs			
Benzo(a)pyrene Naphthalene	None	None	None
Metals			
Antimony Arsenic Cadmium Chromium Copper Lead Mercury Selenium Silver Vanadium Zinc	Arsenic Cadmium Copper Selenium	None	Arsenic Cadmium Chromium Cobalt Copper Lead Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.11 PRE-1941 FORMER SANITARY SEWAGE TREATMENT PLANT, FTMM-20

Surface water and sediment analytical data were evaluated for the identification of COPECs related to the Pre-1941 Former Sanitary STP, Site FTMM-20.

3.4.2.11.1 COPECs for Surface Water at the Pre-1941 Former Sanitary STP FTMM-20

Two surface water samples were collected from Parkers Creek adjacent to Site FTMM-20 as part of the 2010 BEE. Parkers Creek, in the vicinity of Site FTMM-20, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-25**.

PCBs. No PCBs were detected in surface water samples at Site FTMM-20. PCBs are not considered COPECs in surface water at Site FTMM-20.

Pesticides. No pesticides were detected in surface water samples at Site FTMM-20. Pesticides are not considered COPECs in surface water at Site FTMM-20.

VOCs. No VOCs were detected in surface water samples at Site FTMM-20. VOCs are not considered COPECs in surface water at Site FTMM-20.

SVOCs. One SVOC, dimethyl phthalate was detected in the surface water samples at Site FTMM-20. There are no surface water ESC for dimethyl phthalate. SVOCs are not considered COPECs in surface water at Site FTMM-20.

Metals. A total of 14 metals were detected in surface water samples at Site FTMM-20. Parkers Creek, in the vicinity of Site FTMM-20, is saline. None of these metals were detected at concentrations exceeding the applicable saltwater ESC. Metals are not considered COPECs for surface water at Site FTMM-20.

3.4.2.11.2 COPECs for Sediment at the Pre-1941 Former Sanitary STP FTMM-20

Two sediment samples were collected from Parkers Creek adjacent to Site FTMM-20 as part of the 2010 BEE. Parkers Creek, in the vicinity of Site FTMM-20, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-26**.

PCBs. No PCBs were detected in sediment samples at Site FTMM-20. PCBs are not considered COPECs at Site FTMM-20.

Pesticides. No pesticides were detected in sediment samples at Site FTMM-20. Pesticides are not considered COPECs at Site FTMM-20.

VOCs. A total of two VOCs were detected in sediment samples at Site FTMM-20. None were detected at concentrations exceeding the available saltwater sediment ESC. VOCs are not considered COPECs in sediment at Site FTMM-20.

SVOCs. Four SVOCs were detected in surface sediment samples at Site FTMM-20. None of the detected SVOCs exceeded the available saltwater sediment ESC. SVOCs are not considered COPECs in sediment at Site FTMM-20.

Metals. Of the 23 metals detected in sediment at Site FTMM-20, 12 were detected in at least one sediment sample each at concentrations exceeding the applicable saltwater sediment ESC. Arsenic was detected in both samples at concentrations (9.36 and 23.8 mg/kg) greater than the ESC (8.2 mg/kg). Cadmium was detected in both samples at concentrations (1.31 to 2.87 mg/kg) greater than the ESC (1.2 mg/kg). Chromium was detected in one sample at a concentration (99.4 mg/kg) greater than the ESC (81 mg/kg). Cobalt was detected in one sample at a concentration (11.4 mg/kg) greater than the ESC (10 mg/kg). Copper was detected in one sample at a concentration (71.2 mg/kg) greater than the ESC (34 mg/kg). Lead was detected in one sample at a concentration (59.4 mg/kg) greater than the ESC (47 mg/kg). Mercury was detected in one sample at a concentration (0.322 mg/kg) greater than the ESC (0.15 mg/kg). Nickel was detected in one sample at a concentration (21.6 mg/kg) marginally greater than the ESC (21 mg/kg). Selenium was detected in both samples at concentrations (4.04 and 6.86 mg/kg) greater than the ESC (1 mg/kg). Silver was detected in both samples at concentrations (1.35 and 8.07 mg/kg) greater than the ESC (1 mg/kg). Vanadium was detected in one sample at a concentration (60.9 mg/kg) greater than the ESC (57 mg/kg). Zinc was detected in one sample at a concentration (184 mg/kg) greater than the ESC (150 mg/kg). Though Parkers Creek is tidal in the vicinity of Site M-20, the greatest concentrations of these metals were detected in the upstream sample and the lower concentrations were detected in the downstream sample. Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Site FTMM-20.

3.4.2.11.3 Summary of COPECs for Site FTMM-20

Parameters detected in soil, groundwater, surface water, or sediment at Site FTMM-20 at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Site FTMM-20, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Site FTMM-20 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
Not Applicable	Not Applicable	None	None
PCBs			
Not Applicable	Not Applicable	None	None
SVOCs			
Not Applicable	Not Applicable	None	None
Metals			
Not Applicable	Not Applicable	None	Arsenic Cadmium Chromium Cobalt Copper Lead Mercury

Soil	Groundwater	Surface Water	Sediment
			Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.2.12 BUILDING 1122, FTMM-59 (ECP PARCEL 43)

Groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 1122, ECP Parcel 43.

3.4.2.12.1 COPECs for Groundwater at Building 1122, FTMM-59 (ECP Parcel 43)

Five groundwater monitoring wells were monitoring for VOCs during the 2008-2009 time period. Sampling for SVOCs, pesticides, PCBs, and metals was discontinued after the October 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs, pesticides, PCBs, and metals are not considered COPECs in groundwater at Building 1122, FTMM-59 and Parcel 43. Mill Creek could receive groundwater discharge at Building 1122, Site FTMM-59 and Parcel 43. Mill Creek, in the vicinity of Building 1122, is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-9**.

VOCs. Six VOCs were detected in groundwater samples during the 20008-2009 period. None of the detected VOCs were at concentrations greater than the applicable freshwater ESC. VOCs are not considered COPECs for groundwater at Building 1122, FTMM-59 and Parcel 43.

3.4.2.12.2 COPECs for Surface Water at Building 1122, FTMM-59 (ECP Parcel 43)

Two surface water samples were collected from Mill Creek adjacent to Building 1122, FTMM-59 and Parcel 43 as part of the 2010 BEE. One surface water sample was collected in Mill Creek to the east of Building 1122 at a storm water outfall, and the other sample was collected in Mill Creek at a point closest to Building 1122. Mill Creek, in the vicinity of Building 1122, FTMM-59 and Parcel 43, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-27**.

PCBs. No PCBs were detected in surface water samples at Building 1122, FTMM-59 and Parcel 43. PCBs are not considered COPECs in surface at Building 1122, FTMM-59 and Parcel 43.

VOCs. Two VOCs (*cis*-1,2-dichloroethene and PCE) were detected in surface water samples at Building 1122, FTMM-59 and Parcel 43 but at concentrations less than the freshwater ESC. VOCs are not considered COPECs in surface at Building 1122, FTMM-59 and Parcel 43.

SVOCs. Six SVOCs, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzoic acid, 3,3′-dichlorobenzidine, and 1,2,4-trichlorobenzene, were detected in the surface water samples at Building 1122, FTMM-59 and Parcel 43. Anthracene, benzo(a)pyrene, and benzo(a)anthracene concentrations exceeded the applicable freshwater ESC. Both anthracene concentrations (0.12 µg/L) exceeded the 0.035 µg/L ESC. One benzo(*a*)pyrene concentration (0.31 µg/L) exceeded the 0.014 µg/L ESC. Benzo(*a*)anthracene concentrations (0.23 and 0.24 µg/L) exceeded the 0.025 µg/L ESC. Anthracene, benzo(*a*)pyrene, and benzo(*a*)anthracene are considered COPECs in surface water at Building 1122.

Metals. A total of 12 metals were detected in surface water samples at Building 1122, FTMM-59 and Parcel 43. Only lead was detected at concentrations greater than the applicable freshwater ESC in the surface water samples. Total lead concentrations (6.8 and 7.76 µg/L) and dissolved lead concentrations (7.2 and 11.5 µg/L) exceeded the 5.4 µg/L freshwater ESC. Lead is considered a COPEC for surface water at Building 1122.

3.4.2.12.3 COPECs for Sediment at Building 1122, FTMM-59 (ECP Parcel 43)

Three surface sediment samples were collected from Mill Creek adjacent to Building 1122, FTMM-59 and Parcel 43 as part of the ECP SI (Shaw, 2008). These three sediment sample locations were selected to evaluate historical discharges from Building 1122 based on depositional characteristics and potential contaminant migration pathways and included the storm water outfall to the east of Building 1122 (**Appendix K**) into Mill Creek. Mill Creek, in the vicinity of Building 1122, FTMM-59 and Parcel 43, is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table B-1**.

PCBs. No PCBs were detected in sediment samples at Building 1122, FTMM-59 and Parcel 43. PCBs are not considered COPECs at Building 1122, FTMM-59 and Parcel 43.

VOCs. Two VOCs (acetone and methylene chloride) were detected in sediment samples at Building 1122, FTMM-59 and Parcel 43. None were detected at concentrations exceeding the available freshwater sediment ESC. VOCs are not considered COPECs in sediment at Building 1122, FTMM-59 and Parcel 43.

SVOCs. Eleven SVOCs were detected in surface sediment samples at Building 1122, FTMM-59 and Parcel 43. Eight of the detected SVOCs exceeded the available freshwater sediment ESC. Benzo(*a*)anthracene was detected in all three samples and two concentrations (0.510 and 0.610 mg/kg) exceeding the 0.32 mg/kg freshwater sediment ESC. Benzo(*a*)pyrene was detected in all three samples and two concentrations (0.510 and 0.610 mg/kg) exceeding the 0.37 mg/kg freshwater sediment ESC. Benzo(*k*)fluoranthene was detected in all three samples and two concentrations (0.340 and 0.390 mg/kg) exceeding the 0.24 mg/kg freshwater sediment ESC. Chrysene was detected in all three samples and two concentrations (0.86 and 0.88 mg/kg) exceeding the 0.34 mg/kg freshwater sediment ESC. Fluoranthene was detected in all three samples and two concentrations (1.40 and 1.30 mg/kg) exceeding the 0.75 mg/kg freshwater sediment ESC. Phenanthrene was detected in all three samples and one concentration (0.700 mg/kg) exceeded the 0.56 mg/kg freshwater sediment ESC. Pyrene was detected in all three samples and two concentrations (1.60 and 1.40 mg/kg) exceeded the 0.49 mg/kg freshwater sediment ESC. Bis(2-ethylhexyl) phthalate was detected in all three samples at concentrations from 0.440 mg/kg to 1.40 mg/kg. As noted previously, phthalates are common laboratory contaminants and are often found at low concentrations in both field and laboratory QC samples. Bis(2-ethylhexyl) phthalate is not considered a COPEC in surface sediment at Building 1122, FTMM-59 and Parcel 43. Benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*k*)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene are considered COPECs in sediment at Building 1122, FTMM-59 and Parcel 43.

Metals. Of the 18 metals detected in sediment at Building 1122, FTMM-59 and Parcel 43, eight were detected in at least one sediment sample each at concentrations exceeding the applicable freshwater sediment ESC. Arsenic was detected in all three samples and the concentrations (7.48 to 10.2 mg/kg) exceeded the ESC (6 mg/kg). Cadmium was detected in all three samples and two concentrations (1.67 and 1.86 mg/kg) were greater than the ESC (0.6 mg/kg). Chromium was detected in all three samples and the concentrations (155 to 161 mg/kg) exceeded the ESC (26 mg/kg). Copper was detected in all three samples and the concentrations (29.1 to 53.6 mg/kg) were greater than the ESC (16 mg/kg). Lead was detected in all three samples and the concentrations (45.0 to 116 mg/kg) were greater than the ESC (31 mg/kg). Mercury was detected in all three samples and the concentrations (0.25 to 0.47 mg/kg) were greater than the ESC (0.2 mg/kg). Nickel was detected in all three samples and the concentrations (23.7 to 36.4 mg/kg) were greater than the ESC (16 mg/kg). Zinc was detected in all three samples and two concentrations (252 and 286 mg/kg) exceeded the ESC (120 mg/kg). Arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc are considered COPECs in sediment at Building 1122, FTMM-59 and Parcel 43.

3.4.2.12.4 Summary of COPECs for Building 1122, FTMM-59 and Parcel 43

Parameters detected in soil, groundwater, surface water, or sediment at Building 1122, FTMM-59 and Parcel 43 at concentrations greater than the applicable ESC were identified as COPECs for the site. Though cadmium and silver were not detected in surface water at Building 1122, FTMM-59 and Parcel 43, their MDLs were greater than the freshwater ESC. Given that cadmium is considered a COPEC in sediment, it is considered a possible COPEC in surface water. The sediment detection limits

for several PAHs [acenaphthene, acenaphthylene, anthracene, dibenzo(*a,h*)anthracene, fluorene, and 2-methylnaphthalene] exceeded the freshwater sediment ESC. Of these, acenaphthene was identified as a COPEC in surface water. Therefore, anthracene is considered a possible COPEC in sediment. The COPECs, and possible COPECs, identified for Building 1122, FTMM-59 and Parcel 43 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
Not Applicable	None	None	Not Applicable
PCBs			
Not Applicable	None	None	None
SVOCs			
Not Applicable	None	Anthracene Benzo(a)anthracene Benzo(a)pyrene	Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*k*)fluoranthene Chrysene Fluoranthene Phenanthrene Pyrene
Metals			
Not Applicable	None	Lead	Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc
Possible COPECs			
		Cadmium	Anthracene

3.4.2.13 BUILDING 1150 (PARCEL 39)

Surface soil, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 1150, ECP Parcel 39.

3.4.2.13.1 COPECs for Soil at Building 1150 (ECP Parcel 39)

One surface soil sample was collected as part of the ECP SI (Shaw, 2008). This sample was located at the outfall of a clay pipe leading from the direction of Building 1150. Parameters detected in the surface soil sample are presented in **Table B-2**.

VOCs. No VOCs were detected in the surface soil sample. VOCs are not considered COPECs at Parcel 39.

PCBs. No PCBs were detected in the surface soil sample. PCBs are not considered COPECs at Parcel 39.

SVOCs. Four SVOCs were detected in the surface soil sample at Parcel 39. No SVOCs were found at concentrations exceeding the soil ESC. SVOCs are not considered COPECs in surface soil at Parcel 69.

Metals. A total of 18 metals were detected in the surface soil sample. Of these 18, eight were found at concentrations exceeding the soil ESC. The concentration of aluminum (7450 mg/kg) was above the 50 mg/kg soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Parcel 39. Cadmium, chromium, cobalt, lead, mercury, vanadium, and zinc are considered COPECs in soil at Parcel 39.

3.4.2.13.2 COPECs for Surface Water at Building 1150 (ECP Parcel 39)

One surface water sample was collected from Mill Creek adjacent to Building 1150 as part of the 2010 BEE; this surface water sample was also adjacent to Landfill 2, which is located south of Building 1150, across Mill Creek from Building 1150, and was collected immediately downstream of a storm water outfall from the area of Building 1150 in Parcel 39. Additionally, another surface water sample was collected downstream of all storm water outfalls from Parcel 39 (**Appendix K**) as part of the Landfill 2 (FTMM-2) sample collections (**Section 3.4.2.1.3**). Mill Creek, in the vicinity of Building 1150, Parcel 39, is classified as freshwater (**Section 2.4.3**). Parameters detected in the surface water sample are presented in **Table D-28**.

PCBs. No PCBs were detected in surface water samples at Building 1150. PCBs are not considered COPECs in surface water at Building 1150.

Pesticides. No pesticides were detected in surface water samples at Building 1150. Pesticides are not considered COPECs in surface water at Building 1150.

SVOCs. Three SVOCs, anthracene, benzo(*a*)anthracene, and 1,2,4-trichlorobenzene, were detected in the surface water samples at Building 1150. Anthracene and benzo(*a*)anthracene concentrations exceeded the applicable freshwater ESC. The anthracene concentration (0.11 µg/L) exceeded the 0.035 µg/L ESC and the benzo(*a*)anthracene concentration (0.22 µg/L) exceeded the 0.025 µg/L ESC. Anthracene and benzo(*a*)anthracene are considered COPECs in surface water at Building 1150.

Metals. A total of 12 metals were detected in surface water samples at Building 1150. Mill Creek, in the vicinity of Building 1150, is freshwater. Only lead was detected greater than the applicable freshwater ESC in the surface water sample. The total lead concentration (6.2 µg/L) and the dissolved lead concentration (10.1 µg/L) exceeded the 5.4 µg/L freshwater ESC. Lead is considered a COPEC for surface water at Building 1150.

3.4.2.13.3 COPECs for Sediment at Building 1150 (ECP Parcel 39)

Two surface sediment samples were collected from Mill Creek adjacent to Building 1150 as part of the ECP SI (Shaw, 2008). These were collected from deposition locations immediately downgradient of the drainage basin located immediately behind Building 1150 (**Appendix K**). Additionally, four sediment samples were collected as part of the 2010 BEE for Landfill 2 are adjacent to Building 1150 (**Section 3.4.2.1.3**). These sediment sample locations were based on previous sediment sampling conducted for the RI for Landfill 2 (FTMM-2) and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Mill Creek from the area of Building 1150 and Parcel 39. Mill Creek, in the vicinity of Building 1150, Parcel 39, is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples as part of the ECP SI are presented in **Table B-3** and as part of the BEE are presented in **Table D-29**.

PCBs. One PCB mixture, Aroclor 1254, was detected in 2010 BEE sediment samples at Building 1150. Aroclor 1254 was detected in two samples and one concentration (0.064 mg/kg) exceeded the 0.06 mg/kg freshwater ESC. Aroclor 1254 is considered a COPEC at Building 1150.

VOCs. Three VOCs (acetone, methylene chloride, and 2-butanone) were detected in 2010 BEE sediment samples at Building 1150. None were detected at concentrations exceeding the available freshwater or saltwater sediment ESC. VOCs are not considered COPECs in sediment at Building 1150.

SVOCs. Eight SVOCs were detected in surface sediment samples at Building 1150 during the ECP SI and seven of these [benzo(*a*)anthracene, bis(2-ethylhexyl) phthalate, chrysene, di-*n*-butyl phthalate, fluoranthene, phenanthrene, and pyrene] were detected at concentrations exceeding the freshwater sediment ESC. Though 13 SVOCs were detected in surface sediment samples at Building 1150 during the 2010 BEE, only four of these [bis(2-ethylhexyl) phthalate, chrysene, fluoranthene, and pyrene] were detected at concentrations exceeding the freshwater sediment ESC. Concentrations detected during the 2010 BEE were less than those detected during the previous ECP SI. The concentrations of fluoranthene (0.92 mg/kg), chrysene (0.37 mg/kg), pyrene (0.71 mg/kg), and bis(2-ethylhexyl) phthalate (0.28 mg/kg) exceeded the ESC (0.75 mg/kg, 0.34 mg/kg, 0.49 mg/kg, and

0.182 mg/kg, respectively) in the BEE samples. In the SI samples, the concentrations of benzo(*a*)anthracene (0.54 mg/kg), bis(2-ethylhexyl) phthalate (2.1 and 1.3 mg/kg), chrysene (0.37 and 0.71 mg/kg), di-*n*-butyl phthalate (1.9 mg/kg), fluoranthene (0.99 mg/kg), phenanthrene (0.67 mg/kg), and pyrene (1.0 and 2.0 mg/kg) exceeded the ESC of 0.32, 0.182, 0.34, 1.114, 0.75, 0.56, and 0.49 mg/kg, respectively. As noted previously, phthalates are common laboratory contaminants and are often found at low concentrations in both field and laboratory QC samples. Bis(2-ethylhexyl) phthalate and di-*n*-butyl phthalate are not considered COPECs in surface sediment at Building 1150. Benzo(*a*)anthracene, chrysene, fluoranthene, phenanthrene, and pyrene are considered COPECs in sediment at Building 1150.

Metals. During the ECP SI, 18 metals were detected in sediment at Building 1150 and eight of these (arsenic, cadmium chromium, copper, lead, mercury, nickel, and zinc) were detected at concentrations exceeding the freshwater sediment ESC. Though 22 metals were detected in surface sediment samples at Building 1150 during the 2010 BEE, only three of these (arsenic, cadmium, and chromium) were detected at concentrations exceeding the freshwater sediment ESC. Concentrations detected during the BEE were generally less than those detected during the previous ECP SI. The concentrations of arsenic (8.09 and 8.89 mg/kg), cadmium (0.629 to 2.09 mg/kg), chromium (37.7 to 131 mg/kg), copper (27.7 to 41.0 mg/kg), lead (61.7 mg/kg), mercury (0.67 mg/kg), nickel (32.4 mg/kg), and zinc (210 mg/kg) exceeded the ESC of 6, 0.6, 26, 16, 31, 0.2, 16, and 120 mg/kg, respectively, in the BEE or SI samples. Vanadium was detected at concentrations exceeding the saltwater sediment ESC; there are no freshwater ESC for vanadium. Vanadium was identified as a COPEC in surface soil and is considered a COPEC in sediment. Arsenic, cadmium, chromium, copper, lead, mercury, nickel, vanadium, and zinc are considered COPECs in sediment at Building 1150.

3.4.2.13.4 Summary of COPECs for Building 1150

Parameters detected in soil, groundwater, surface water, or sediment at Building 1150 (Parcel 39) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though cadmium and silver were not detected in surface water at Building 1150, their MDLs were greater than the freshwater ESC. Given that cadmium is considered a COPEC in sediment, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Building 1150 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
None	Not Applicable	None	None
Pesticides			
Not Applicable	Not Applicable	None	None
PCBs			
None	Not Applicable	None	Aroclor 1254
SVOCs			
None	Not Applicable	Anthracene Benzo(*a*)anthracene	Benzo(*a*)anthracene Chrysene Fluoranthene Phenanthrene Pyrene
Metals			
Cadmium Chromium Cobalt Lead Mercury Vanadium Zinc	Not Applicable	Lead	Arsenic Cadmium Chromium Copper Lead Mercury Nickel Vanadium Zinc
Possible COPECs			
		Cadmium	

3.4.2.14 BUILDINGS 283, 288, 291, 293, 295 (FTMM-61 AND ECP PARCEL 49)

Surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 283 (FTMM-61) and Buildings 283, 288, 291, 293, and 295 (Parcel 49).

3.4.2.14.1 COPECs for Surface Soil at FTMM-61 and Parcel 49

Ten surface soil samples were collected in relation to FTMM-61 and Parcel 49 as part of the ECP SI (Shaw, 2008). Parameters detected in surface soil samples are presented in **Table B-4**.

PCBs. One PCB mixture, Aroclor 1260, was detected in three of the surface soil samples at FTMM-61 and Parcel 49. Two of the concentrations (0.47 and 8.85 mg/kg) exceeded the soil ESC (0.371 mg/kg). Aroclor 1260 is considered a COPEC in soil at Parcel 49.

SVOCs. Twenty-two SVOCs were detected in surface soil samples in at least one sample each at FTMM-61 and Parcel 49. Ten SVOCs were found at concentrations exceeding the soil ESC; nine of these SVOCs are PAHs. The highest concentrations of these PAHs were found in one of the soil samples: benzo(*a*)anthracene (80 mg/kg), benzo(*a*)pyrene (54 mg/kg), benzo(*b*)fluoranthene (75 mg/kg), chrysene (79 mg/kg), fluoranthene (190 mg/kg), 2-methylnaphthalene (4.4 mg/kg), naphthalene (11 mg/kg), phenanthrene (170 mg/kg), and pyrene (160 mg/kg). Benzo(*a*)anthracene, benzo(a)pyrene, and chrysene were also detected exceeding the ESC in one or two other surface soil samples, but at much lower concentrations. Butyl benzyl phthalate was also detected in three samples at concentrations (0.52 to 1.8 mg/kg) exceeding the 0.239 mg/kg ESC. As noted previously, phthalates are commonly found in field and laboratory QC samples and are not considered COPECs in sediment at FTMM-61 and Parcel 49. Benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*b*)fluoranthene, chrysene, fluoranthene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene are considered COPECs in surface soil at Parcel 49.

Metals. A total of 19 metals were detected in surface soil samples; 10 (aluminum, arsenic, cadmium, chromium, copper, lead, manganese, mercury, vanadium, and zinc) of which were found at concentrations exceeding the soil ESC. Concentrations of aluminum (7,310 to 21,600 mg/kg) were greater than the 50 mg/kg soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at FTMM-61 and Parcel 49. Arsenic, cadmium, chromium, copper, lead, manganese, mercury, vanadium, and zinc are considered COPECs in soil at FTMM-61 and Parcel 49.

3.4.2.14.2 COPECs for Groundwater at FTMM-61 and Parcel 49

Seven groundwater samples (including one duplicate sample) were collected from two distinct temporary wells and four monitoring wells as part of the ECP SI (Shaw, 2008). One of the temporary wells was located north of Building 283 and the other was located east of former Building 289. The monitoring wells were located along the northern perimeter of the former Squier Complex. Parkers Creek could receive groundwater discharge at FTMM-61 and Parcel 49. Parkers Creek, in the vicinity of FTMM-61 and Parcel 49, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table B-5**.

VOCs. Nine VOCs (acetone, benzene, bromodichloromethane, chloroform, ethylbenzene, methyl ethyl ketone, vinyl chloride, xylenes, and toluene) were detected in groundwater samples but at concentrations less than the ESC. VOCs are not considered COPECs at FTMM-61 and Parcel 49.

SVOCs. Four SVOCs were also detected in groundwater samples. One SVOC [bis(2-ethylhexyl) phthalate] was detected in the groundwater samples at concentrations exceeding the ESC. As noted previously, bis(2-ethylhexyl) phthalate, a commonly used plasticizer, is present in a wide variety of plastic products and is commonly detected in field and laboratory QC samples. It was detected in the field blank associated with FTMM-61 and Parcel 49 groundwater sampling (Shaw, 2008) and it is not considered a COPEC in groundwater at FTMM-61 and Parcel 49.

Metals. A total of 18 metals were detected in groundwater samples at FTMM-61 and Parcel 49. Only one metal, zinc, was detected at concentrations in at least one sample exceeding the applicable

saltwater ESC. Zinc was detected in three samples and two concentrations (103 and 107 µg/L) were greater than the 81 µg/L ESC. Zinc is considered a COPEC in groundwater at FTMM-61 and Parcel 49.

3.4.2.14.3 COPECs for Surface Water at FTMM-61 and Parcel 49

Two surface water samples were collected from Parkers Creek in relation to FTMM-61 and Parcel 49 as part of the 2010 BEE. These two surface water samples were collected at storm water line outfalls into Parkers Creek, to the east of Building 283 and north of Parcel 49. Parkers Creek, in the vicinity of FTMM-61 and Parcel 49, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-30**.

PCBs. No PCBs were detected in surface water samples at FTMM-61 and Parcel 49. PCBs are not considered COPECs in sediment at FTMM-61 and Parcel 49.

VOCs. No VOCs were detected in surface water samples at FTMM-61 and Parcel 49. VOCs are not considered COPECs in sediment at FTMM-61 and Parcel 49.

SVOCs. One SVOC, dimethyl phthalate, was detected in the surface water samples at FTMM-61 and Parcel 49. There are no surface water ESC for dimethyl phthalate. SVOCs are not considered COPECs in surface water at FTMM-61 and Parcel 49.

Metals. A total of 13 metals were detected in surface water samples at FTMM-61 and Parcel 49. None of these metals were detected at concentrations exceeding the applicable saltwater ESC. Metals are not considered COPECs for surface water at FTMM-61 and Parcel 49.

3.4.2.14.4 COPECs for Sediment at FTMM-61 and Parcel 49

Seven surface sediment samples (including one duplicate sample) representing three sediment locations were collected from Parkers Creek in relation to FTMM-61 and Parcel 49 as part of the ECP SI (Shaw, 2008). These three sediment sample locations were selected to evaluate historical discharges from Building 283 and Parcel 49 based on depositional characteristics and potential contaminant migration pathways and included the storm water outfalls in Parkers Creek to the east of Building 283 (**Appendix K**) associated with former septic systems at Building 78 and sump pump discharges related to Building 283. Parkers Creek, in the vicinity of FTMM-61 and Parcel 49, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table B-6**.

VOCs. No VOCs were detected in surface sediment samples at FTMM-61 and Parcel 49. VOCs are not considered COPECs at FTMM-61 and Parcel 49.

PCBs. No PCBs were detected in surface sediment samples at FTMM-61 and Parcel 49. PCBs are not considered COPECs at FTMM-61 and Parcel 49.

SVOCs. Ten SVOCs were detected in surface sediment samples at FTMM-61 and Parcel 49. One of the detected SVOCs exceeded the available saltwater sediment ESC. Di-*n*-butyl phthalate was detected in all samples at concentrations from 0.890 to 2.40 mg/kg. As noted previously, phthalates are common laboratory contaminants and are often found at low concentrations in both field and laboratory QC samples. Di-*n*-butyl phthalate is not considered a COPEC in surface sediment at FTMM-61 and Parcel 49.

Metals. Of the 20 metals detected in sediment at FTMM-61 and Parcel 49, 12 were detected in at least one sediment sample each at concentrations exceeding the applicable saltwater sediment ESC. Aluminum was detected in two sediment samples at concentrations (2.92 and 1.85%) exceeding the saltwater sediment ESC (1.8%). Aluminum, like iron, is a major component of soil and sediment, and is usually not considered a COPEC except in very low pH environments. Aluminum is not considered a COPEC at FTMM-61 and Parcel 49. Arsenic was detected in all samples and the concentrations (14.8 to 29.7 mg/kg) exceeding the ESC (8.2 mg/kg). Barium was detected in all samples and the concentrations (65.3 to 96.4 mg/kg) greater than the ESC (48 mg/kg). Cadmium was detected in all samples and concentrations in three samples (1.65 to 5.55 mg/kg) greater than the ESC (1.2 mg/kg). Chromium was detected in all samples and the concentrations (149 to 353 mg/kg) were greater than the ESC (81 mg/kg). Copper was detected in all samples and three concentrations (76.5 to 111 mg/kg) were greater than the ESC (34 mg/kg). Lead was detected in three samples and one concentration (148 mg/kg) was greater than the ESC (47 mg/kg). Mercury was detected in three samples and the concentrations (0.23 to 0.53

mg/kg) were greater than the ESC (0.15 mg/kg). Nickel was detected in all samples and two concentrations (44.0 and 68.5 mg/kg) were greater than the ESC (21 mg/kg). Silver was detected in one sample and the concentration (1.40 mg/kg) was greater than the ESC (1 mg/kg). Vanadium was detected in all samples and the concentrations (79.3 to 125 mg/kg) were greater than the ESC (57 mg/kg). Zinc was detected in all samples and two concentrations (1320 and 2090 mg/kg) exceeded the ESC (150 mg/kg). Arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, silver, vanadium, and zinc are considered COPECs in sediment at FTMM-61 and Parcel 49.

3.4.2.14.5 Summary of COPECs for FTMM-61 and Parcel 49

Parameters detected in soil, groundwater, surface water, or sediment at FTMM-61 and Parcel 49 at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at FTMM-61 and Parcel 49, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in soil and sediment (though not in groundwater), it is considered a possible COPEC in surface water. The sediment detection limits for several PAHs [acenaphthene, acenaphthylene, anthracene, benzo(*g,h,i*)perylene, dibenzo(*a,h*)anthracene, fluorene, 2-methylnaphthalene, and pyrene] were greater than the saltwater sediment ESC. These PAHs were not detected in any of the saltwater samples from FTMM-61 and Parcel 49; however, 2-methylnaphthalene and pyrene are considered COPECs in soil. Therefore, 2-methylnaphthalene and pyrene are considered possible COPECS in sediment. The COPECs, and possible COPECs, identified for FTMM-61 and Parcel 49 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
Aroclor 1260	Not Applicable	None	None
SVOCs			
Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*b*)fluoranthene Chrysene Fluoranthene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene	None	None	None
Metals			
Arsenic Cadmium Chromium Copper Lead Manganese Mercury Vanadium Zinc	Zinc	None	Arsenic Barium Cadmium Chromium Copper Lead Mercury Nickel Silver Vanadium Zinc
Possible COPECs			
		Copper	2-Methylnaphthalene Pyrene

3.4.2.15 BUILDING 1075 (ECP PARCEL 61)

Surface soil, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Parcel 61.

3.4.2.15.1 COPECs for Surface Soil at Parcel 61

One surface soil sample was collected from Parcel 61 as part of the ECP SI (Shaw, 2008) near the southeastern corner of Building 1075. Parameters detected in the surface soil sample are presented in **Table B-7**.

PCBs. No PCBs were detected in the surface soil sample. PCBs are not considered COPECs at Parcel 61.

SVOCs. A total of 18 SVOCs were detected in the surface soil sample. Of these 18, three were detected above the soil ESC. Benzo(*a*)pyrene (3.7 mg/kg) exceeded the 1.52 mg/kg ESC, chrysene (5.0 mg/kg) exceeded the 4.73 mg/kg ESC, and naphthalene (1.2 mg/kg) exceeded the 0.0994 mg/kg ESC. These three PAHs are considered COPECs at Parcel 61.

Metals. A total of 18 metals were detected in the surface soil sample. Of these 18, eight (aluminum, cadmium, chromium, copper, lead, mercury, vanadium, and zinc) were identified at concentrations exceeding the soil ESC. The concentration of aluminum (10,100 mg/kg) exceeded the 50 mg/kg soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Parcel 61. Cadmium, chromium, copper, lead, mercury, vanadium, and zinc are considered COPECs in soil at Parcel 61.

3.4.2.15.2 COPECs for Surface Water at Parcel 61

One surface water sample was collected from a tributary to Husky Brook in relation to Parcel 61 as part of the 2010 BEE. This surface water sample was collected directly downgradient of the stormwater outfall in the tributary to Husky Brook. Husky Brook, in the vicinity of Parcel 61, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-31**.

VOCs. No VOCs were detected in surface water samples at Parcel 61. VOCs are not considered COPECs in surface water at Parcel 61.

PCBs. No PCBs were detected in surface water samples at Parcel 61. PCBs are not considered COPECs in surface water at Parcel 61.

SVOCs. Two SVOCs [benzo(*a*)anthracene and hexachlorobutadiene] were detected in the surface water sample. There are no available saltwater ESC for the detected SVOCs. Benzo(*a*)anthracene and hexachlorobutadiene are not considered COPECs in surface water at Parcel 61.

Metals. A total of 14 metals were detected in surface water samples at Parcel 61. None of these were detected at concentrations exceeding the available saltwater ESC. Metals are not considered COPECs in surface water at Parcel 61.

3.4.2.15.3 COPECs for Sediment at Parcel 61

Two sediment samples were collected from a tributary to Husky Brook in relation to Parcel 61 as part of the ECP SI (Shaw, 2008). One sediment sample was collected directly downgradient of the stormwater outfall into the tributary to Husky Brook and the other was collected downgradient of that near the confluence of the tributary with Husky Brook. Husky Brook, in the vicinity of Parcel 61, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table B-8**.

VOCs. No VOCs were detected in sediment samples at Parcel 61. VOCs are not considered COPECs at Parcel 61.

PCBs. No PCBs were detected in sediment samples at Parcel 61. PCBs are not considered COPECs at Parcel 61.

SVOCs. A total of 13 SVOCs were detected in surface sediment samples at Parcel 61. Bis(2-ethylhexyl) phthalate was detected in both sediment samples; the concentrations (0.380 and 0.460 mg/kg) were greater than the saltwater sediment ESC (0.18216 mg/kg). As noted previously, phthalates are commonly found in field and laboratory QC samples and are not considered COPECs in sediment at Parcel 61. Ten PAHs were detected at concentrations exceeding the saltwater ESC in one or both

samples: acenaphthene (1.60 mg/kg), anthracene (0.160 and 0.290 mg/kg), benzo(a)anthracene (0.490 and 0.740 mg/kg), benzo(*a*)pyrene (0.430 and 0.650 mg/kg), benzo(*k*)fluoranthene (0.380 mg/kg), chrysene (0.710 and 0.920 mg/kg), fluoranthene (1.3 and 1.7 mg/kg), fluorene (0.140 mg/kg), phenanthrene (0.680 and 1.2 mg/kg), and pyrene (1.5 and 2.2 mg/kg). Acenaphthene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*k*)fluoranthene, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene are considered COPECs in sediment at Parcel 61.

Metals. Of the 17 metals detected in sediment at Parcel 61, two were detected in at least one sample at concentrations greater than the saltwater sediment ESC. Arsenic in one sample (13.3 mg/kg) was detected greater than the saltwater sediment ESC (8.2 mg/kg). Chromium was detected in one sample at a concentration (86.0 mg/kg) that exceeded the saltwater sediment ESC (81 mg/kg). Arsenic and chromium are considered COPECs in sediment at Parcel 61.

3.4.2.15.4 Summary of COPECs for Parcel 61

Parameters detected in soil, groundwater, surface water, or sediment at Building 1075 (Parcel 61) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Parcel 61, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in soil (though not in sediment), it is considered a possible COPEC in surface water. Several PAHs [acenaphthylene, benzo(*g,h,i*)perylene, dibenzo(*a,h*)anthracene, and 2-methylnaphthalene] were not detected in sediment samples, but their detection limits were greater than the saltwater sediment ESC in both samples. These were not identified as COPECs in other media at the site and are not considered COPECs in **sediment**. The COPECs, and possible COPECs, identified for Parcel 61 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
None	Not Applicable	None	None
SVOCs			
Benzo(*a*)pyrene Chrysene Naphthalene	Not Applicable	None	Acenaphthene Anthracene Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*k*)fluoranthene Chrysene Fluoranthene Fluorene Phenanthrene Pyrene
Metals			
Cadmium Chromium Copper Lead Mercury Vanadium Zinc	Not Applicable	None	Arsenic Chromium
Possible COPECs			
		Copper	

3.4.2.16 BUILDING 900 (ECP PARCEL 69)

Surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 900 (Parcel 69).

3.4.2.16.1 COPECs for Soil at Parcel 69

Four surface soil samples were collected in relation to Parcel 69 as part of the ECP SI (Shaw, 2008). Parameters detected in surface soil samples are presented in **Table B-9**.

PCBs. No PCBs were detected in surface soil samples at Parcel 69. PCBs are not considered COPECs in soil at Parcel 69.

SVOCs. Four SVOCs were detected in surface soil samples in at least one sample each at Parcel 69. No SVOCs were found at concentrations exceeding the soil ESC. SVOCs are not considered COPECs in surface soil at Parcel 69.

Metals. A total of 17 metals were detected in surface soil samples. Of these 17, seven were identified at concentrations exceeding the soil ESC. Concentrations of aluminum (6,760 to 9,190 mg/kg) exceeded the 50 mg/kg soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Parcel 69. Chromium, copper, lead, mercury, vanadium, and zinc are considered COPECs in soil at Parcel 69.

3.4.2.16.2 COPECs for Groundwater at Parcel 69

Three groundwater samples (including one duplicate sample) were collected from two distinct temporary wells as part of the ECP SI (Shaw, 2008). One of these was located in an area of a former waste oil AST east of Building 900 and the other was located downgradient of Building 900. Oceanport Creek could receive groundwater discharge at Parcel 69. Oceanport Creek, in the vicinity of Parcel 69, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table B-10**.

VOCs. Three VOCs (acetone, PCE, and toluene) were detected in groundwater samples but at concentrations less than the ESC. VOCs are not considered COPECs in groundwater at Parcel 69.

SVOCs. One SVOC [bis(2-ethylhexyl) phthalate] was also detected in the groundwater samples. As noted previously, bis(2-ethylhexyl) phthalate, a commonly used plasticizer, is present in a wide variety of plastic products and is commonly detected in field and laboratory QC samples. It was detected in the field blank associated with Parcel 69 groundwater sampling (Shaw, 2008) and it is not considered a COPEC in groundwater at Parcel 69.

3.4.2.16.3 COPECs for Surface Water at Parcel 69

One surface water sample was collected from Oceanport Creek in relation to Parcel 69 as part of the 2010 BEE. Oceanport Creek, in the vicinity of Parcel 69, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-32**.

PCBs. No PCBs were detected in surface water samples at Parcel 69. PCBs are not considered COPECs in surface water at Parcel 69.

VOCs. No VOCs were detected in surface water samples at Parcel 69. VOCs are not considered COPECs in surface water at Parcel 69.

SVOCs. No SVOCs were detected in surface water samples at Parcel 69. SVOCs are not considered COPECs in surface water at Parcel 69.

Metals. A total of 10 metals were detected in surface water samples at Parcel 69. None of these metals were detected at concentrations exceeding the applicable saltwater ESC. Metals are not considered COPECs for surface water at Parcel 49.

3.4.2.16.4 COPECs for Sediment at Parcel 69

Four surface sediment samples representing two sediment locations were collected from Oceanport Creek in relation to Parcel 69 as part of the ECP SI (Shaw, 2008). Oceanport Creek, in the vicinity of Parcel 69, is classified as saline estuarine (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table B-11**.

PCBs. No PCBs were detected in surface sediment samples at Parcel 69. PCBs are not considered COPECs in sediment at Parcel 69.

VOCs. Three VOCs (acetone, carbon disulfide, and methylene chloride) were detected in sediment samples. VOCs are not considered COPECs in sediment at Parcel 69.

SVOCs. Five SVOCs were detected in surface sediment samples at Parcel 69. All five of the detected SVOCs exceeded the available saltwater sediment ESC. Di-*n*-butyl phthalate was detected in both samples at concentrations ranging from 1.20 to 4.80 mg/kg. As noted previously, phthalates are common laboratory contaminants and are often found at low concentrations in both field and laboratory QC samples. Bis(2-ethylhexyl) phthalate is not considered a COPEC in surface sediment at Parcel 69. Acenaphthene in two samples (0.50 and 1.2 mg/kg), fluoranthene (0.79 and 2.8 mg/kg), phenanthrene in one sample (0.25 mg/kg), and pyrene (1.1 and 3.1 mg/kg) exceeded the saltwater ESC of 0.016, 0.6, 0.24, and 0.665 mg/kg, respectively. Acenaphthene, fluoranthene, phenanthrene, and pyrene are considered COPECs in sediment at Parcel 69.

Metals. Of the 20 metals detected in sediment at Parcel 49, 14 were detected in at least one sediment sample each at concentrations exceeding the applicable saltwater sediment ESC. Aluminum was detected in both sediment samples and one concentration (4.13%) exceeded the saltwater sediment ESC (1.8%). Aluminum, like iron, is a major component of soil and sediment, and is usually not considered a COPEC except in very low pH environments. Aluminum is not considered a COPEC at Parcel 69. Arsenic was detected in all samples and one concentration (36.2 mg/kg) exceeded the ESC (8.2 mg/kg). Barium was detected in all samples and one concentration (89.6 mg/kg) exceeded the ESC (48 mg/kg). Cadmium was detected in one sample and the concentration (14.1 mg/kg) exceeded the ESC (1.2 mg/kg). Chromium was detected in all samples and the concentrations (74.5 to 345 mg/kg) were greater than the ESC (81 mg/kg). Cobalt was detected in both samples and one concentration (20.3 mg/kg) exceeded the ESC (10 mg/kg). Copper was detected in all samples and one concentration (203 mg/kg) exceeded the ESC (34 mg/kg). Lead was detected in both samples and one concentration (410 mg/kg) exceeded the ESC (47 mg/kg). Manganese was detected in both samples and one concentration (339 mg/kg) exceeded the ESC (260 mg/kg). Mercury was detected in one sample and the concentration (0.83 mg/kg) exceeded the ESC (0.15 mg/kg). Nickel was detected in all samples and one concentration (53.1 mg/kg) exceeded the ESC (21 mg/kg). Silver was detected in one sample and the concentration (9.99 mg/kg) exceeded the ESC (1 mg/kg). Vanadium was detected in all samples and one concentration (185 mg/kg) exceeded the ESC (57 mg/kg). Zinc was detected in all samples and one concentration (515 mg/kg) exceeded the ESC (150 mg/kg). Arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, silver, vanadium, and zinc are considered COPECs in sediment at Parcel 69.

3.4.2.16.5 Summary of COPECs for Parcel 69

Parameters detected in soil, groundwater, surface water, or sediment at Building 900 (Parcel 69) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though copper was not detected in surface water at Parcel 69, its MDLs were greater than the saltwater ESC. Given that copper was identified as a COPEC in soil and sediment, it is considered a possible COPEC in surface water. Several PAHs [acenaphthylene, anthracene, benzo(*a*)anthracene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, dibenzo(*a,h*)anthracene, fluorene, indeno(1,2,3-*cd*)pyrene, 2-methylnaphthalene, and naphthalene] were not detected in sediment samples but their detection limits were greater than the saltwater sediment ESC in both samples. These PAHs were not identified as COPECs in other site media and are not considered COPECs for sediment. The COPECs, and possible COPECs, identified for Parcel 69 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
None	Not Applicable	None	None

Soil	Groundwater	Surface Water	Sediment
SVOCs			
None	None	None	Acenaphthene Fluoranthene Phenanthrene Pyrene
Metals			
Chromium Copper Lead Mercury Vanadium Zinc	Not Applicable	None	Arsenic Barium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Silver Vanadium Zinc
Possible COPECs			
		Copper	

3.4.3 CHARLES WOOD AREA

3.4.3.1 LANDFILL, SITE CW-3A, FTMM-25

Near surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Landfill CW-3A (FTMM-25).

3.4.3.1.1 COPECs for Soil at Landfill CW-3A

Near surface (6-12 inches bgs) soil samples were collected from Landfill CW-3A (FTMM-25) as part of the IRP RI investigation (Versar, 2005b). A total of 48 samples were analyzed for SVOCs, pesticides, PCBs, and metals. Parameters detected in near surface soil samples are presented in **Table A-9**.

SVOCs. A total of 21 SVOCs were detected in near surface soil samples from Landfill CW-3A (FTMM-25). Of these 21 SVOCs, two were detected at concentrations exceeding the soil ESC in at least one sample. Naphthalene was detected in one sample at a concentration greater than the 0.0994 mg/kg ESC. Bis(2-ethylhexyl) phthalate was detected in two samples at concentrations exceeding the 0.925 mg/kg ESC. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples, and bis(2-ethylhexyl) phthalate is not considered a COPEC. Naphthalene is considered a COPEC in soil at Landfill CW-3A (FTMM-25).

Pesticides. Six pesticides were detected in near surface soil samples from Landfill CW-3A (FTMM-25). Four of these pesticides were detected at concentrations exceeding the soil ESC in at least one sample. 4,4′-DDT was detected in half of the 48 samples and the majority of these had concentrations that were greater than the 0.0035 mg/kg ESC. Dieldrin was detected in four samples and the concentrations were greater than the 0.049 mg/kg ESC. Endrin aldehyde and heptachlor were detected in one sample each at concentrations exceeding the 0.0105 and 0.0538 mg/kg ESC, respectively. 4,4′-DDT, endrin aldehyde, dieldrin, and heptachlor are considered COPECs at Landfill CW-3A (FTMM-25).

PCBs. Two Aroclors were detected in near surface soil samples from Landfill CW-3A (FTMM-25). Aroclor 1260 and Aroclor 1254 were detected in one sample each. The concentration of Aroclor 1254 exceeded the 0.371 mg/kg ESC. Aroclor 1254 is considered a COPEC in soil at Landfill CW-3A (FTMM-25).

Metals. A total of 22 metals were detected in near surface soil samples from Landfill CW-3A (FTMM-25) of which most metals were detected in the majority of the samples. Silver was detected

infrequently, being detected in seven samples; selenium was detected in less than half the samples (14 of 48). Fourteen metals (aluminum, antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, vanadium, and zinc) were detected at concentrations exceeding the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill CW-3A. Antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, vanadium, and zinc are considered COPECs in soil at Landfill CW-3A (FTMM-25).

3.4.3.1.2 COPECs for Groundwater at Landfill CW-3A (FTMM-25)

Four groundwater monitoring wells at Landfill CW-3A (FTMM-25) have been monitored for metals during the 2008-2009 time period. Shrewsbury Creek could receive groundwater discharge from Landfill CW-3A (FTMM-25). Shrewsbury Creek, in the vicinity of Landfill CW-3A (FTMM-25), is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-10**.

Metals. A total of 10 metals were detected in groundwater samples from Landfill CW-3A (FTMM-25) during the 2008-2009 time period. Of these 10, six (barium, cadmium, chromium, copper, lead, and selenium) were detected in at least one groundwater sample at concentrations exceeding the freshwater ESC. Barium concentrations in one well (CW3AMW02) were all greater than the 220 µg/L freshwater ESC. Barium did not exceed the ESC in any of the other three monitoring wells during this period. Most of the concentrations of copper from one well (CW3AMW03) exceeded the 6.5 µg/L site-specific freshwater ESC. Copper did not exceed the ESC in any of the other three monitoring wells during this period. Chromium was detected in one sample at a concentration greater than the freshwater ESC (19 µg/L). Cadmium, lead, and selenium were detected at concentrations exceeding the ESC in most, if not all, of the wells in at least one sample. Barium, cadmium, chromium, copper, lead, and selenium are considered COPECs in groundwater at Landfill CW-3A (FTMM-25).

3.4.3.1.3 COPECs for Surface Water at Landfill CW-3A (FTMM-25)

Two surface water samples were collected from Shrewsbury Creek adjacent to Landfill CW-3A (FTMM-25) as part of the 2010 BEE. One surface water sample was collected downstream of the stormwater outfall at the western end of Landfill CW-3A (**Appendix K**), and the other surface water sample was collected downgradient of that location. Shrewsbury Creek, in the vicinity of Landfill CW-3A (FTMM-25), is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-33**.

VOCs. One VOC was detected in at least one of the two surface water samples. Toluene was detected at a concentration (6.8 µg/L) less than the freshwater ESC. VOCs are not considered COPECs in surface water at Landfill CW-3A (FTMM-25).

SVOCs. Three SVOCs were detected in at least one of the two surface water samples. One sample had a concentration of 3,3′-dichlorobenzidine (0.61 µg/L) less than the freshwater ESC. Anthracene (0.11 µg/L) and benzo(*a*)pyrene (0.31 µg/L) were detected greater than the freshwater ESC (0.035 and 0.014 µg/L, respectively). Anthracene and benzo(*a*)pyrene are considered COPECs in surface water at Landfill CW-3A (FTMM-25).

PCBs. PCBs were not detected in surface water samples and are not considered COPECs in surface water at Landfill CW-3A (FTMM-25).

Pesticides. Pesticides were not detected in surface water samples and are not considered COPECs in surface water at Landfill CW-3A (FTMM-25).

Metals. A total of 18 metals were detected in surface water samples at Landfill CW-3A (FTMM-25). Of these 18, four were detected at concentrations exceeding the freshwater ESC. Total copper (8.48 µg/L) and total lead (6.18 and 8.81 µg/L) were detected at concentrations exceeding the freshwater ESC for dissolved copper (6.5 µg/L) and dissolved lead (5.4 µg/L); dissolved copper and dissolved lead were not detected. Copper and lead are not considered COPECs in surface water. Total cadmium (0.97 µg/L) and dissolved cadmium (0.79 µg/L) were detected at concentrations greater than the freshwater ESC (0.14 µg/L) in one surface water sample, and total zinc (117 µg/L) and dissolved zinc

(99.8 µg/L) were detected greater than the freshwater ESC (88 µg/L) in one surface water sample. Cadmium and zinc are considered COPECs in surface water at Landfill CW-3A (FTMM-25).

3.4.3.1.4 COPECs for Sediment at Landfill CW-3A (FTMM-25)

Six sediment samples were collected from Shrewsbury Creek adjacent to Landfill CW-3A (FTMM-25) as part of the 2010 BEE. Sediment sample locations were based on previous sediment sampling conducted for the RI and were located in the field based on depositional characteristics and potential contaminant migration pathways and included storm water outfalls (**Appendix K**) into Shrewsbury Creek in the vicinity of Landfill CW-3A (FTMM-25) from the area of Buildings 2707 and 2713 in Parcel 27 (**Section 3.4.3.4**). Shrewsbury Creek, in the vicinity of Landfill CW-3A (FTMM-25), is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-34**.

VOCs. Four VOCs (acetone, methylene chloride, toluene, and 2-butanone) were detected in at least one sediment sample each, but none were detected at concentrations exceeding the ESC.

PCBs. No PCBs were detected in sediment samples at Landfill CW-3A (FTMM-25).

Pesticides. Three pesticides (4,4'-DDT, 4,4'-DDE, and 4,4'-DDD) were detected in at least one sediment sample each from Landfill CW-3A. Only one sample had a 4,4'-DDD concentration (0.013 mg/kg) exceeding the freshwater sediment ESC (0.008 mg/kg), and 4,4'-DDD is considered a COPEC in sediment at Landfill CW-3A (FTMM-25).

SVOCs. A total of 16 SVOCs were detected in surface sediment samples at Landfill CW-3A (FTMM-25). Of the 16 detected SVOCs, 12 were detected in one sediment sample (CW3-SD6) at concentrations exceeding the freshwater ESC; these were all PAHs: 0.78 mg/kg acenaphthene, 4.1 mg/kg anthracene, 7.0 mg/kg benzo(a)anthracene, 4.6 mg/kg benzo(a)pyrene, 2.0 mg/kg benzo(*g,h,i*)perylene, 2.3 mg/kg benzo(*k*)fluoranthene, 5.6 mg/kg chrysene, 17 mg/kg fluoranthene, 1.4 mg/kg fluorene, 2.0 mg/kg indeno(1,2,3-*cd*)pyrene, 15 mg/kg phenanthrene, and 13 mg/kg pyrene. Acenaphthene, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-*cd*)pyrene, phenanthrene, and pyrene are considered COPECs in sediment at Landfill CW-3A (FTMM-25).

Metals. Of the 20 metals detected in sediment at Landfill CW-3A (FTMM-25), five (arsenic, cadmium, chromium, copper, and lead) were detected in at least one sample at concentrations exceeding the freshwater sediment ESC. Arsenic concentrations in one sample (6.59 mg/kg), cadmium concentrations in three samples (1.07 to 3.38 mg/kg), chromium concentrations in five samples (29.3 to 145 mg/kg), copper concentrations in two samples (23.3 and 31.6 mg/kg), and lead in one sample (31.2 mg/kg) exceeded the ESC of 6, 0.6, 26, 16, and 31 mg/kg, respectively. Though there are no freshwater sediment ESC for barium, selenium, and vanadium, detected concentrations of these metals were detected at concentrations greater than the available saltwater sediment ESC. These metals were identified as COPECs in other environmental media at Landfill CW-3A (FTMM-25) and are considered COPECs in sediment. Arsenic, barium, cadmium, chromium, copper, lead, selenium, and vanadium are considered COPECs in sediment at Landfill CW-3A (FTMM-25).

3.4.3.1.5 Summary of COPECs for Landfill CW-3A (FTMM-25)

Parameters detected in soil, groundwater, surface water, or sediment at Landfill CW-3A (FTMM-25) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though silver was not detected in surface water at Landfill CW-3A (FTMM-25), its MDLs were greater than the freshwater ESC. Given that silver is considered a COPEC in sediment (though not in soil or groundwater), it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Landfill CW-3A (FTMM-25) are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	Not Applicable	None	None
Pesticides			
DDT	Not Applicable	None	DDD

Soil	Groundwater	Surface Water	Sediment
Dieldrin Endrin aldehyde Heptachlor			
PCBs			
Aroclor 1254	Not Applicable	None	None
SVOCs			
Naphthalene	Not Applicable	Anthracene Benzo(a)pyrene	Acenaphthene Anthracene Benzo(*a*)anthracene Benzo(*a*)pyrene Benzo(*g,h,i*)perylene Benzo(*k*)fluoranthene Chrysene Fluoranthene Fluorene Indeno(1,2,3-*cd*)pyrene Phenanthrene Pyrene
Metals			
Antimony Arsenic Barium Cadmium Chromium Copper Lead Manganese Mercury Selenium Silver Vanadium Zinc	Barium Cadmium Chromium Copper Lead Selenium	Cadmium Zinc	Arsenic Barium Cadmium Chromium Copper Lead Selenium Vanadium
Possible COPECs			
		Silver	

3.4.3.2 FORMER PESTICIDE STORAGE AREA, SITE CW-6 (FTMM-28)

Surface soil, groundwater, surface water, and wetland sediment analytical data were evaluated for the identification of COPECs related to the Former Pesticide Storage Area, Site CW-6 (FTMM-28).

3.4.3.2.1 COPECs for Soil at Former Pesticide Storage Area, Site CW-6 (FTMM-28)

Four surface soil samples were collected as part of the 2010 BEE at Site CW-6 (FTMM-28). Parameters detected in sediment samples are presented in **Table D-35**.

VOCs. Five VOCs were detected in surface soil samples at Site CW-6 (FTMM-28). None of the VOCs were detected at concentrations exceeding the soil ESC. VOCs are not considered COPECs in soil at Site CW-6 (FTMM-28).

SVOCs. Fifteen SVOCs were detected in surface soil samples at Site CW-6 (FTMM-28). One SVOC, chrysene, was detected at a concentration (22 mg/kg) greater than the soil ESC (4.73 mg/kg). Chrysene is considered a COPEC in soil at Site CW-6 (FTMM-28).

Pesticides. Five pesticides were detected in surface soil samples at Site CW-6 (FTMM-28). Dieldrin (0.0092 mg/kg) and 4,4'-DDT (0.021 to 0.23 mg/kg) were detected in at least one soil sample each greater than the soil ESC of 0.049 and 0.0035 mg/kg, respectively. Dieldrin and 4,4'-DDT are considered COPECs in soil at Site CW-6 (FTMM-28).

PCBs. No PCBs were detected in surface soil samples at Site CW-6 (FTMM-28). PCBs are not considered COPECs in surface soil at Site CW-6 (FTMM-28).

Metals. A total of 23 metals were detected in surface soil samples at Site CW-6 (FTMM-28). Eleven metals (aluminum, antimony, arsenic, cadmium, chromium, copper, lead, mercury, selenium, vanadium, and zinc) were detected exceeding the ESC in at least one of the surface soil samples from Site CW-6 (FTMM-28). Aluminum (1,640 to 6,740 mg/kg), antimony (0.62 to 3.06 mg/kg), chromium (13.1 to 55.2 mg/kg), lead (30.9 to 356 mg/kg), mercury (0.218 to 8.1 mg/kg), selenium (1.1 to 7.61 mg/kg), vanadium (12.3 to 55.6 mg/kg), and zinc (42.5 to 373 mg/kg) were detected at concentrations exceeding the ESC in all four of the surface soil samples. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Landfill Site CW-6. Antimony, arsenic, cadmium, chromium, copper, lead, mercury, selenium, vanadium, and zinc are considered COPECs in soil at CW-6 (FTMM-28).

3.4.3.2.2 COPECs for Groundwater at Former Pesticide Storage Area, Site CW-6 (FTMM-28)

Four groundwater monitoring wells at Site CW-6 (FTMM-28) have been monitored during the 2008-2009 time period. Sampling for SVOCs and VOCs was discontinued after the November 2004 sampling event per NJDEP approval letter dated November 2004. SVOCs and VOCs are not considered COPECs in groundwater at Landfill 2. Wampum Brook could receive groundwater discharge from Site CW-6 (FTMM-28). Wampum Brook, in the vicinity of Site CW-6 (FTMM-28), is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table C-11**.

Metals. A total of 11 metals were detected in groundwater samples from Site CW-6 (FTMM-28) during the 2008-2009 time period. Of these 11, four (cadmium, copper, lead, and selenium) were detected in at least one groundwater sample at concentrations exceeding the freshwater ESC. Lead concentrations in one well (CW6MW01) during two quarters in 2008 were greater than the 5.4 µg/L freshwater ESC. Copper exceeded the site-specific freshwater ESC for dissolved copper of 8.1 µg/L in two of the monitoring wells. Cadmium and selenium were detected at concentrations exceeding the ESC (0.14 and 5 µg/L, respectively) in all of the wells in at least one sample. Cadmium, copper, lead, and selenium are considered COPECs in groundwater at Landfill CW-3A.

3.4.3.2.3 COPECs for Surface Water at Former Pesticide Storage Area, Site CW-6 (FTMM-28)

Two surface water samples were collected as part of the 2010 BEE at Site CW-6 (FTMM-28). These were located upstream of Site CW-6 (FTMM-28) where Wampum Brook enters the CWA and downstream of Site CW-6 (FTMM-28) where Wampum Brook exits the CWA. Wampum Brook, in the vicinity of Site CW-6 (FTMM-28), is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-36**.

VOCs. One VOC was detected in surface water samples at Site CW-6 (FTMM-28). MTBE was detected in one sample at a concentration less than the freshwater ESC. VOCs are not considered COPECs in surface water at Site CW-6 (FTMM-28).

PCBs. One PCB mixture was detected in surface water samples at Site CW-6 (FTMM-28). Aroclor 1242 was detected in both surface water samples at concentrations (0.13 and 0.3 µg/L) exceeding the freshwater ESC (0.014 µg/L). Aroclor 1242 is considered a COPEC in surface water at Site CW-6 (FTMM-28).

SVOCs. No SVOCs were detected in surface water samples. SVOCs are not considered COPECs in surface water at Site CW-6 (FTMM-28).

Pesticides. No pesticides were detected in surface water samples. Pesticides are not considered COPECs in surface water at Site CW-6 (FTMM-28).

Metals. A total of 13 metals were detected in surface water samples at Site CW-6 (FTMM-28). Of these 13, three (cadmium, lead, and zinc) were detected at concentrations exceeding the freshwater ESC in at least one sample. Total cadmium (0.52 and 1.13 µg/L) and dissolved cadmium (0.8 µg/L) were detected greater than the site-specific freshwater ESC (0.14 µg/L) and total cobalt (29.4 µg/L) and dissolved cobalt (28.7 µg/L) were exceeded the freshwater ESC (24 µg/L) in one surface water sample. This sediment sample was collected from Wampum Brook upstream of Site CW-6 (FTMM-28) at the

upgradient boundary of the CWA. Cobalt is not considered a COPEC in surface water at Site CW-6 (FTMM-28). Total lead (7.94 and 8.09 µg/L) and dissolved lead (6.32 and 8.79 µg/L) were detected at concentrations exceeding the freshwater ESC (5.4 µg/L) in both samples. Cadmium and lead are considered COPECs in surface water at Site CW-6 (FTMM-28).

3.4.3.2.4 COPECs for Sediment at Former Pesticide Storage Area, Site CW-6 (FTMM-28)

Four sediment samples were collected from the wetland area southwest of Site CW-6 (FTMM-28) and two sediment samples were collected from Wampum Brook as part of the 2010 BEE. Wampum Brook, in the vicinity of Site CW-6 (FTMM-28), is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table D-37**.

VOCs. Five VOCs (acetone, methylene chloride, styrene, toluene, and 2-butanone) were detected in at least one sediment sample each, but none were detected at concentrations exceeding the freshwater sediment ESC. VOCs are not considered COPECs in wetland sediments at Site CW-6 (FTMM-28).

Pesticides. One pesticide (4,4'-DDE) was detected in one wetland sediment sample from Site CW-6 (FTMM-28). The concentration (0.006 mg/kg) exceeded the freshwater sediment ESC (0.005 mg/kg) and 4,4'-DDE is considered a COPEC in sediment at Site CW-6 (FTMM-28).

PCBs. Two PCB mixtures (Aroclor 1242 and Aroclor 1260) were detected in one sediment sample each. Aroclor 1260 was detected in one wetland sediment sample at a concentration (0.1 mg/kg) which exceeds the freshwater sediment ESC (0.005 mg/kg); Aroclor 1242 was detected at a concentration less than the freshwater sediment ESC for PCBs (0.07 mg/kg). Aroclor 1260 is considered a COPEC in wetland sediment at Site CW-6 (FTMM-28).

SVOCs. A total of 20 SVOCs were detected in surface sediment samples at Site CW-6 (FTMM-28). Of the 20 detected SVOCs, 15 were detected in one sediment sample (CW6-SD6) at concentrations exceeding the ESC; these were all PAHs: 0.47 mg/kg acenaphthene, 1.6 mg/kg acenaphthylene, 0.3 mg/kg anthracene, 1.0 mg/kg benzo(*a*)anthracene, 1.2 mg/kg benzo(*a*)pyrene, 0.89 mg/kg benzo(*g,h,i*)perylene, 0.74 mg/kg benzo(*k*)fluoranthene, 1.9 mg/kg chrysene, 4.9 mg/kg fluoranthene, 0.82 mg/kg fluorene, 0.98 mg/kg indeno(1,2,3-*cd*)pyrene, 1.3 mg/kg 2-methylnaphthalene, 4.4 mg/kg naphthalene, 8.3 mg/kg phenanthrene, and 3.3 mg/kg pyrene. This sediment sample was collected from Wampum Brook upstream of Site CW-6 (FTMM-28) at the upgradient boundary of the CWA. These PAHs are not considered COPECs in sediment at Site CW-6 (FTMM-28). One SVOC (2,4-dinitrophenol) was detected in two wetland sediment samples at concentrations (1.2 and 1.7 mg/kg) that exceeded the freshwater sediment ESC (0.00621 mg/kg). Thus, 2,4-dinitrophenol is considered a COPEC in wetland sediments at Landfill CW-6 (FTMM-28).

Metals. Of the 22 metals detected in sediment at Site CW-6 (FTMM-28), nine (arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc) were detected in at least one sample at concentrations exceeding the freshwater sediment ESC. Arsenic concentrations in two wetland samples (11.7 and 13.1 mg/kg), cadmium concentrations in five samples (0.9 to 5.56 mg/kg), chromium concentrations in six samples (35.3 to 150 mg/kg), copper concentrations in four samples (26.2 to 56.2 mg/kg), lead in four samples (124 to 218 mg/kg), mercury in three samples (0.426 to 6.6 mg/kg), nickel in three samples (16.2 to 56.2 mg/kg), silver in four samples (1.1 to 12.1 mg/kg), and zinc in one sample (168 mg/kg) exceeded the ESC of 6, 0.6, 26, 16, 31, 0.2, 16, 1.0, and 120 mg/kg, respectively. Though there are no freshwater sediment ESC for barium, selenium, and vanadium, detected concentrations of these metals were detected at concentrations greater than the available saltwater sediment ESC. Of these metals, selenium and vanadium were identified as COPECs in other environmental media at Site CW-6 (FTMM-28) and are considered COPECs in sediment. Arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, vanadium, and zinc are considered COPECs in sediment at Site CW-6 (FTMM-28).

3.4.3.2.5 Summary of COPECs for Site CW-6 (FTMM-28)

Parameters detected in soil, groundwater, surface water, or sediment at Site CW-6 (FTMM-28) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though silver

and 4,4′-DDE were not detected in surface water at Landfill CW-6 (FTMM-28), their MDLs were greater than the freshwater ESC. Given that silver and 4,4′-DDE are considered COPECs in sediment (though not in soil or groundwater), they are considered possible COPECs in surface water. The COPECs, and possible COPECs, identified for Landfill CW-6 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
None	None	None	None
Pesticides			
DDT Dieldrin	Not Applicable	None	DDE
PCBs			
None	Not Applicable	Aroclor 1242	Aroclor 1260
SVOCs			
Chrysene	None	None	2,4-Dinitrophenol
Metals			
Antimony Arsenic Cadmium Chromium Copper Lead Mercury Selenium Vanadium Zinc	Cadmium Copper Lead Selenium	Cadmium Lead	Arsenic Cadmium Chromium Copper Lead Mercury Nickel Selenium Silver Vanadium Zinc
Possible COPECs			
		DDE Silver	

3.4.3.3 BUILDING 2700 (ECP PARCEL 15)

Groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 2700 and ECP Parcel 15.

3.4.3.3.1 COPECs for Groundwater at Building 2700 (Parcel 15)

Seven groundwater samples (including one duplicate sample) were collected from six distinct temporary wells as part of the ECP SI (Shaw, 2008). These were located along the downgradient boundary of the parcel along Shrewsbury Creek. Shrewsbury Creek could receive groundwater discharge from Parcel 15. Shrewsbury Creek, in the vicinity of Parcel 15, is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table B-12**.

VOCs. One VOC, toluene, was detected in one groundwater sample but at a concentration less than the ESC. VOCs are not considered COEPCs in groundwater at Parcel 15.

SVOCs. One SVOC, bis(2-ethylhexyl) phthalate, was detected in three groundwater samples at concentrations from 1.19 to 4.04 µg/L exceeding the freshwater ESC of 0.3 µg/L. Bis(2-ethylhexyl) phthalate, a commonly used plasticizer, is present in a wide variety of plastic products and is commonly detected in field and laboratory QC samples. It was detected in the field blank associated with Parcel 15 groundwater sampling (Shaw, 2008) and it is not considered a COPEC in groundwater at Parcel 15.

Metals. A total of 19 metals were detected in Parcel 15 groundwater samples. Of the 19 metals detected, seven (barium, cadmium, chromium, copper, lead, selenium, and vanadium) were detected at least once at concentrations greater than the respective freshwater ESC. Barium, cadmium, chromium, copper, lead, selenium, and vanadium are considered COPECs in groundwater at Parcel 15.

3.4.3.3.2 COPECs for Surface Water at Building 2700 (ECP Parcel 15)

Two surface water samples were collected from Shrewsbury Creek adjacent to Parcel 15 as part of the 2010 BEE. These samples were collected at the discharge points of an underground stream diversion near the southwest end of Building 2525 and of a stormwater pipe outfall (**Appendix K**). Shrewsbury Creek, in the vicinity of Parcel 15, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-38**.

VOCs. No VOCs were detected in surface water samples at Parcel 15. VOCs are not considered COPECs in surface water at Parcel 15.

SVOCs. No SVOCs were detected in surface water samples at Parcel 15. SVOCs are not considered COPECs in surface water at Parcel 15.

PCBs. No PCBs were detected in surface water samples at Parcel 15. PCBs are not considered COPECs in surface water at Parcel 15.

Metals. A total of 12 metals were detected in Parcel 15 surface water samples. Of the 12 metals detected, two (cadmium and lead) were detected at least once exceeding the freshwater ESC. Total cadmium was detected in one surface water sample at a concentration of 0.55 µg/L which exceeds the freshwater ESC of 0.15 µg/L. However, the ESC is based on dissolved cadmium and cadmium was not detected in either of the filtered surface water samples from Parcel 15; cadmium is not considered a COPEC in surface water at Parcel 15. Lead was detected in all surface water samples from Parcel 15. Total lead concentrations ranged from 6.84 to 8.3 µg/L and dissolved lead concentrations ranged from 4.33 to 8.27 µg/L. The freshwater ESC for lead of 5.4 µg/L is based on dissolved lead and one of the two filtered surface water samples had a lead concentration above the ESC. Lead is considered a COPEC in surface water at Parcel 15.

3.4.3.3.3 COPECs for Sediment at Building 2700 (ECP Parcel 15)

A total of three surface sediment samples were collected from three stormwater outfall locations within Shrewsbury Creek adjacent to Parcel 15 as part of the ECP SI (Shaw, 2008). These samples were collected at the discharge points of an underground stream diversion near the southwest end of Building 2525 and of two other stormwater pipe outfalls (**Appendix K**). Shrewsbury Creek, in the vicinity of Parcel 15, is classified as freshwater (**Section 2.4.3**). Parameters detected in sediment samples are presented in **Table B-13**.

SVOCs. A total of 10 SVOCs were detected in Parcel 15 surface sediment samples. One SVOC, bis(2-ethylhexyl) phthalate, was detected in one of three surface sediment samples with a concentration of 1.3 mg/kg which exceeds the freshwater sediment ESC of 0.182 mg/kg. As noted previously, phthalates are common laboratory contaminants and are often found at low concentrations in both field and laboratory QC samples. Bis(2-ethylhexyl) phthalate is not considered a COPEC in surface sediment at Parcel 15.

Metals. A total of 18 metals were detected in Parcel 15 surface sediment samples. Only one metal was detected in surface sediment samples from Parcel 15 at concentrations exceeding the freshwater sediment ESC. Total chromium was detected at concentrations ranging from 29.4 to 37.0 mg/kg. These are above the 26 mg/kg ESC, and chromium is considered a COPEC in sediment at Parcel 15.

3.4.3.3.4 Summary of COPECs for Parcel 15

Parameters detected in soil, groundwater, surface water, or sediment at Building 2700 (Parcel 15) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though cadmium was not detected in filtered surface water samples at Parcel 15, their MDLs were greater than the freshwater ESC. Given that cadmium was detected at concentrations exceeding the freshwater ESC in unfiltered surface water samples and cadmium is considered a COPEC in groundwater, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Parcel 15 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	Not Applicable
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
Not Applicable	Not Applicable	None	Not Applicable
SVOCs			
Not Applicable	None	None	None
Metals			
Not Applicable	Barium Cadmium Chromium Copper Lead Selenium Vanadium	Lead	Chromium
Possible COPECs			
		Cadmium	

3.4.3.4 BUILDINGS 2507 AND 2704 (ECP PARCEL 27)

Surface soil, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Buildings 2507 and 2704 in ECP Parcel 27.

3.4.3.4.1 COPECs for Surface Soil at Buildings 2507 and 2704 (ECP Parcel 27)

Three surface soil samples (including one duplicate) were collected at Parcel 27 as part of the SI (Shaw, 2008). Parameters detected in surface soil samples are presented in **Table B-14**.

VOCs. No VOCs were detected in surface soil samples at Parcel 27. VOCs are not considered COPECs in surface soil.

PCBs. No PCBs were detected in surface soil samples at Parcel 27. PCBs are not considered COPECs in surface soil.

SVOCs. A total of eight SVOCs were detected in surface soil samples. Of these, only one was detected greater than the soil ESC. Bis(2-ethylhexyl) phthalate was detected in the duplicate sample at a concentration (0.940 mg/kg) which exceeds the 0.92954 mg/kg soil ESC. As noted elsewhere, bis(2-ethylhexyl) phthalate is commonly found in field and laboratory QC samples, and bis(2-ethylhexyl) phthalate is not considered a COPEC. SVOCs are not considered COPECs in soil at Parcel 27.

Metals. A total of 18 metals were detected in surface soil samples at Parcel 27. Of these, 10 (aluminum, arsenic, cadmium, chromium, copper, lead, manganese, mercury, vanadium, and zinc) were detected in at least one surface soil sample each above the soil ESC. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Parcel 27. Arsenic, cadmium, chromium, copper, lead, manganese, mercury, vanadium, and zinc are considered COPECs at Parcel 27.

3.4.3.4.2 COPECs for Surface Water at Buildings 2507 and 2704 (ECP Parcel 27)

Two surface water samples were collected from Shrewsbury Creek adjacent to Parcel 27, at an outfall and at an additional location downstream, as part of the 2010 BEE. One surface water sample was collected at a stormwater outfall and the other was collected downstream of that location. Shrewsbury Creek, in the vicinity of Parcel 27, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-39**.

VOCs. No VOCs were detected in surface water samples at Parcel 27. VOCs are not considered COPECs in surface water at Parcel 27.

SVOCs. No SVOCs were detected in surface water samples at Parcel 27. SVOCs are not considered COPECs in surface water at Parcel 27.

PCBs. No PCBs were detected in surface water samples at Parcel 27. PCBs are not considered COPECs in surface water at Parcel 27.

Metals. A total of 14 metals were detected in Parcel 27 surface water samples. Of the 14 metals detected, three (cadmium, chromium, and lead) were detected at least once exceeding the freshwater ESC. Total cadmium was detected at concentrations of 0.76 and 0.88 µg/L and dissolved cadmium was detected at concentrations of 0.52 and 0.69 µg/L; these exceed ESC for dissolved cadmium of 0.16 µg/L. Chromium was detected in one filtered sample at a concentration (28.5 µg/L) greater than the ESC for dissolved chromium of 21 µg/L. Total lead was detected at concentrations of 5.46 and 10.6 µg/L and dissolved lead was detected at concentrations of 5.77 and 8.18 µg/L; these exceed the freshwater ESC for dissolved lead of 5.4 µg/L. Cadmium, chromium, and lead are considered COPECs in surface water at Parcel 27.

3.4.3.4.3 COPECs for Sediment at Buildings 2507 and 2704 (ECP Parcel 27)

Two surface sediment samples were collected from Shrewsbury Creek adjacent to Parcel 27, at an outfall and at an additional location downstream as part of the ECP SI (Shaw, 2008). One sediment sample was collected at a stormwater outfall and the other was collected downstream of that location. Shrewsbury Creek, in the vicinity of Parcel 27, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface sediment samples are presented in **Table B-15**.

SVOCs. A total of seven SVOCs were detected in Parcel 27 surface sediment samples. None of the SVOCs detected in surface sediment samples exceeded the freshwater sediment ESC. SVOCs are not considered COPECs in sediment at Parcel 27.

Of the 17 metals detected, six (arsenic, cadmium, chromium, copper, lead, and zinc) were detected at concentrations exceeding the freshwater sediment ESC. Arsenic (6.11 mg/kg), copper (187 mg/kg), lead (84.9 mg/kg), and zinc (264 mg/kg) were detected greater than their ESC of 6, 16, 31, and 120 mg/kg, respectively, in one of the two surface sediments collected at Parcel 27. Cadmium (0.715 and 1.76 mg/kg) and total chromium (49.8 and 49.6 mg/kg) were detected at concentrations exceeding the ESC (0.6 and 26 mg/kg, respectively) in both surface sediment samples. Arsenic, cadmium, chromium, copper, lead, and zinc are considered COPECs in sediment at Parcel 27.

3.4.3.4.4 Summary of COPECs for Parcel 27

Parameters detected in soil, groundwater, surface water, or sediment at Buildings 2507 and2704 (Parcel 27) at concentrations greater than the applicable ESC were identified as COPECs for the site. The COPECs, and possible COPECs, identified for Parcel 27 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
None	Not Applicable	None	Not Applicable
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
None	Not Applicable	None	Not Applicable
SVOCs			
None	Not Applicable	None	None
Metals			
Arsenic Cadmium Chromium Copper Lead Manganese Mercury Vanadium Zinc	Not Applicable	Cadmium Chromium Lead	Arsenic Cadmium Chromium Copper Lead Zinc

3.4.3.5 BUILDING 2525 (ECP PARCEL 28)

Surface soil, groundwater, surface water, and sediment analytical data were evaluated for the identification of COPECs related to Building 2525 and ECP Parcel 28.

3.4.3.5.1 COPECs for Surface Soil at Building 2525 (ECP Parcel 28)

Two surface soil samples were collected from Parcel 28 as part of the ECP SI (Shaw, 2008). Parameters detected in surface soil samples are presented in **Table B-16**.

PCBs. No PCBs were detected in surface soil samples and PCBs are not considered COPECs at Parcel 28.

SVOCs. Five SVOCs were detected in surface soil samples but none were detected at concentrations greater than the soil ESC. SVOCs are not considered COPECs in surface soil at Parcel 28.

Metals. A total of 17 metals were detected in surface soil samples. Of these, five (aluminum, chromium, lead, vanadium, and zinc) were detected at concentrations exceeding the ESC in at least one sample each. Aluminum, like iron, is a common component of soils and sediments and is not considered a COPEC except in conditions of very low pH where aluminum could be bioavailable; aluminum is not considered a COPEC in soil at Parcel 28. Chromium, lead, vanadium, and zinc are considered COPECs at Parcel 28.

3.4.3.5.2 COPECs for Groundwater at Building 2525 (ECP Parcel 28)

Five groundwater samples (including one duplicate sample) were collected from four distinct temporary wells as part of the ECP SI (Shaw, 2008). Three of these were located downgradient of former drainage fields and one was located downgradient of a former storage pad area located in an open field west of Building 2290 and Guam Lane. Shrewsbury Creek could receive groundwater discharge from Parcel 28. Shrewsbury Creek, in the vicinity of Parcel 28, is classified as freshwater (**Section 2.4.3**). Parameters detected in groundwater samples are presented in **Table B-17**.

VOCs. Three VOCs (acetone, chloroform, and toluene) were detected in at least one groundwater sample each but at concentrations less than the ESC. VOCs are not considered COPECs in groundwater at Parcel 28.

SVOCs. One SVOC, bis(2-ethylhexyl) phthalate, was detected in three groundwater samples at concentrations from 0.94 to 2.30 µg/L which exceed the ESC of 0.3 µg/L. As discussed earlier, bis(2-ethylhexyl) phthalate, a commonly used plasticizer, is present in a wide variety of plastic products and is commonly detected in field and laboratory QC samples, and it is not considered a COPEC in groundwater at Parcel 28.

Metals. A total of 13 metals were detected in Parcel 28 groundwater samples. Of the 13 metals detected, only cadmium was detected at a concentration greater than the ESC. Detected concentrations ranged from 0.314 to 0.533 µg/L which exceed the freshwater ESC of 0.15 µg/L. Cadmium is considered a COPEC in groundwater at Parcel 28.

3.4.3.5.3 COPECs for Surface Water at Building 2525 (ECP Parcel 28)

Two surface water samples were collected from Shrewsbury Creek adjacent to Parcel 28 as part of the BEE. These were located downgradient of potential former discharge pipes which had been previously observed on the southeast bank of the creek. Shrewsbury Creek, in the vicinity of Parcel 28, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface water samples are presented in **Table D-40**.

VOCs. No VOCs were detected in surface water samples at Parcel 28. VOCs are not considered COPECs in surface water at Parcel 28.

SVOCs. No SVOCs were detected in surface water samples at Parcel 28. SVOCs are not considered COPECs in surface water at Parcel 28.

PCBs. No PCBs were detected in surface water samples at Parcel 28. PCBs are not considered COPECs in surface water at Parcel 28.

Metals. A total of 11 metals were detected in Parcel 28 surface water samples. Of the 11 metals detected, only lead was detected at a concentration exceeding the freshwater ESC. Total lead was detected at concentrations of 6.36 and 7.74 µg/L and dissolved lead was detected at concentrations of 5.74 and 7.14 µg/L; these exceed the freshwater ESC for dissolved lead of 5.4 µg/L. Lead is considered a COPEC in surface water at Parcel 28.

3.4.3.5.4 COPECs for Sediment at Building 2525 (ECP Parcel 28)

Two surface sediment samples were collected from Shrewsbury Creek adjacent to Parcel 28 as part of the ECP SI (Shaw, 2008). These were located along the southeast bank of Shrewsbury Creek adjacent to Building 2525 directly downgradient of potential former discharge pipes observed on the southeast bank of the creek. Shrewsbury Creek, in the vicinity of Parcel 28, is classified as freshwater (**Section 2.4.3**). Parameters detected in surface sediment samples are presented in **Table B-18**.

VOCs. One VOC (acetone) was detected in both Parcel 28 surface sediment samples. There are no available sediment ESC for acetone. VOCs are not considered COPECs in sediment at Parcel 28.

SVOCs. A total of five SVOCs were detected in Parcel 28 surface sediment samples. None of the SVOCs detected in surface sediment samples exceeded the freshwater sediment ESC. SVOCs are not considered COPECs in sediment at Parcel 28.

Metals. Of the 17 metals detected, one (chromium) was detected at concentrations greater than the freshwater sediment ESC. Total chromium (36.8 and 43.0 mg/kg) was detected greater than the ESC (26 mg/kg) in both surface sediment samples. Chromium is considered a COPEC in sediment at Parcel 28.

3.4.3.5.5 Summary of COPECs for Parcel 28

Parameters detected in soil, groundwater, surface water, or sediment at Building 2525 (Parcel 28) at concentrations greater than the applicable ESC were identified as COPECs for the site. Though cadmium was not detected in surface water at Parcel 28, its MDLs were greater than the freshwater ESC. Given that cadmium is considered a COPEC in groundwater, it is considered a possible COPEC in surface water. The COPECs, and possible COPECs, identified for Parcel 28 are summarized below by medium.

Soil	Groundwater	Surface Water	Sediment
VOCs			
Not Applicable	None	None	None
Pesticides			
Not Applicable	Not Applicable	Not Applicable	Not Applicable
PCBs			
None	Not Applicable	None	Not Applicable
SVOCs			
None	None	None	None
Metals			
Chromium Lead Vanadium Zinc	Cadmium	Lead	Chromium
Possible COPECs			
		Cadmium	

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-2	M2-SD3	6/24/10	15:08	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD4	6/24/10	15:24	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD5	6/24/10	15:36	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD6	6/24/10	15:53	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD7	6/25/10	8:45	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD8	6/25/10	9:05	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD9	6/25/10	9:25	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD10	6/25/10	9:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD11	6/25/10	9:55	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD12	6/25/10	10:10	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD13	6/25/10	10:30	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD14	6/24/10	14:15	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SW6	6/21/10	11:15	na	na		SW		x	x	x	x	x	x		x			x	
M-2	M2-SW11	6/21/10	11:30	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-2						12	2													
M-3	M3-SD1	6/18/10	10:38	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD2	6/18/10	10:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD3	6/18/10	11:28	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD4	6/18/10	11:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD5	6/18/10	13:33	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD6	6/18/10	13:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD7	6/18/10	14:08	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD8	6/21/10	14:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD9	6/21/10	14:57	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD10	6/21/10	15:12	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD11	6/21/10	14:25	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SW3	6/21/10	8:31	na	na		SW		x	x	x	x	x	x		x			x	
M-3	M3-SW8	6/21/10	8:50	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-3						11	2													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-4	M4-SD1	6/22/10	13:55	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SD2	6/22/10	14:14	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SD3	6/22/10	14:30	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SD4	6/22/10	14:46	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SD5	6/22/10	15:07	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SD6	6/22/10	15:30	0	0.5	SD			x	x	x	x			x		x	x	x	
M-4	M4-SW4	6/21/10	9:45	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-4						6	1													
M-5	M5-SD1	6/17/10	12:18	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SD2	6/18/10	9:23	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SD3	6/18/10	9:37	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SD4	6/18/10	9:04	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SD5	6/18/10	9:57	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SD6	6/18/10	10:17	0	0.5	SD			x	x	x	x			x		x	x	x	
M-5	M5-SW4	6/18/10	8:45	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-5						6	1													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-8	M8-SD1	6/23/10	13:05	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD2	6/17/10	10:46	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD3	6/17/10	16:24	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD4	6/17/10	16:44	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD5	6/17/10	16:00	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD6	6/23/10	13:29	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD7	6/23/10	13:38	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD8	6/17/10	13:45	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD9	6/17/10	11:35	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD10	6/17/10	11:58	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD12	6/17/10	12:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SW3	6/17/10	16:18	na	na		SW		x	x	x	x	x	x		x			x	
M-8	M8-SW7	6/23/10	11:05	na	na		SW		x	x	x	x	x	x		x			x	
M-8	M8-SW12	6/23/10	11:20	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-8						11	3													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-12/M-14	M14-SD1	6/15/10	9:10	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD2	6/15/10	9:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD3	6/15/10	10:25	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD4	6/15/10	10:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD5	6/15/10	11:36	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD6	6/15/10	12:10	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD7	6/15/10	14:33	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD8	6/15/10	15:23	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD9	6/16/10	10:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD10	6/16/10	11:22	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD11	6/16/10	11:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD12	6/28/10	13:45	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD13	6/16/10	12:48	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SW3	6/22/10	10:08	na	na		SW		x	x	x	x	x	x		x			x	
M-12/M-14	M14-SW8	6/15/10	15:01	na	na		SW		x	x	x	x	x	x		x			x	
M-12/M-14	M14-SW12	6/28/10	13:53	na	na		SW		x	x	x	x	x	x		x			x	
M-12/M-14	M14-SW13	6/22/10	11:32	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-12/M-14						13	4													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-15	M15-SD1	6/14/10	13:45	0	0.5	SD			x	x	x	x			x		x	x	x	
M-15	M15-SD2	6/14/10	14:10	0	0.5	SD			x	x	x	x			x		x	x	x	
M-15	M15-SD3	6/14/10	14:30	0	0.5	SD			x	x	x	x			x		x	x	x	
M-15	M15-SD4	6/14/10	15:02	0	0.5	SD			x	x	x	x			x		x	x	x	
M-15	M15-SW1	6/14/10	13:40	na	na		SW		x	x	x	x	x	x		x			x	
M-15	M15-SW2	6/14/10	14:00	na	na		SW		x	x	x	x	x	x		x			x	
M-15	M15-SW4	6/14/10	14:55	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at M-15						4	3													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite											Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-16	M16-SD1	6/14/10	10:04	0	0.5	SD			x	x	x	x			x		x	x	x	
M-16	M16-SD2	6/14/10	10:44	0	0.5	SD			x	x	x	x			x		x	x	x	
M-16	M16-SD3	6/14/10	11:10	0	0.5	SD			x	x	x	x			x		x	x	x	
M-16	M16-SD4	6/14/10	11:55	0	0.5	SD			x	x	x	x			x		x	x	x	
M-16	M16-SW1	6/23/10	11:55	na	na		SW		x	x	x	x	x	x		x			x	
M-16	M16-SW2	6/23/10	12:05	na	na		SW		x	x	x	x	x	x		x			x	
M-16	M16-SW4	6/23/10	12:18	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples for M-16						4	3													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
M-18	M18-SD1	6/16/10	15:45	0	0.5	SD			x	x	x	x			x		x	x	x	
M-18	M18-SD2	6/17/10	9:03	0	0.5	SD			x	x	x	x			x		x	x	x	
M-18	M18-SD3	6/16/10	16:36	0	0.5	SD			x	x	x	x			x		x	x	x	
M-18	M18-SD4	6/16/10	17:00	0	0.5	SD			x	x	x	x			x		x	x	x	
M-18	M18-SD5	6/17/10	10:00	0	0.5	SD			x	x	x	x			x		x	x	x	
M-18	M18-SW3	6/22/10	10:08	na	na		SW		x	x	x	x	x	x		x			x	
M-18	M18-SW5	6/17/10	9:50	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples for M-18						5	2													
M-20	M20-SD1	6/23/10	9:50	0	0.5	SD			x	x	x	x			x		x	x	x	
M-20	M20-SD2	6/23/10	10:15	0	0.5	SD			x	x	x	x			x		x	x	x	
M-20	M20-SW1	6/23/10	9:45	na	na		SW		x	x	x	x	x	x		x			x	
M-20	M20-SW2	6/23/10	10:10	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples for M-20						2	2													

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)	Analytical Suite											Comments/Variances
							VO+15 (Method 8260B)	BIN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
43 & Building 1122	P43-SW2	6/22/10	9:36	na	na	SW	x	x	x		x	x		x			x	
43 & Building 1122	P43-SW3	6/22/10	9:18	na	na	SW	x	x	x		x	x		x			x	
Total Samples for ECP43						2												
49 & Building 283	P49-SW2	6/23/10	8:53	na	na	SW	x	x	x		x	x		x			x	
49 & Building 283	P49-SW3	6/23/10	8:40	na	na	SW	x	x	x		x	x		x			x	
Total Samples for ECP49						2												
61	P61-SW1	6/15/10	14:01	na	na	SW	x	x	x		x	x		x			x	
Total Samples for ECP61						1												
69	P69-SW2	6/28/10	13:30	na	na	SW	x	x	x		x	x		x			x	
Total Samples for ECP69						1												

Table 3-1
Sample and Analytical Summary
Main Post

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Sampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	BN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
NA	MP-SD1	6/25/10	12:05	0	0.5	SD			x	x	x	x			x		x	x	x	
NA	MP-SD2	6/25/10	14:15	0	0.5	SD			x	x	x	x			x		x	x	x	
NA	MP-SD3	6/25/10	15:05	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD1	6/25/10	13:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-2	M2-SD2	6/24/10	14:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD12	6/21/10	15:40	0	0.5	SD			x	x	x	x			x		x	x	x	
M-3	M3-SD13	6/25/10	11:25	0	0.5	SD			x	x	x	x			x		x	x	x	
M-8	M8-SD11	6/21/10	10:15	0	0.5	SD			x	x	x	x			x		x	x	x	
M-12/M-14	M14-SD14	6/16/10	14:12	0	0.5	SD			x	x	x	x			x		x	x	x	
NA	MP-SW1	6/25/10	11:55	na	na		SW		x	x	x	x	x	x		x			x	
NA	MP-SW2	6/25/10	14:02	na	na		SW		x	x	x	x	x	x		x			x	
NA	MP-SW3	6/25/10	14:58	na	na		SW		x	x	x	x	x	x		x			x	
M-2	M2-SW1	6/25/10	13:38	na	na		SW		x	x	x	x	x	x		x			x	
M-2	M2-SW2	6/24/10	14:33	na	na		SW		x	x	x	x	x	x		x			x	
M-3	M3-SW12	6/22/10	8:43	na	na		SW		x	x	x	x	x	x		x			x	
M-3	M3-SW13	6/25/10	11:15	na	na		SW		x	x	x	x	x	x		x			x	
M-8	M8-SW11	6/21/10	10:05	na	na		SW		x	x	x	x	x	x		x			x	
M-12/M-14	M14-SW14	6/22/10	12:09	na	na		SW		x	x	x	x	x	x		x			x	
Total Upgradient Samples						9	9													
Total Samples at MP						83	38	0	121	121	121	115	38	38	83	38	83	83	121	

Notes:
ASTM - American Society for Testing and Materials
B/N - Base/Neutral
BEE - Baseline Ecological Evaluation
ECP - Environmental Condition of Property
IRP - Installation Restoration Property
na - not applicable
PCB - Polychlorinated Biphenyl
SD - Sediment
SS - Surface Soil
SW - Surface Water
TAL - Target Analyte List
TOC - Total Organic Carbon

Table 3-2
Sampling and Analytical Summary
Charles Wood Area

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Ssampled (SD, SW, and SS)			Analytical Suite											Comments/Variances
									VO+15 (Method 8260B)	BN+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
CW-3	CW3-SD1	6/28/10	8:50	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD2	6/28/10	9:05	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD3	6/28/10	9:18	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD4	6/28/10	9:40	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD5	6/28/10	10:20	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD6	6/28/10	10:48	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SW4	6/28/10	9:50	na	na		SW		x	x	x	x	x	x		x			x	
CW-3	CW3-SW5	6/28/10	10:15	na	na		SW		x	x	x	x	x	x		x			x	
Total Samples at CW-3						6	2													
CW-6	CW6-SD1	6/18/10	16:32	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SD2	6/18/10	16:14	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SD3	6/18/10	16:42	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SD4	6/18/10	16:47	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SD5	6/24/10	10:35	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SD6	6/24/10	9:40	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-6	CW6-SW5	6/24/10	10:29	na	na		SW		x	x	x	x	x	x		x			x	
CW-6	CW6-SW6	6/24/10	9:33	na	na		SW		x	x	x	x	x	x		x			x	
CW-6	CW6-SS1	6/18/10	15:23	0	0.5			SS	x	x	x	x			x		x	x		
CW-6	CW6-SS2	6/18/10	15:40	0	0.5			SS	x	x	x	x			x		x	x		
CW-6	CW6-SS3	6/18/10	15:50	0	0.5			SS	x	x	x	x			x		x	x		
CW-6	CW6-SS4	6/18/10	15:59	0	0.5			SS	x	x	x	x			x		x	x		
Total Samples at CW-6						6	2	4												
15	P15-SW1	6/24/10	12:33	na	na		SW		x	x	x		x	x		x			x	
15	P15-SW3	6/24/10	12:15	na	na		SW		x	x	x		x	x		x			x	
Total Samples at ECP15							2													

Table 3-2
Sampling and Analytical Summary
Charles Wood Area

IRP or ECP Site	BEE Sample Location Name	Sample Date	Sample Time	Top Depth	Bottom Depth	Media Ssampled (SD, SW, and SS)			Analytical Suite												Comments/Variances
									VO+15 (Method 8260B)	B/N+15 (Method 8270C)	PCBs (Method 8082)	Pesticides (Method 8081A)	TAL Metals - SW - field filtered (Method 6010B/7470A)	TAL Metals - SW - unfiltered (Method 6010B/7470A)	TAL Metals - SS/SD - (Method 6010B/7471A)	Hardness (SM2340B)	TOC (Lloyd Kahn)	Grain Size (ASTM D442-53)	Filed Measured Parameters (dissolved oxygen, pH, temperature, salinity, and conductivity)	
27	P27-SW1	6/25/10	15:58	na	na		SW		x	x	x		x	x		x			x	
27	P27-SW2	6/25/10	15:45	na	na		SW		x	x	x		x	x		x			x	
Total Samples at ECP27							2													
28	P28-SW1	6/24/10	11:54	na	na		SW		x	x	x		x	x		x			x	
28	P28-SW2	6/24/10	11:34	na	na		SW		x	x	x		x	x		x			x	
Total Samples for ECP28							2													
CW-3	CW3-SD7	6/28/10	11:40	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SD8	6/28/10	12:10	0	0.5	SD			x	x	x	x			x		x	x	x	
CW-3	CW3-SW7	6/28/10	11:35	na	na		SW		x	x	x	x	x	x		x			x	
CW-3	CW3-SW8	na	na	na	na				x	x	x	x	x	x		x			x	Sample not collected. There was no water existing in the creek upstream of the CW3-SW7 sample location.
Total Upgradient Samples						2	1													
CWA	CWA-SD1	6/24/10	9:00	0	0.5	SD			x	x	x	x			x		x	x	x	Sample added to program to evaluate the furthest downgradient location within Wampum Brook on CWA.
CWA	CWA-SW1	6/24/10	8:55	na	na		SW		x	x	x	x	x	x		x			x	Sample added to program to evaluate the furthest downgradient location within Wampum Brook on CWA.
Total Samples Downgradient of CWA						1	1													
Total Samples at CWA						15	12	4	30	30	30	24	12	12	18	12	18	18	26	

Notes:
ASTM - American Society for Testing and Materials
B/N - Base/Neutral
BEE - Baseline Ecological Evaluation
CWA - Charles Wood Area
ECP - Environmental Condition of Property
IRP - Installation Restoration Property
na - not applicable
NEW - indicates location does not coincide with a previous sample location
PCB - Polychlorinated Biphenyl
SD - Sediment
SS - Surface Soil
SW - Surface Water
TAL - Target Analyte List
TOC - Total Organic Carbon

Table 3-3
Summary of Analytes Detected in Main Post Background Surface Water Samples

Analyte	ESC		# of Freshwater ESC Exceedances	# of Saltwater ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SW	SW-SW							
VOCs (ug/L)									
Chloroform	140	NAV	0	0	1	9	2.9	2.9	M14-SW14
cis-1,2-Dichloroethene	NAV	NAV	0	0	3	9	1.3	3.3	MP-SW3
Tetrachloroethene	45	NAV	0	0	1	9	1.3	1.3	M2-SW2
SVOCs (ug/L)									
Anthracene	0.035	NAV	2	0	2	9	0.052	0.12	M14-SW14
Benzo(a)anthracene	0.025	NAV	2	0	2	9	0.23	0.23	M14-SW14; M3-SW12
Benzoic acid	NAV	NAV	0	0	1	9	12	12	MP-SW1
1,2,4-Trichlorobenzene	30	NAV	0	0	1	9	0.56	0.56	M14-SW14
Pesticides (ug/L)	***None detected***								
PCBs (ug/L)	***None detected***								
Metals (ug/L)									
Aluminum	NAV	NAV	0	0	14	18	6.63	78.6	M3-SW12
Arsenic	150	36	0	0	2	18	4.67	4.73	M8-SW11-Diss
Barium	220	NAV	0	0	18	18	31.4	64.7	M2-SW1; MP-SW2-Diss
Calcium	NAV	NAV	0	0	18	18	22600	40700	M8-SW11
Iron	NAV	NAV	0	0	18	18	84.8	2520	M3-SW12
Lead	5.4	24	18	0	18	18	5.79	18.8	M2-SW1-Diss
Magnesium	NAV	NAV	0	0	18	18	3550	53800	M8-SW11
Manganese	NAV	NAV	0	0	18	18	32.1	106	M8-SW11
Mercury	0.77	0.94	0	0	2	18	0.09	0.11	MP-SW1-Diss
Nickel	33	22	0	0	15	18	4.65	15.8	MP-SW3
Potassium	NAV	NAV	0	0	18	18	2400	19900	M8-SW11
Sodium	NAV	NAV	0	0	18	18	24300	433000	M8-SW11
Thallium	10	NAV	0	0	5	18	3.33	8.77	M8-SW11
Zinc	85	81	0	0	18	18	38.1	59.9	MP-SW2
Misc. (ug/L)									
Hardness	na	na	na	na	9	9	71124	323391	M8-SW11

Notes:
ug/L = micrograms per liter
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
NAV = No Available Value
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness in Main Post site and background samples (Appendix E)
na = Not Applicable

Table 3-4
Summary of Analytes Detected in Main Post Background Sediment Samples

Analyte	ESC		# of FW-SED ESC Exceedances	# of SW-SED ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SED	SW-SED							
VOCs (mg/kg)									
Acetone	NAV	NAV	0	0	6	9	0.012	0.34	MP-SD2
Methylene chloride	0.159	NAV	0	0	4	9	0.0025	0.0088	MP-SD2
Toluene	2.5	2.5	0	0	1	9	0.013	0.013	MP-SD3
2-Butanone	NAV	NAV	0	0	2	9	0.0094	0.095	MP-SD2
SVOCs (mg/kg)									
Acenaphthene	0.016	0.016	2	2	2	9	0.11	0.12	M3-SD12
Acenaphthylene	0.044	0.044	1	1	1	9	0.089	0.089	MP-SD2
Anthracene	0.22	0.085	1	4	6	9	0.017	0.25	MP-SD3
Benzo(a)anthracene	0.32	0.261	4	4	7	9	0.018	1.2	MP-SD3
Benzo(a)pyrene	0.37	0.43	3	3	7	9	0.025	1.2	MP-SD3
Benzo(b)fluoranthene	10.4	1.8	0	0	5	9	0.066	1.8	MP-SD3
Benzo(g,h,i)perylene	0.17	0.17	3	3	3	9	0.38	0.87	MP-SD3
Benzo(k)fluoranthene	0.24	0.24	3	3	4	9	0.13	0.64	MP-SD3
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0	0	1	9	0.069	0.069	M3-SD12
Butylbenzylphthalate	1.97	0.063	0	1	1	9	0.6	0.6	M2-SD2
Chrysene	0.34	0.384	4	4	5	9	0.064	1.7	MP-SD3
Dibenz(a,h)anthracene	0.06	0.063	1	1	1	9	0.088	0.088	M3-SD12
Dibenzofuran	NAV	NAV	0	0	2	9	0.062	0.082	MP-SD2
3,3'-Dichlorobenzidine	0.127	NAV	0	0	1	9	0.016	0.016	M3-SD13
Dimethylphthalate	NAV	NAV	0	0	9	9	0.28	0.79	MP-SD2
Fluoranthene	0.75	0.6	4	4	6	9	0.064	4.5	MP-SD3
Fluorene	0.19	0.019	1	2	2	9	0.13	0.32	MP-SD2
Indeno(1,2,3-c,d)pyrene	0.2	0.2	3	3	4	9	0.095	0.84	MP-SD3
Phenanthrene	0.56	0.24	3	4	5	9	0.15	3.1	MP-SD3
Pyrene	0.49	0.665	4	4	5	9	0.12	3	MP-SD3
Pesticides (mg/kg)									
4,4'-DDD	0.008	0.002	0	3	3	9	0.0022	0.0047	M2-SD1
4,4'-DDE	0.005	0.0022	0	1	2	9	0.0017	0.0034	M14-SD14
PCBs (mg/kg)									
Aroclor 1242	0.07	0.023	0	1	1	9	0.064	0.064	M2-SD2
Aroclor 1254	0.06	0.06	1	1	2	9	0.021	0.086	M2-SD1
Metals (mg/kg)									
Aluminum	25500	18000	0	0	9	9	965	17600	M3-SD13
Antimony	3	9.3	2	0	7	9	1.08	6.96	M2-SD2
Arsenic	6	8.2	7	6	9	9	0.68	61.6	M3-SD13
Barium	NAV	48	0	5	9	9	11.5	196	MP-SD2
Beryllium	NAV	NAV	0	0	9	9	0.2	3.83	MP-SD2
Cadmium	0.6	1.2	9	8	9	9	0.75	17.2	M3-SD13

Table 3-4
Summary of Analytes Detected in Main Post Background Sediment Samples

Analyte	ESC		# of FW-SED ESC Exceedances	# of SW-SED ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SED	SW-SED							
Calcium	NAV	NAV	0	0	8	9	446	4310	MP-SD1
Chromium	26	81	8	3	9	9	9.24	125	M3-SD13
Cobalt	50	10	0	4	9	9	1.05	16.8	MP-SD2
Copper	16	34	3	2	6	9	1.88	165	M2-SD2
Iron	NAV	NAV	0	0	9	9	2960	162000	M3-SD13
Lead	31	47	4	2	9	9	5.61	945	M2-SD1
Magnesium	NAV	NAV	0	0	9	9	192	4650	M3-SD13
Manganese	630	260	0	1	9	9	4.86	551	MP-SD1
Mercury	0.2	0.15	1	1	8	9	0.02	0.424	MP-SD2
Nickel	16	21	4	3	9	9	2.55	53.5	MP-SD2
Potassium	NAV	NAV	0	0	9	9	507	12000	MP-SD1
Selenium	NAV	1	0	8	9	9	0.95	19	M3-SD13
Silver	1	1	1	1	1	9	11.2	11.2	MP-SD2
Sodium	NAV	NAV	0	0	9	9	28.6	1230	M8-SD11
Thallium	NAV	NAV	0	0	3	9	0.88	3.02	M3-SD13
Vanadium	NAV	57	0	4	9	9	6.82	218	M3-SD13
Zinc	120	150	5	4	9	9	31.4	423	MP-SD2
Misc. (mg/kg)									
Total Organic Carbon	na	na	na	na	9	9	900	6100	MP-SD2

Notes:
mg/kg = micrograms per kilogram
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
NAV = No Available Value
na = Not Applicable

Table 3-5
Summary of Analytes Detected in Charles Wood Area Background Surface Water Samples

Analyte	ESC		# of Freshwater ESC Exceedances	# of Saltwater ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SW	SW-SW							
VOCs (ug/L)									
Methyl-tert-butyl ether	51000	18000	0	0	1	2	3.8	3.8	CW3-SW7
SVOCs (ug/L)									
Anthracene	0.035	NAV	1	0	1	2	0.11	0.11	CW3-SW7
Pesticides (ug/L)									
4,4'-DDD	NAV	NAV	0	0	1	2	0.008	0.008	CW3-SW7
PCBs (ug/L)									
Aroclor 1242	0.014	0.03	1	1	1	2	0.3	0.3	CW6-SW6
Metals (ug/L)									
Aluminum	NAV	NAV	0	0	4	4	14	9500	CW3-SW7
Arsenic	150	36	0	0	2	4	6.83	20.7	CW3-SW7
Barium	220	NAV	0	0	4	4	73.8	131	CW3-SW7
Beryllium	3.6	NAV	0	0	1	4	0.8	0.8	CW3-SW7
Cadmium	0.14	8.8	3	0	3	4	0.8	2.07	CW3-SW7
Calcium	NAV	NAV	0	0	4	4	28400	30300	CW3-SW7
Chromium	19	50	1	1	2	4	2.55	55.5	CW3-SW7
Cobalt	24	NAV	2	0	3	4	7.94	29.4	CW6-SW6
Copper	6.5	3.1	1	1	1	4	9.99	9.99	CW3-SW7
Iron	NAV	NAV	0	0	4	4	1440	38400	CW3-SW7
Lead	5.4	24	3	1	3	4	6.32	69.7	CW3-SW7
Magnesium	NAV	NAV	0	0	4	4	5730	14100	CW3-SW7
Manganese	NAV	NAV	0	0	4	4	127	160	CW3-SW7
Mercury	0.77	0.94	0	0	2	4	0.1	0.41	CW3-SW7
Nickel	34	22	0	2	3	4	14.5	32.6	CW6-SW6
Potassium	NAV	NAV	0	0	4	4	3370	14300	CW3-SW7
Sodium	NAV	NAV	0	0	4	4	66800	120000	CW3-SW7-Diss
Vanadium	12	NAV	1	0	2	4	6.91	60.1	CW3-SW7
Zinc	88	81	1	1	4	4	45.2	149	CW3-SW7
Misc. (ug/L)									
Hardness	na	na	na	na	2	2	94486	133738	CW3-SW7

Notes:
ug/L = micrograms per liter
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
NAV = No Available Value
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness in Charles Wood Area site and background samples (Appendix E).
na = Not Applicable

Table 3-6
Summary of Analytes Detected in Charles Wood Area Background Sediment Samples

Analyte	ESC		# of FW-SED ESC Exceedances	# of SW-SED ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SED	SW-SED							
VOCs (mg/kg)									
Acetone	NAV	NAV	0	0	2	3	0.093	0.34	CW3-SD8
Methylene chloride	0.159	0.159	0	0	2	3	0.0093	0.013	CW3-SD7
Styrene	0.254	0.254	0	0	1	3	0.001	0.001	CW6-SD6
Toluene	2.5	2.5	0	0	1	3	0.002	0.002	CW6-SD6
2-Butanone	NAV	NAV	0	0	1	3	0.1	0.1	CW3-SD8
SVOCs (mg/kg)									
Acenaphthene	0.016	0.016	1	1	1	3	0.47	0.47	CW6-SD6
Acenaphthylene	0.044	0.044	1	1	1	3	1.6	1.6	CW6-SD6
Anthracene	0.22	0.085	1	1	3	3	0.011	0.3	CW6-SD6
Benzo(a)anthracene	0.32	0.261	1	1	1	3	0.028	1.0	CW6-SD6
Benzo(a)pyrene	0.37	0.43	1	1	3	3	0.03	1.2	CW6-SD6
Benzo(b)fluoranthene	10.4	1.8	0	1	1	3	2.1	2.1	CW6-SD6
Benzo(g,h,i)perylene	0.17	0.17	1	1	1	3	0.89	0.89	CW6-SD6
Benzo(k)fluoranthene	0.24	0.24	1	1	1	3	0.74	0.74	CW6-SD6
Chrysene	0.34	0.384	1	1	1	3	1.9	1.9	CW6-SD6
Dibenzofuran	NAV	NAV	0	0	1	3	0.48	0.48	CW6-SD6
Dimethylphthalate	NAV	NAV	0	0	3	3	0.45	1.6	CW3-SD7
Fluoranthene	0.75	0.6	1	1	1	3	4.9	4.9	CW6-SD6
Fluorene	0.19	0.019	1	1	1	3	0.82	0.82	CW6-SD6
Indeno(1,2,3-c,d)pyrene	0.2	0.2	1	1	1	3	0.98	0.98	CW6-SD6
2-Methylnaphthalene	0.07	0.07	1	1	1	3	1.3	1.3	CW6-SD6
Naphthalene	0.16	0.16	1	1	1	3	4.4	4.4	CW6-SD6
Phenanthrene	0.56	0.24	1	1	1	3	8.3	8.3	CW6-SD6
Pyrene	0.49	0.665	1	1	1	3	3.3	3.3	CW6-SD6
Pesticides (mg/kg)									
4,4'-DDD	0.008	0.002	0	1	1	3	0.0031	0.0031	CW3-SD7
PCBs (mg/kg)	***None detected***								
Metals (mg/kg)									
Aluminum	25500	18000	0	0	3	3	860	10200	CW3-SD7
Arsenic	6	8.2	0	0	3	3	0.68	5.43	CW3-SD8
Barium	NAV	48	0	2	3	3	4.41	140	CW3-SD8
Beryllium	NAV	NAV	0	0	3	3	0.38	1.14	CW3-SD7
Cadmium	0.6	1.2	2	0	3	3	0.38	1.08	CW3-SD7
Calcium	NAV	NAV	0	0	3	3	16.7	2480	CW3-SD7
Chromium	26	81	3	1	3	3	60.7	97.3	CW3-SD8
Cobalt	50	10	0	0	3	3	3.74	8.94	CW6-SD6
Copper	16	34	0	0	3	3	2.49	7.09	CW3-SD8
Iron	NAV	NAV	0	0	3	3	9040	14700	CW3-SD7
Lead	31	47	1	0	3	3	5.67	36	CW3-SD7
Magnesium	NAV	NAV	0	0	3	3	160	1900	CW3-SD7
Manganese	630	260	0	0	3	3	4.36	69.1	CW3-SD8
Mercury	0.2	0.15	1	1	3	3	0.064	0.251	CW3-SD7
Nickel	16	21	1	1	3	3	9.51	56.2	CW6-SD6
Potassium	NAV	NAV	0	0	3	3	441	2000	CW3-SD7
Selenium	NAV	1	0	3	3	3	1.82	4.15	CW3-SD8
Sodium	NAV	NAV	0	0	3	3	150	4050	CW3-SD8
Vanadium	NAV	57	0	0	3	3	10.7	50.3	CW3-SD7
Zinc	120	150	0	0	3	3	15.3	84.9	CW3-SD7
Misc. (mg/kg)									
Total Organic Carbon	na	na	na	na	3	2	540	8200	CW3-SD8

Notes:
mg/kg = micrograms per kilogram
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
NAV = No Available Value
na = Not Applicable

Table 3-7
Summary of Analytes Detected in Charles Wood Area Downgradient Surface Water Samples

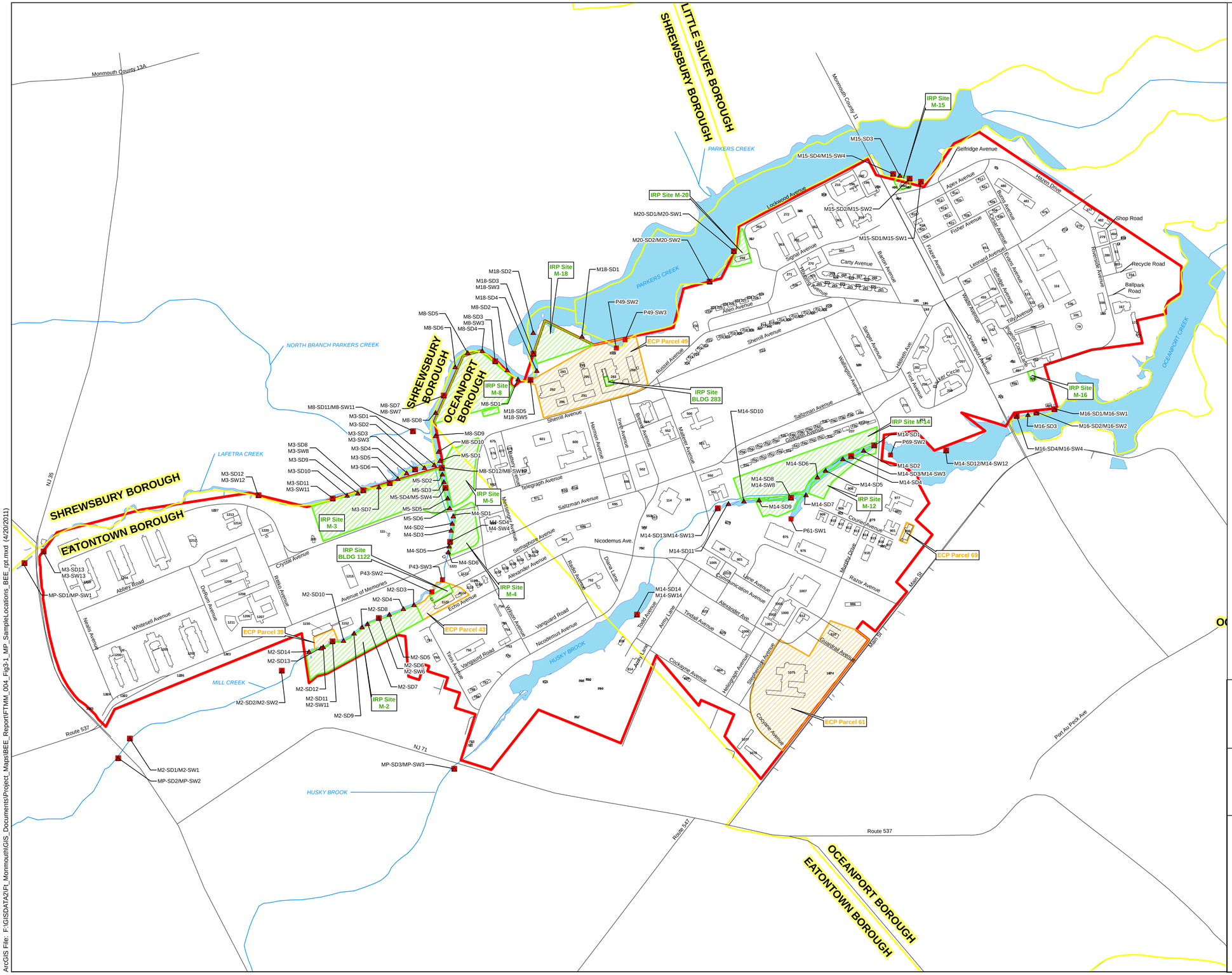
Analyte	ESC		# of Freshwater ESC Exceedances	# of Saltwater ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SW	SW-SW							
VOCs (ug/L)	***None detected***								
SVOCs (ug/L)									
Hexachlorobutadiene	0.053	NAV	1	0	1	2	0.12	0.12	CWA-SW1
Pesticides (ug/L)	***None detected***								
PCBs (ug/L)	***None detected***								
Aroclor 1242	0.014	0.03	1	1	0	2	0.13	0.13	CW6-SW5
Metals (ug/L)									
Aluminum	NAV	NAV	0	0	4	4	11.4	130	CW6-SW5
Arsenic	150	36	0	0	2	4	7.47	10.2	CWA-SW1
Barium	220	NAV	0	0	2	4	58.5	76.1	CWA-SW1
Cadmium	0.14	8.8	1	0	1	4	0.52	0.52	CW6-SW5
Calcium	NAV	NAV	0	0	4	4	29600	45600	CWA-SW1
Iron	NAV	NAV	0	0	4	4	252	10800	CWA-SW1
Lead	5.4	24	4	0	4	4	8.09	14	CWA-SW1-Diss
Magnesium	NAV	NAV	0	0	4	4	4490	4830	CW6-SW5
Manganese	NAV	NAV	0	0	4	4	109	591	CWA-SW1
Nickel	34	22	0	1	2	4	20.8	23	CW6-SW5
Potassium	NAV	NAV	0	0	4	4	3100	5340	CWA-SW1
Selenium	5	71	1	0	1	4	5.33	5.33	CWA-SW1-Diss
Sodium	NAV	NAV	0	0	4	4	36100	55500	CW6-SW5
Zinc	88	81	0	0	4	4	48.3	80.1	CW6-SW5
Misc. (ug/L)									
Hardness	na	na	na	na	2	2	95205	132498	CWA-SW1

Notes:
ug/L = micrograms per liter
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
NAV = No Available Value
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness in Charles Wood Area site and background samples (Appendix E).
na = Not Applicable

Table 3-8
Summary of Analytes Detected in Charles Wood Area Downgradient Sediment Samples

Analyte	ESC		# of FW-SED ESC Exceedances	# of SW-SED ESC Exceedances	# of Detections	# of Samples	Minimum Concentration	Maximum Concentration	Location of Maximum
	FW-SED	SW-SED							
VOCs (mg/kg)									
Acetone	NAV	NAV	0	0	2	2	0.015	0.021	CWA-SD1
Methylene chloride	0.159	NAV	0	0	1	2	0.0032	0.0032	CWA-SD1
SVOCs (mg/kg)									
Acenaphthene	0.016	0.016	1	1	1	2	0.49	0.49	CWA-SD1
Anthracene	0.22	0.085	0	0	2	2	0.0053	0.082	CWA-SD1
Benzo(a)anthracene	0.32	0.261	0	0	2	2	0.031	0.033	CW6-SD5
Benzo(a)pyrene	0.37	0.43	0	0	2	2	0.02	0.036	CW6-SD5
Dimethylphthalate	NAV	NAV	0	0	2	2	0.43	0.53	CWA-SD1
Fluoranthene	0.75	0.6	0	0	1	2	0.093	0.093	CW6-SD5
Phenanthrene	0.56	0.24	1	1	1	2	0.6	0.6	CWA-SD1
Pyrene	0.49	0.665	0	0	1	2	0.068	0.068	CW6-SD5
Pesticides (mg/kg)	***None detected***								
PCBs (mg/kg)	***None detected***								
Aroclor 1242	0.07	0.023	0	1	1	2	0.05	0.05	CW6-SD5
Metals (mg/kg)									
Aluminum	25500	18000	0	0	2	2	2170	4170	CWA-SD1
Antimony	3	9.3	0	0	1	2	0.76	0.76	CWA-SD1
Arsenic	6	8.2	1	0	2	2	3.18	6.29	CWA-SD1
Barium	NAV	48	0	0	2	2	13.1	40.3	CWA-SD1
Beryllium	NAV	NAV	0	0	2	2	0.44	1.02	CW6-SD5
Cadmium	0.6	1.2	2	1	2	2	1.15	1.34	CW6-SD5
Calcium	NAV	NAV	0	0	1	2	5370	5370	CWA-SD1
Chromium	26	81	2	0	2	2	32.8	50.2	CW6-SD5
Cobalt	50	10	0	0	2	2	3.36	5.82	CW6-SD5
Copper	16	34	0	0	2	2	4.63	15.6	CWA-SD1
Iron	NAV	NAV	0	0	2	2	14200	15700	CW6-SD5
Lead	31	47	1	0	2	2	13.4	32.4	CWA-SD1
Magnesium	NAV	NAV	0	0	2	2	316	1270	CWA-SD1
Manganese	630	260	0	0	2	2	4.9	59.6	CWA-SD1
Mercury	0.2	0.15	1	1	2	2	0.047	0.249	CWA-SD1
Nickel	16	21	1	1	2	2	8.06	29.7	CW6-SD5
Potassium	NAV	NAV	0	0	2	2	871	1560	CWA-SD1
Selenium	NAV	1	0	2	2	2	2.72	3.17	CW6-SD5
Sodium	NAV	NAV	0	0	2	2	133	238	CWA-SD1
Vanadium	NAV	57	0	0	2	2	19.9	24.1	CWA-SD1
Zinc	120	150	0	0	2	2	49.8	104	CWA-SD1
Misc. (mg/kg)									
Total Organic Carbon	na	na	na	na	2	2	3700	4700	CW6-SD5

Notes:
mg/kg = micrograms per kilogram
ESC = Ecological Screening Criteria (See Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
NAV = No Available Value
na = Not Applicable



Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 3-1

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

SAMPLE LOCATIONS

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_004_Fig3-1_MP_SampleLocations_BEE_rpt.mxd (4/20/2011)

TINTON FALLS BOROUGH

EATONTOWN BOROUGH

PARKERS CK BRANCH 12046

UNT TO 12046 @ 1.90

SHREWSBURY (PARKERS CREEK)

WAMPUM BROOK

Route 537

Tinton Avenue

Hope Road

Guam Lane

Hemphill Road

Rabbit Avenue

Tinton Falls Public Works Way

Charles Wood Area

Corregidor Road

Laboratory Road

Coppuck Place Drive

Radiac Way

Hellfgott Drive

Quartz Avenue

Watson Avenue

Pearl Harbor Avenue

Satellite Road

Fire Line Drive

Radar Avenue

Academy Avenue

Monmouth County 51

Megill Drive

Megill Circle

Lowther Drive

Maxwell Place

Wigwag Road

Helms Drive

Pinebrook Road

Mitchell Drive

NJ 36

ECP Parcel 15

ECP Parcel 26

ECP Parcel 27

IRP Site CW-3A

IRP Site CW-6

CWA-SD1/CWA-SW1

CW3-SD1

CW3-SD2

CW3-SD3

CW3-SD4
CW3-SW4

CW3-SD5
CW3-SW5

CW3-SD6

CW3-SD7
CW3-SW7

CW3-SD8

P28-SW2

P28-SW1

P15-SW3

P15-SW1

P27-SW2

P27-SW1

CW6-SS1

CW6-SS2

CW6-SS3

CW6-SS4

CW6-SD1

CW6-SD2

CW6-SD3

CW6-SD4

CW6-SD5/CW6-SW5

CW6-SD6/CW6-SW6

LEGEND

Sample Locations

- Sediment Sample Location
- Surface Water Sample Location
- Sediment/Surface Water Sample Location
- Surface Soil Sample Location
- Road Centerline
- Water Feature
- Building
- Municipal Boundary
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary

N

Scale:

0 300 600 1,200

Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 3-2

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

SAMPLE LOCATIONS

CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_005_Fig3-2_CWA_SampleLocations_BEE_rpt.mxd (4/20/2011)

4.0 ECOLOGICAL EVALUATION

COPECs were identified in the previous section through a comparison of analytical data from site media (surface soil, groundwater, surface water, and sediment) to concentrations used as screening levels for ecological concern. A qualitative determination of the potential for adverse effects from site constituents is made in this section based on the COPECs, the presence of environmentally sensitive areas, and the potential migration pathways of site constituents.

COPECs identified at potential exposure points, such as surface water and sediments of the creeks and rivers and wetland soils at the Pesticide Storage Area CW-6 (FTMM-28), are compared to background and ambient levels of those constituents (**Section 2.4.7**, **Table 2-2**, **Appendix G**, and **Table 3-3 through Table 3-6**). The potential risk to wildlife exposed to constituents present in surface water, sediment, and food items (aquatic plants, fish, and invertebrates) at concentrations above background are evaluated through the use of food chain models to provide additional lines of evidence to support the conclusions of the ecological evaluations for each of the applicable IRP sites and ECP Parcels addressed in this BEE. The wildlife exposure models are discussed in **Section 4.1**, and the ecological evaluation of each site or parcel is discussed in **Section 4.2** for the MP and **Section 4.3** for the CWA.

4.1 WILDLIFE EXPOSURE MODELS

Wildlife may be exposed through dietary consumption of contaminants present in sediment or wetland soils at concentrations greater than background. In order to assess the potential risks to various feeding guilds from soil or sediment-related constituents, a food web model was constructed for the following target species: the American Robin (*Turdus migratorius*), the Great Blue Heron (*Ardes herodeus*), and the Mallard Duck (*Anas platyrhynchos*). These food web models were used to evaluate wildlife exposure to COPECs present at concentrations above those in background.

The first species, the American Robin, is a terrestrial invertivore and may be exposed to constituents in soil from consumption of invertebrates that accumulate constituents from the soil and from incidental ingestion of soil. The American Robin is chosen to represent exposures to invertivorous species.

The remaining two species are aquatic-based species and may be exposed to constituents present in the sediment through bioaccumulation in dietary items: aquatic plants, small fish, and aquatic vertebrates and invertebrates.

The Great Blue Heron is the largest member of the wading birds in North America with long necks and spear-like bills. It is widely distributed in both saltwater and freshwater environments. Fish are the preferred prey, but Great Blue Herons also eat amphibians, reptiles, crustaceans, insects, birds, and mammals. A limited area of the MP, particularly some of the wetland area along Oceanport Creek, was identified through the NJDEP Landscape Project Critical Wildlife Habitat database as habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Like the Great Blue Heron, the Least Tern is piscivorous, but is a more seasonal resident, is limited in adequate foraging areas at the site, is mainly marine, and has a much larger foraging area. The Great Blue Heron was chosen to represent piscivorous birds that may be exposed throughout the waterways in and around FTMM.

The Mallard is a surface-feeding duck common to both freshwater and saltwater wetlands. Their feeding methods often include filtering through soft mud for food, exposing them to potential sediment-related contaminants. They feed mostly on aquatic plants, depending on the season, and are the most abundant duck in the United States being widespread throughout the United States. The Mallard was chosen to represent herbivorous birds with direct exposure to sediments.

The wildlife exposure estimates are expressed as the body weight-normalized average daily doses from all exposure routes: food consumption, water consumption, and incidental soil or sediment consumption. This is expressed through the following equation:

where:

ADD	=	average daily dose (mg/kg-day)
BW	=	body weight (kg)
IR_{food}	=	ingestion rate of food by receptor species (kg/day)
f_i	=	fraction of daily diet comprised of food item i
C_i	=	Concentration of COPEC in food item i (mg/kg)
IR_{water}	=	ingestion rate of water (L/day)
C_{water}	=	Concentration of COPEC in water (mg/L)
f_{soil}	=	fraction of daily diet comprised of soil
M_{diet}	=	weighted average moisture content of diet expressed as a fraction
C_{soil}	=	concentration of COPEC in soil (mg/kg)
AUF	=	area use factor which is the fraction of a species' range occupied by the site

Ingestion rates, exposure factors, and other natural history parameters for these target species are presented in **Table 4-1** and are from the Wildlife Exposure Factors Handbook (USEPA, 1993b).

Literature-derived bioconcentration factors (or bioaccumulation factors or biotransfer factors) were used to estimate COPEC concentrations in food items (e.g., aquatic plants, invertebrates, and fish). The bioaccumulation factors (BAFs) for soil invertebrates, aquatic plants, fish and aquatic vertebrates and invertebrates for the COPECs are listed in **Table 4-2**, **Table 4-3**, and **Table 4-4**, respectively.

The soil-to-invertebrate bioaccumulation factors were obtained from several sources. The primary sources were the recommended BAFs from the USEPA's ecological soil screening level guidance (USEPA. 1995 et seq.). Regression models were developed for Oak Ridge National Laboratory (Sample et al., 1998a) for use in estimating the uptake of inorganic elements from soil by earthworms. The median BAF was used for mercury from this source. The bioconcentration factor (BCF) for the remaining inorganics were from USEPA (1999) or, by default, set at the geometric mean of all the inorganic BCFs from that guidance (USEPA, 1999) as recommended by that guidance. For non-chlorinated organic compounds with log K_{OW} values less than 5, the BCF was set at 0.7 (for dry weight) as recommended by the State of Washington (WAC Title 173) in its wildlife exposure models.

The sediment-to-aquatic plant bioaccumulation factors were obtained mostly from the USEPA's *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities* (1999). In accordance with USEPA (1999), inorganic COPECs without BAFs used the geometric mean of the available inorganic BAFs and organic COPECs without BAFs used the regression equation of Travis and Arms (1988). BAFs for DDD and DDT used the BAF for DDE as a surrogate.

The sediment-to-aquatic invertebrate bioaccumulation factors were obtained mostly from the USEPA's *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities* (1999). These values are also used as a conservative estimate of BAFs for foraging fish which would experience less exposure to sediment contaminants than benthic invertebrates which experience continuous direct contact with sediments. In accordance with USEPA (1999), inorganic COPECs without BAFs used the geometric mean of the available inorganic BAFs. BAFs for DDD and DDT used the BAF for DDE as a surrogate. BAFs for several PAHs were obtained from the USEPA's National Sediment Quality Inventory assuming 10.5% lipid in species and 2% organic carbon content in sediment.

The soil/sediment ingestion rate for the receptor species is most often represented as a percentage of a receptor species' diet expressed as a ratio of dry weights. These soil ingestion rates are presented in **Table 4-4** along with other natural history parameters for the receptor species. In order to account for the methodology used in the estimation of the soil ingestion rates, the moisture content of the receptor species' diets must be accounted for. The relationship used to estimate the soil ingestion rates for the receptors in this BEE is as follows:

Where:

IR_{soil} = ingestion rate of soil (mg/kg-day)
IR_{food} = ingestion rate of food by receptor species (kg/day)
f_{soil} = fraction of daily diet comprised of soil
M_{diet} = weighted average moisture content of diet expressed as a fraction

The bioaccumulation models and the exposure models are related to the concentrations of COPECs in various environmental media (e.g., sediment). For each site addressed in this BEE where constituent concentrations are detected at concentrations above ESCs and above background concentrations, a conservative estimate of the concentration to which a receptor would be exposed over time needs to be estimated. The concentration is referred to as the exposure point concentration and it is the arithmetic average concentration for a COPEC based on a set of sampling results for the area. Average concentrations were calculated using ProUCL Version 4.00.05 using one-half the detection limit or Kaplan-Meir Method when non-detects were present. For the conservative purposes of the screening level risk assessment, the maximum detected concentration is used initially for each site where COPECs are present at concentrations above background.

The area use factor (AUF) is the fraction of a species' foraging range that is occupied by the site. For example, the foraging area for the Great Blue Heron is reported as averaging 4.5 hectares (HA). If the potential foraging area of the site is 0.45 HA, then the fraction intake from the site is only 10% and the AUF is 0.1. Another consideration regarding the fraction intake from the site is the amount of time per year that a species may spend in the habitat associated with the site. With avian species, this is usually due to seasonal differences and migration. It should be noted that, though a species may seem to be present in an area year-round, the winter and breeding season populations are often different with the local winter population migrating further north during the breeding season, and the local breeding season population migrating from the south. For the conservative purposes of the screening level risk assessment, the AUF is initially set equal to one (assumes the target species only forages at the site) and the seasonality is not considered.

Ecological effects due to exposure to contaminants are estimated using toxicity reference values (TRVs). TRVs are analogous to the reference doses used in human health risk assessments. However, reference doses in human health risk assessments are defined as "safe" levels, whereas TRVs may be based on No Observable Adverse Effect Levels (NOAELs), Lowest Observable Adverse Effect Levels (LOAELs), or other toxicity data. Dose-based toxicological benchmarks based on laboratory test animals were obtained from the literature and are presented in **Table 4-5**. Data from chronic toxicity studies and from studies that addressed survival, growth, or reproduction endpoints are used in preference to shorter term studies or studies where effects could not be directly linked to impacts on survival, growth, or reproduction. The primary sources for avian TRVs were the recommended NOAELs from the USEPA's ecological soil screening level guidance (USEPA. 1995 et seq.). When not available through these primary sources, NOAEL TRVs were obtained from the literature (Sample et al., 1996; USEPA, 1999; Eisler, 1987). Though the ecological soil screening level guidance does not recommend LOAELs, LOAELs were obtained from these guidances following their methodology: LOAELs were obtained from the same study that provided the NOAELs or LOAELs were calculated as the geometric means of LOAELs from reproduction and growth studies whenever NOAELs were calculated as the geometric means of those studies.

The potential risks to wildlife via exposure to COPECs through the food web are estimated by comparing the potential exposures (expressed as the average daily dose) to the TRVs. This comparison is made in the form of the hazard quotient (HQ) which is the ratio of the estimated average daily dose (ADD) to the TRV:

$$\frac{\quad}{\quad}$$

For the conservative purposes of the screening level risk assessment, a NOAEL-based HQ is initially determined using the NOAEL-based TRV as the denominator. When the NOAEL-based HQ is greater than one, indicating that the conservatively estimated exposure may be greater than the NOAEL,

then a LOAEL-based HQ is also calculated. The potential wildlife screening level wildlife risk evaluations are presented in the following sections for sites where COPECs are detected in sediment or wetland soils at concentrations above background.

4.2 MAIN POST

On the MP, 13 IRP Sites and five ECP Parcels were addressed in this BEE. Two of the IRP sites are contained within ECP Parcels and are addressed as one.

4.2.1 LANDFILL 2 (FTMM-2)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified several pesticides, PCBs, SVOCs, and metals as COPECs in near surface soil and one VOC, several pesticides, and several metals as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. Two SVOCs and lead were identified as COPECs in surface water. PCBs, SVOCs, and metals were identified as COPECs in sediment. Though 4,4′-DDE and cadmium were not detected in surface water, their surface water MDLs were greater than the applicable ESC. Given that 4,4′-DDE is a COPEC in soil and cadmium is a COPEC in soil, groundwater, and sediment, they are considered possible COPECs in surface water. **Table 4-6** and **Table 4-7** provide a summary of the COPECs in surface water and sediment at Landfill 2 (FTMM-2) as well as background and ambient levels of those constituents. Though PCBs and SVOCs in sediment were detected very infrequently at concentrations above the ESCs, some detected concentrations were above background. The maximum sediment barium concentration also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-8**.

GIS digital data available through the NJDEP indicate the presence of deciduous wetlands along Mill Creek and to the east and west of Landfill 2 (**Figure 4-1**) as well as herbaceous wetlands across the site (**Figure 4-2**). A site visit on September 9, 2009, confirmed the presence of deciduous wetlands bordering Mill Creek and Landfill 2 (FTMM-2); however, the site itself was typical of upland habitat and not herbaceous wetlands.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Landfill 2 (FTMM-2) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- Most SVOCs, pesticides, and PCBs in soil were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Though identified as COPECs in near surface soil or groundwater, VOCs and pesticides were not identified as COPECs in surface water or sediment where exposure may occur.
- Lead concentrations in surface water and sediment were similar to those in background samples (**Table 3-3**).
- PCBs in sediment at low concentrations are ubiquitous due to varied anthropogenic sources. Detected concentrations of PCBs were low, mostly within a factor of 2 of the LELs used for screening and orders of magnitude less than the SELs, and detected concentrations were similar to those in background samples (**Table 3-4**).

- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The few detected concentrations of PAHs identified as COPECs were at low concentrations and at concentrations similar to those in background samples (**Table 3-3** and **Table 3-4**). These SVOCs, though some were identified as COPECs in soil, were not identified as COPECs in groundwater indicating that their current presence in surface water and sediment may not be due to migration from Landfill 2 (FTMM-2).
- The concentrations of metals in surface water and sediment exceeding ESC were similar to those found in background samples (**Table 3-3** and **Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for PBCs and SVOCs are less than one. Though the NOAEL-based Great Blue Heron HQ for barium based on foraging only at the maximum detected concentration is greater than one, HQs based on average detected concentrations or the size of the potential foraging area are well below one (0.63 and 0.33, respectively).

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. COPECs in surface water were limited to two PAHs and lead, and COPECs in sediment, though potentially related to landfill soil or groundwater COPECs indicating a potential migration pathway, are at low concentrations relative to the ESC and similar to background concentrations. Based on wildlife exposure models for this site, the HQs do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 2 (FTMM-2) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 2 (FTMM-2) are not warranted or recommended.

4.2.2 LANDFILL 3 (FTMM-3)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified one PCB, several pesticides, SVOCs, and metals as COPECs in near surface soil. VOCs were not identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils, the COPECs in soil may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Two pesticides and several metals were identified as COPECs in sediment. **Table 4-9** and **Table 4-10** provide a summary of the COPECs in surface water and sediment at Landfill 3 (FTMM-3) as well as background and ambient levels of those constituents. Though DDD and DDT in sediment were detected in only one sample each at concentrations above the ESCs, these detected concentrations were above background. The maximum sediment copper concentration also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-11**.

GIS digital data available through the NJDEP indicate the presence of freshwater tidal wetlands (**Figure 4-2**) along Lafetra Creek opposite Landfill 3 (FTMM-3) as well as deciduous wetlands (**Figure 4-1**) further to the north and to the west of Landfill 3 (FTMM-3).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species and that Lafetra Creek as well as the adjacent wetlands are Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Landfill 3 (FTMM-3) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- With the exception of two PAHs and 4,4′-DDT, SVOCs and pesticides in soil were detected infrequently at concentrations exceeding the ESC.
- No COPECs were identified in groundwater that may flow to potential exposure points.
- The concentration of 4,4-DDD (0.0095 mg/kg) exceeded the saltwater sediment ESC (0.002 mg/kg). One detected concentration (0.18 mg/kg) of 4,4′-DDT, exceeded the ER-L value used for screening (0.001 mg/kg) as well as the ER-M value (0.007 mg/kg) but similar to that reported in SI background samples for sediment and soil (Weston, 1995).
- Though identified as COPECs in near surface soil, PCBs were not identified as COPECs in surface water or sediment where ecological exposures may occur.
- PAHs, though identified as COPECs in near surface soil, were not identified as COPECs in surface water or sediment where ecological exposure may occur.
- With the exception of the concentration of copper in one sediment sample, the concentrations of metals were similar to those found in background samples (**Table 3-3** and **Table 3-4**). The remaining sediment sample copper concentrations were low with respect to the ESC and similar to that in most of the background samples.
- Conservative wildlife HQs for DDD and DDT are less than one. Though the NOAEL-based Mallard and Great Blue Heron HQs for copper based on the maximum detected concentration is greater than one, HQs based on average detected concentrations or the size of the potential foraging area are well less than one.

Within the landfill, COPECs were identified in soils that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. The metals COPECs in sediment, though potentially related to landfill soil COPECs, are mostly found at low concentrations in relation to the ESC and similar to background concentrations. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 3 (FTMM-3) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 3 (FTMM-3) are not warranted or recommended.

4.2.3 LANDFILL 4 (FTMM-4)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified a few pesticides, two SVOCs, and several metals as COPECs in near surface soil. Five metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil and groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Two pesticides, three PCBs, six SVOCs, and six metals were identified as COPECs in sediment. **Table 4-12** and **Table 4-13** provide a summary of the COPECs in surface water and sediment at Landfill 4 (FTMM-4) as well as background and ambient levels of those constituents. Though DDD and DDT in sediment were detected infrequently at concentrations above the ESCs, these detected concentrations were above background. The maximum sediment PCB concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-14**.

No significant habitats in the vicinity of Landfill 4 are identified within the GIS digital data available through the NJDEP.

The potential for ecological effects from COPECs at Landfill 4 (FTMM-4) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- With the exception of 4,4′-DDT, pesticide and SVOC concentrations in soil exceeding COPECs were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Though identified as COPECs in near surface soil, pesticides were not identified as COPECs in surface water and detected infrequently in sediment where ecological exposures may occur. Detected concentrations in sediment were low with respect to the applicable ESC.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Though PCBs were detected in sediment, they were not detected in near surface soils at Landfill 4 (FTMM-4), and may not be related to the Landfill. PCBs at low concentrations are ubiquitous due to varied anthropogenic sources. Detected concentrations of PCBs in sediment were low, all within a factor of 8 of the ER-Ls used for screening and orders of magnitude less than the ER-Ms, and detected concentrations were similar to those in background samples (**Table 3-4**).
- PAHs in surface water and sediment have many anthropogenic sources and are ubiquitous in environmental media. The few detected concentrations of PAHs identified as COPECs were at low concentrations and at concentrations similar to those in background samples (**Table 3-3** and **Table 3-4**).
- The concentrations of metals in surface water and sediment were similar to those found in background samples (**Table 3-3** and **Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for DDD, DDT, and PCBs are less than one.

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. COPECs in surface water were limited to lead which is found at similar concentrations within background samples. The metals COPECs in sediment, though potentially related to landfill soil or groundwater COPECs indicating a potential migration pathway, are found at low concentrations in relation to the ESC and similar to background concentrations. Conservative wildlife HQs are all less than one indicating no ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 4 (FTMM-4) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 4 (FTMM-4) are not warranted or recommended.

4.2.4 LANDFILL 5 (FTMM-5)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified one PCB, several pesticides, SVOCs, and metals as COPECs in near surface soil. No VOCs were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Three pesticides, several SVOCs, and several metals were identified as COPECs in sediment. **Table 4-15** and **Table 4-16** provide a summary of the COPECs in surface water and sediment at Landfill

5 (FTMM-5) as well as background and ambient levels of those constituents. The maximum sediment DDD, DDE, and DDT concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-17**.

Though the GIS digital data available through the NJDEP do not indicate the presence of critical habitats at Landfill 5 (FTMM-5), the forested area to the north is Habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species, and is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Landfill 5 (FTMM-5) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- Most SVOCs, pesticides, and PCBs in soil were detected infrequently at concentrations exceeding the ESC.
- No VOCs were identified as COPECs in groundwater that may flow to potential exposure points.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- All detected concentrations of the pesticides 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT were within a factor of eight of the saltwater sediment ESC (most were within a factor of three of the ER-Ls) and below the ER-Ms.
- Though identified as COPECs in near surface soil, PCBs were not identified as COPECs in surface water or sediment where ecological exposures may occur.
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The few detected concentrations of PAHs identified as COPECs were at low concentrations and most were similar to those in background samples (**Table 3-3** and **Table 3-4**).
- The concentrations of metals in sediment were similar to those found in background samples (**Table 3-3** and **Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for DDD, DDE, and DDT are less than one.

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. COPECs in sediment, though potentially related to landfill soil COPECs, are at low concentrations and similar to background concentrations. Pesticides in sediment, though potentially related to landfill soil, were detected infrequently and at low concentrations in relation to the ESC. Conservative wildlife HQs are all less than one indicating no ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 5 (FTMM-5) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 5 (FTMM-5) are not warranted or recommended.

4.2.5 LANDFILL 8 (FTMM-8)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified several pesticides, PCBs, SVOCs, and metals as COPECs in near surface soil. Several pesticides were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soils and groundwater may have the potential to migrate towards environmentally sensitive habitats

where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper exceeded the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Two PCBs, 4,4-DDD, and several metals were identified as COPECs in sediment. **Table 4-18** and **Table 4-19** provide a summary of the COPECs in surface water and sediment at Landfill 8 (FTMM-8) as well as background and ambient levels of those constituents. Though PCBs in sediment were detected infrequently at concentrations above the ESCs, these detected concentrations were above background. The maximum sediment chromium, cobalt, mercury, and nickel concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-20**.

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated wetlands (**Figure 4-2**) along Parkers Creek opposite Landfill 8 (FTMM-8), with deciduous shrub/scrub wetlands and deciduous wetlands present further from the landfill (**Figure 4-1**). Landfill 8 (FTMM-8) is identified as a coastal forest habitat.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas across Parkers Creek and the forested areas on Landfill 8 (FTMM-8) are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. Parkers Creek, as well as the wetlands and forested area, is listed as Conservation Rank 4 as potential bald eagle foraging habitat, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Landfill 8 (FTMM-8) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- Most SVOCs, PCBs, and pesticides in soil were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Though several pesticides were identified as COPECs in near surface soil and groundwater, only 4,4′-DDD was detected as a COPEC in sediment where ecological exposure may occur indicating no significant migration of organic COPECs from the landfill.
- The three detected concentrations (0.0021, 0.0023, and 0.0033 mg/kg) in sediment of the pesticide, 4,4-DDD, were only marginally greater than the saltwater sediment ESC (0.002 mg/kg).
- Though identified as COPECs in near surface soil, PCBs were not identified as COPECs in surface water where ecological exposures may occur.
- PCBs at low concentrations in sediment are ubiquitous due to varied anthropogenic sources. Detected concentrations of PCBs in sediment were all within a factor of eight of the ER-Ls and orders of magnitude less than the ER-Ms, and detected concentrations were similar to those in background samples (**Table 3-4**).
- Though identified as PAHs in near surface soil, PAHs were not identified as COPECs in surface water or sediment where ecological exposures may occur.

- The concentrations of metals were similar to those found in background samples for the BEE investigation (**Table 3-3** and **Table 3-4**) or the background soil and sediment concentrations reported in the SI (Weston, 1995).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for PCBs and mercury are less than one. Though the NOAEL-based Great Blue Heron HQs for chromium, cobalt, and nickel based on foraging only at the maximum detected concentration are greater than one, HQs based on the size of the potential foraging area are well less than one (0.56, 0.40, and 0.24, respectively).

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. Pesticides and PCBs in sediment, though potentially related to landfill soil, were detected infrequently and at low concentrations in relation to the ESC. Metals in sediment were found at concentrations similar to the background concentrations from the BEE investigation or SI. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 8 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 8 (FTMM-8) are not warranted or recommended.

4.2.6 LANDFILL 12 (FTMM-12)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified several pesticides, SVOCs, and metals as COPECs in near surface soil. Several metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil and groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Three pesticides, one PCB, several PAHs and several metals were identified as COPECs in sediment. **Table 4-21** and **Table 4-22** provide a summary of the COPECs in surface water and sediment at Landfill 12 (FTMM-12) as well as background and ambient levels of those constituents. Though PCBs in sediment were detected in only one sample at a concentration above the ESCs, this detected concentration was above background. The maximum sediment DDD, DDE, DDT, acenaphthene, and anthracene concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-23**. This table addresses both Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14), which are located on opposite sides of Husky Brook.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded (**Figure 4-1**) wetlands along both banks of Husky Brook in the western half of Landfill 12 (FTMM-12). Based on site observations, these wetlands are less extensive than indicated through the NJDEP data.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Husky Brook and the small tributary are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. To the east of Landfill 12 (FTMM-12), on the opposite side of Wallington Avenue-Murphy Drive, the emergent wetland areas are habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Husky Brook, as well as the wetlands and forested areas of Landfill 12 (FTMM-12), is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Landfill 12 (FTMM-12) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in near surface soils under a clean soil cover and ecological exposure is unlikely though contaminants may migrate to potential exposure points.

- Most of the SVOCs and pesticides in soil were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Several metals were identified as COPECs in groundwater that may flow to potential exposure points in Husky Brook.
- No VOCs were identified as a COPEC in surface water or sediment.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Several pesticides were identified as COPECs in near surface soil. Of these, only three (4,4′-DDD, 4,4′-DDE, and 4,4′-DDT) were detected at concentrations exceeding the criteria in sediment. 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT were generally only marginally above the saltwater sediment ESC (0.001 to 0.0022 mg/kg).
- Though one PCB was identified as a COPEC in sediment, PCBs were not identified as COPECs in near surface soil and their presence in sediment may not be related to the landfill.
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The detected concentrations of PAHs identified as COPECs were at low concentrations and most were similar to those in background samples (**Table 3-3** and **Table 3-4**); the highest concentrations were west of Landfill 12 (FTMM-12) near Malterer Avenue and are more likely due to runoff from roads and parking surfaces than from the landfill. Though above the ER-Ls used for screening, all concentrations were well below the ER-Ms.
- No COPECs were identified in surface water.
- The concentrations of metals in sediment were similar to those found in background samples (**Table 3-4**).
- Conservative wildlife, assuming foraging only at the point of maximum concentration, HQs for PCBs, DDD, DDE, DDT, and PAHs are less than one.

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. The concentrations of metals in sediment, though potentially related to landfill soil or groundwater COPECs indicating a potential migration pathway, are at low concentrations in relation to the ESC and similar to background concentrations. Conservative wildlife HQs are less than one indicating no ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 12 (FTMM-12) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 12 (FTMM-12) are not warranted or recommended.

4.2.7 LANDFILL 14 (FTMM-14)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified several pesticides, SVOCs, and metals as COPECs in near surface soil. Several metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil and groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper exceeded the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Three pesticides, one PCB, several PAHs and several metals were identified as COPECs in sediment. **Table 4-24** and **Table 4-25** provide a summary of the COPECs in surface water and

sediment at Landfill 14 (FTMM-14) as well as background and ambient levels of those constituents. Though PCBs in sediment were detected in only one sample at a concentration above the ESCs, this detected concentration was above background. The maximum sediment DDD, DDE, DDT, acenaphthene, and anthracene concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-23**. This table addresses both Landfill 12 (FTMM-12) and Landfill 14 (FTMM-14) since they are located on opposite banks of Husky Brook.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands (**Figure 4-1**) along both banks of Husky Brook in the western half of Landfill 14 (FTMM-14) as well as along the small tributary that divides Landfill 12 (FTMM-12). Based on site observations, these wetlands are less extensive than indicated through the NJDEP data.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Husky Brook and the small tributary are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. To the east of Landfill 14 (FTMM-14), on the opposite side of Wallington Avenue-Murphy Drive, the emergent wetland areas are habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Husky Brook, as well as the wetlands and forested areas of Landfill 14 (FTMM-14), is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Landfill 14 (FTMM-14) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in near surface soils under a clean soil cover and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- Most SVOCs and pesticides in soil were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Several metals were identified as COPECs in groundwater that may flow to potential exposure points.
- No VOCs were identified as COPECs in groundwater, surface water, or sediment.
- No COPECs were identified in surface water.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Several pesticides were identified as COPECs in near surface soil. Of these, only three (4,4′-DDD, 4,4′-DDE, and 4,4′-DDT) were detected at concentrations exceeding the criteria in sediment. 4,4′-DDD, 4,4′-DDE, and 4,4′-DDT were generally only marginally above the saltwater sediment ESC (0.001 to 0.0022 mg/kg).
- Though one PCB was identified as a COPEC in sediment, PCBs were not identified as COPECs in near surface soil and their presence in sediment may not be related to the landfill.
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The detected concentrations of PAHs identified as COPECs were at low concentrations and similar to those identified in background samples (**Table 3-3** and **Table 3-4**); the highest concentrations were west of Landfill 14 (FTMM-14) near Malterer Avenue and are more likely due to runoff from roads and parking surfaces than from the landfill. Though above the ER-Ls used for screening, all concentrations were well below the ER-Ms.

- The concentrations of metals were similar to those found in background samples (**Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for PCBs, DDD, DDE, DDT, and PAHs are less than one.

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. The concentrations of metals in sediment, though potentially related to landfill soil or groundwater COPECs indicating a potential migration pathway, are at low concentrations in relation to the ESC and similar to background concentrations. Conservative wildlife HQs are less than one indicating no ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill 14 (FTMM-14) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill 14 (FTMM-14) are not warranted or recommended.

4.2.8 WATER TANK (FTMM-15)

Surface water and sediment data were evaluated. Ecological receptors may be exposed to surface water or sediment. No COPECs were identified in surface water. One pesticide and several metals were identified as COPECs in sediment. **Table 4-26** provides a summary of the COPECs in sediment at Site FTMM-15 as well as background and ambient levels of those constituents. No COPECs in surface water or sediment were detected at concentrations above BEE background levels.

No significant habitats in the vicinity of FTMM-15 are identified within GIS digital data available through the NJDEP.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Site FTMM-15 is judged to be minimal for the following reasons:

- No VOCs, SVOCs, or PCBs were identified as COPECs in surface water or sediment where ecological exposures could occur.
- No pesticides or metals were identified as COPECs in surface water.
- The detected concentration (0.0041 mg/kg) of one pesticide, 4,4-DDT, identified as a COPEC in sediment exceeded the saltwater ER-L (0.001 mg/kg) but less than the ER-M (0.007 mg/kg).
- The concentrations of metals were not above concentrations found in background samples (**Table 3-4**).

No COPECs were identified in surface water. Only one pesticide, in one sample at a low concentration, and metals were identified as COPECs in sediment. Metals were similar to background. Based on these considerations and the information provided in this report, it is concluded that constituents at Site FTMM-15 are unlikely to have a significant effect on sensitive ecological receptors or habitats, and additional ecological assessments at Site M-15 are not warranted or recommended.

4.2.9 PESTICIDE STORAGE, BUILDING 498 (FTMM-16)

Surface water and sediment data were evaluated. Ecological receptors may be exposed to surface water or sediment. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. One SVOC and several metals were identified as COPECs in sediment. **Table 4-27** and **Table 4-28** provide a summary of the COPECs in surface water and sediment at Site FTMM-16 as well as background and ambient levels of those constituents. Although hexachlorobutadiene in sediment was detected in only one sample at a concentration above the ESC, this detected concentration was above background. The maximum

sediment chromium, mercury, and zinc concentrations also exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-29**.

GIS digital data available through the NJDEP indicate the presence of low marsh saline wetlands west of the marina and east of Oceanport Avenue (**Figure 4-2**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that wetland area along Oceanport Creek is habitat Rank 4 for the Least Tern; this rank indicates at least one or more occurrences of a state endangered species. Oceanport Creek, as well as the wetlands, is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Site FTMM-16 is judged to be minimal for the following reasons:

- No VOCs, pesticides, or PCBs were identified as COPECs in surface water or sediment where ecological exposures could occur.
- No PCBs or metals were identified as COPECs in surface water.
- The only SVOC identified as a COPEC in sediment, hexachlorobutadiene, was only detected in one sample and the concentration (0.008 mg/kg) was within an order of magnitude of the saltwater ESC (0.0013 mg/kg).
- The concentrations of two metals were found in sediment at concentrations above those in background samples (**Table 3-4**): chromium and zinc. Site FTMM-16 is a concern due to the presence of pesticides that were detected to have migrated from the site (a soil removal action was completed in 1999). Chromium, lead, and zinc are not expected to be found related to the operations of the Pesticide Storage Area. These concentrations were detected in sediments collected from an active marina and are more likely due to marina activities rather than those related to pesticide storage at Site FTMM-16 or to natural geology or regional anthropogenic deposition; chromium concentrations were similar to those reported for ambient soils in the urban coastal plain (BEM Systems, Inc., 1998), similar to the range of background soil reported for the SI (Weston, 1995), and less than that reported for glauconitic soils (median concentration of 348 mg/kg) by Dooley (2001).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for hexachlorobutadiene, mercury, and zinc are less than one. Though the NOAEL-based Great Blue Heron HQ for chromium based on foraging only at the maximum detected concentration is greater than one, the HQ based on the size of the potential foraging area is well less than one (0.27).

No COPECs were identified in surface water. Only one SVOC, in one sample at a low concentration, and metals were identified as COPECs in sediment. Though most metals were similar to background, chromium and zinc showed some elevated levels but these are more likely due to marina activities rather than those related to pesticide storage at Site FTMM-16 or natural geology and regional anthropogenic deposition. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, constituents related to Site FTMM-16 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Site FTMM-16 are not warranted or recommended.

4.2.10 FORMER TRAINING AREA/LANDFILL (FTMM-18)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified two pesticides, two SVOCs, and several metals as COPECs in near surface soil. A few metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil and groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. No COPECs were identified as COPECs in

surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Several metals were identified as COPECs in sediment. **Table 4-30** and **Table 4-31** provide a summary of the COPECs in surface water and sediment at Site FTMM-18 as well as background and ambient levels of those constituents. The maximum sediment chromium, cobalt, and mercury concentrations exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-32**.

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated coastal wetlands and high marsh saline wetlands adjacent to Parkers Creek (**Figure 4-2**); based on on-site observations, there is also an area of deciduous wetlands between the maintained lawns and the emergent wetlands and there are small emergent wetlands within the area of maintained lawn.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland areas along Parkers Creek are habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species. Parkers Creek as well as the associated wetlands are listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Site FTMM-18 is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- The pesticide and PCB COPECs identified in soils were detected infrequently at concentrations exceeding the ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- A few metals were identified as COPECs in groundwater that may flow to potential exposure points.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Though a pesticide and a PAH were identified as COPECs in near surface soils, they were not identified as COPECs in surface water or sediment where ecological exposures may occur.
- With the exception of the concentrations of silver in two sediment samples, the concentrations of metals were similar to those found in background samples from the BEE investigation (**Table 3-3** and **Table 3-4**) or SI (Weston, 1995). Siler was identified as a COPEC in near surface soil but not in groundwater or surface water.
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for mercury are less than one. Though the NOAEL-based Great Blue Heron HQs for chromium and cobalt based on foraging only at the maximum detected concentrations are greater than one, HQs based on the size of the potential foraging area and average concentrations (0.85 and 0.13, respectively), or based on LOAELs (0.60 and 0.50, respectively), are well less than one.

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. Only metals were identified as COPECs in sediment. Though most metals in sediment were found at concentrations similar to background, silver was detected at concentrations above background. Potential risks due to exposure to elevated silver are limited in area around Site FTMM-18. The wildlife

exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, constituents related to Site FTMM-18 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Site FTMM-18 are not warranted or recommended.

4.2.11 PRE-1941 FORMER SANITARY SEWAGE TREATMENT PLANT (FTMM-20)

Surface water and sediment data were evaluated. Ecological receptors may be exposed to surface water or sediment. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in sediment, copper is considered a possible COPEC in surface water. Several metals were identified as COPECs in sediment. **Table 4-33** and **Table 4-34** provide a summary of the COPECs in surface water and sediment at Site FTMM-20 as well as background and ambient levels of those constituents. No COPECs in surface water or sediment were detected at concentrations above BEE background levels.

No significant habitats in the vicinity of Site FTMM-20 are identified within GIS digital data available through the NJDEP.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Site FTMM-20 is judged to be minimal for the following reasons:

- No VOCs, SVOCs, pesticides, or PCBs were identified as COPECs in surface water or sediment where ecological exposures may occur.
- No metals were identified as COPECs in surface water.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- The concentrations of metals in sediment were not above those found in background samples (**Table 3-4**). Additionally, though Parkers Creek is tidal in the area of Site FTMM-20, the greatest concentrations were found in the upstream samples.

No COPECs were identified in surface water. Only metals were identified as COPECs in sediment. The concentrations of metals in sediment were not above those in background, consistent with the findings of the SI report (Weston, 1995). Based on these considerations and the information provided in this report, it is concluded that constituents at Site FTMM-20 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Site FTMM-20 are not warranted or recommended.

4.2.12 BUILDING 1122, FTMM-59 (ECP PARCEL 43)

Groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to groundwater, but ecological receptors may be exposed to surface water or sediment. No COPECs were identified in groundwater. Only three PAHs and lead were identified as COPECs in surface water. Several PAHs and metals were identified as COPECs in sediment. Though cadmium was not detected in surface water, its MDLs were greater than the freshwater ESC and cadmium was identified as a COPEC in sediment; therefore, cadmium is considered a potential COPEC in surface water. **Table 4-35** and **Table 4-36** provide a summary of the COPECs in surface water and sediment at Parcel 43 as well as background and ambient levels of those constituents. The maximum sediment chromium and mercury concentrations and the maximum surface water benzo(a)anthracene and benzo(a)pyrene concentrations exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-37**.

GIS digital data available through the NJDEP indicate the presence of deciduous wetlands along Mill Creek in the area of Building 1122 (FTMM-59) and Parcel 43.

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Building 1122 (FTMM-59) and Parcel 43 is judged to be minimal for the following reasons:

- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- No COPECs were identified in groundwater that may flow to potential exposure points.
- Pesticides, PCBs, and VOCs were not identified as COPECs in surface water or sediment where ecological exposures may occur.
- Lead in surface water was found at concentrations similar to those in background samples (**Table 3-3**).
- Though cadmium was identified as a potential COPEC in surface water, cadmium concentrations in sediment were similar to those in background samples (**Table 3-4**).
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The detected concentrations of PAHs in surface water and sediment identified as COPECs were at low concentrations and most were similar to those in background samples (**Table 3-3** and **Table 3-4**).
- With the exception of chromium, the concentrations of metals were similar to those found in background samples from the BEE investigation (**Table 3-4**) or SI (Weston, 1995). Chromium concentrations were within the range of ambient soil levels determined for the urban coastal region (BEM Systems, Inc., 1998), the range of background soil concentrations reported for the SI (Weston, 1995), and the range of concentrations reported for glauconitic soils (Dooley, 2001); thus, chromium may be related to natural geology or regional deposition.
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for mercury and SVOCs are less than one. Though the NOAEL-based Great Blue Heron HQ for chromium based on foraging only at the maximum detected concentrations is greater than one, the HQ based on the size of the potential foraging area is well less than one (0.21).

No COPECs were identified in groundwater. The only metal identified as a COPEC in surface water was lead, which was found at concentrations similar to background. PAHs identified as COPECs in surface water and sediment were identified at concentrations similar to background and are likely related to general runoff from road surfaces in the area. Though most metals in sediment were found at concentrations similar to background sediment, chromium was detected at concentrations above sediment background but within the range of ambient soil concentrations and below median concentrations for glauconitic soils. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Building 1122 (FTMM-59) and Parcel 43 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Building 1122 (FTMM-59) and Parcel 43 are not warranted or recommended.

4.2.13 BUILDING 1150 (ECP PARCEL 39)

Surface soil, surface water, and sediment data were evaluated. Ecological receptors have limited potential for exposure to soils in the area, but ecological receptors may be exposed to surface water or sediment. Several metals were identified as COPECs in soil. Only two PAHs and lead were identified as COPECs in surface water. One PCB, five PAHs, and several metals were identified as COPECs in sediment. Though cadmium was not detected in surface water, its MDLs were greater than the freshwater ESC and cadmium was identified as a COPEC in soil and sediment; therefore, cadmium is considered a potential COPEC in surface water. **Table 4-38** and **Table 4-39** provide a summary of the COPECs in surface water and sediment at Parcel 39 as well as background and ambient levels of those

constituents. The maximum sediment chromium and mercury concentrations exceeded BEE background concentrations. A summary of the wildlife HQs for this COPEC is presented in **Table 4-40**.

GIS digital data available through the NJDEP indicate the presence of deciduous wetlands and herbaceous wetlands along Mill Creek in the area of Parcel 39 (**Figure 4-1** and **Figure 4-2**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the forested wetland area along Mill Creek adjacent to Parcel 39 is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Parcel 39 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of Parcel 39 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- No VOCs, PCBs, or SVOCs were identified as COPECs in soil.
- Though one PCB was identified as a COPEC in sediments, it was not identified as a COPEC in other site media. PCBs were not identified as COPECs in surface water or soil and may not be related to Parcel 39. The concentration of PCBs was marginally above the ESC.
- Lead in surface water was found at concentrations similar to those in background samples (**Table 3-3**).
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. The detected concentrations of PAHs identified as COPECs in surface water and sediment were at low concentrations and were similar to those in background samples (**Table 3-3** and **Table 3-4**).
- The concentrations of metals in sediment were similar to those found in background samples (**Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for mercury are less than one. Though the NOAEL-based Great Blue Heron HQ for chromium based on foraging only at the maximum detected concentrations is greater than one, the HQ based on the size of the potential foraging area is well less than one (0.03).

In soil at Parcel 39, only metals were identified as COPECs. These soils are limited in area and are located near buildings and active areas where the potential for ecological exposures is limited. Metals and PAHs in surface water or sediment were at concentrations similar to background. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Parcel 39 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats and the potential for ecological risk is considered low, and additional ecological assessments at Parcel 39 are not warranted or recommended.

4.2.14 BUILDINGS 283, 288, 291, 293, 295 (FTMM-61 AND ECP PARCEL 49)

Surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed groundwater and have limited potential for exposure to soils in the area, but ecological receptors may be exposed to surface water or sediment. One PCB, several PAHs, and metals were identified as COPECs in soil. No VOCs were identified as COPECs in groundwater. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper exceeded the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Several metals were identified as COPECs in sediment. Though pyrene and 2-methylnaphthalene were not detected in sediment, their detection limits

were greater than the freshwater sediment ESC and they were identified as COPECs in soil; therefore, pyrene and 2-methylnaphthalene are considered potential COPECs in sediment. **Table 4-41** and **Table 4-42** provide a summary of the COPECs in surface water and sediment at FTMM-61 and Parcel 49 as well as background and ambient levels of those constituents. The maximum sediment chromium, cobalt, mercury, nickel, and zinc concentrations exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-43**.

GIS digital data available through the NJDEP indicate the presence of mixed high marsh saline wetlands and Phragmites dominated wetlands along Parkers Creek on the western portion of Parcel 49 (**Figure 4-2**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species, and that Parkers Creek is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at FTMM-61 and Parcel 49 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of FTMM-61 and Parcel 49 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- Though PAHs were identified as COPECs in soil, they were not identified as COPECs in other site media where ecological exposures may occur, suggesting limited migration of these constituents.
- Though one PCB was identified as a COPEC in soil, it was not identified as a COPEC in other site media where ecological exposures may occur.
- VOCs and pesticides were not identified as COPECs in environmental media.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Zinc was the only COPEC identified in groundwater that may flow to potential exposure points.
- No COPECs were identified in surface water where ecological exposures may occur.
- With the exception of chromium and zinc, the concentrations of metals in sediment were similar to those found in background samples from the BEE investigation (**Table 3-4**) or the SI (Weston, 1995). Concentrations of chromium were greater than the background concentrations but well within the range expected for glauconitic soils (Dooley, 2001); though concentrations were greater than the ER-L they were less than the ER-M. The concentration of zinc in one of two samples and its duplicate sample (1,320 and 2,090 mg/kg) exceeded the ER-M (410 mg/kg).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for cobalt and mercury are less than one. Though the NOAEL-based Great Blue Heron HQs for chromium, nickel, and zinc based on foraging only at the maximum detected concentrations are greater than one, HQs for nickel and zinc based on the size of the potential foraging area and average concentrations (0.16 and 0.27, respectively), or based on LOAELs, are well less than one, and HQs for chromium based on the size of the potential foraging area are less than one based on LOAELs (0.30) and only slightly greater than one based on NOAELs (1.79).

In FTMM-61 and Parcel 49 soil, PAHs and PCBs were identified as COPECs but were not identified as COPECs in surface water or sediment where ecological exposures may occur, suggesting limited migration. Several metals in soil and zinc in groundwater were identified as COPECs that could

migrate to ecological exposure points in nearby surface water or sediment. No COPECs were identified in surface water. Though most metals in sediment were found at concentrations similar to background, a few (chromium and zinc) were detected at concentrations above background; though chromium concentrations are similar to those in glauconitic soils. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that there is a potential for some ecological risk due to elevated metals zinc in sediment in a limited area around FTMM-61 and Parcel 49, though these concentrations may be related to other anthropogenic sources. Additional ecological assessments at FTMM-61 and Parcel 49 are not warranted or recommended. It is unlikely to have a significant deleterious effect on sensitive ecological receptors or habitats and the potential for significant ecological risk is considered minimal.

4.2.15 BUILDING 1075 (ECP PARCEL 61)

Surface soil, surface water, and sediment data were evaluated. Ecological receptors have limited potential for exposure to soils within the area, but ecological receptors may be exposed to surface water or sediment. Three PAHs and several metals were identified as COPECs in soil. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in soil, copper is considered a possible COPEC in surface water. Several PAHs and two metals were identified as COPECs in sediment. **Table 4-44** and **Table 4-45** provide a summary of the COPECs in surface water and sediment at Parcel 61 as well as background and ambient levels of those constituents. The maximum sediment acenaphthene concentration exceeded BEE background concentrations. A summary of the wildlife HQs for this COPEC is presented in **Table 4-46**.

GIS digital data available through the NJDEP indicate the presence of deciduous shrub/scrub wetlands along the tributary to Husky Brook (**Figure 4-1**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species, and that Husky Brook is listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Parcel 61 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of Parcel 61 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- PAHs, as well as metals, were identified as COPECs in soil that could migrate to surface water or sediment.
- VOCs, pesticides, and PCBs were not identified as COPECs in environmental media.
- Though copper was identified as a potential COPEC in surface water, copper concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Though PAHs have many anthropogenic sources and are ubiquitous in environmental media, elevated concentrations in soil at Parcel 61 may indicate a site-related source of PAHs to surface water and sediment. The detected concentrations of PAHs identified as COPECs were at low concentrations and most were similar to those in background samples (**Table 3-3** and **Table 3-4**). Though concentrations in sediment exceeded the ER-Ls used for screening, all concentrations were less than the ER-Ms.
- The concentrations of metals in sediment were similar to those found in background samples (**Table 3-4**).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for acenaphthene are less than one.

In soil at Parcel 61, PAHs were identified as COPECs. These were also identified as COPECs in sediment of the small tributary to Husky Brook. Metals in sediment were found at concentrations similar to background. Conservative wildlife HQs are less than one. Based on these considerations and the information provided in this report, it is concluded that there is a potential for some ecological risk due to elevated PAHs in sediment. These exposures are limited in area in the small tributary to Husky Brook around Parcel 61, and may also be related to other anthropogenic sources; all PAH concentrations were well below the ER-M values, and additional ecological assessments at Parcel 61 are not warranted or recommended.

4.2.16 BUILDING 900 (ECP PARCEL 69)

Surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed groundwater and have limited potential for exposure to soils in the area, but ecological receptors may be exposed to surface water or sediment. Several metals were identified as COPECs in soil. No COPECs were identified in groundwater. No COPECs were identified as COPECs in surface water; however, given that the surface water MDL for copper was greater than the applicable ESC and copper was identified as a COPEC in other site media, copper is considered a possible COPEC in surface water. Several PAHs and metals were identified as COPECs in sediment. **Table 4-47** and **Table 4-48** provide a summary of the COPECs in surface water and sediment at Parcel 69 as well as background and ambient levels of those constituents. The maximum sediment acenaphthene, chromium, cobalt, copper, mercury, and zinc concentrations exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-49**.

GIS digital data available through the NJDEP indicate the presence of Phragmites dominated coastal wetlands (**Figure 4-2**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the emergent wetland area along Oceanport Creek is habitat Rank 4, which is assigned to patches with one or more occurrences of a state endangered species, in this case the Least Tern. Oceanport Creek and the adjacent wetlands are also listed as Conservation Rank 4 as potential bald eagle foraging habitat (**Figure 4-3**), indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. The presence of bald eagles has not been documented for this site.

The potential for ecological effects from COPECs at Parcel 69 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of Parcel 69 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- Only metals were identified as COPECs in soil.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- No COPECs were identified in groundwater that may flow to potential exposure points.
- VOCs, pesticides, and PCBs were not identified as COPECs in environmental media.
- No COPECs were identified in surface water where ecological exposures may occur.
- Though PAHs were identified as COPECs in sediment, they were not identified as COPECs in other site media; PAHs may not be related to Parcel 69 and at concentrations similar to background (**Table 3-4**).
- With the exception of chromium and zinc, the concentrations of metals in sediment were similar to those found in background samples from the BEE investigation (**Table 3-4**) or the SI (Weston, 1995). Chromium concentrations were similar to those found in glauconitic soils (Dooley, 2001).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for acenaphthene, cobalt, mercury, and zinc are less than one. Though the NOAEL-based

Mallard or Great Blue Heron HQs for chromium and copper based on foraging only at the maximum detected concentrations are greater than one, the HQs for copper based on the size of the potential foraging area are well less than one (0.52 for Great Blue Heron and less than 0.01 for Mallard), and the Great Blue Heron HQs for chromium based on the size of the potential foraging area are less than one based on LOAELs (0.30) and only slightly greater than one based on NOAELs (1.75).

The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that though there is a potential for some ecological risk due to elevated metals (including zinc), these exposures are limited in area around Parcel 69 and may be related to regional anthropogenic inputs based on the proximity of the locations to areas of heavy vehicular traffic, and additional ecological assessments at Parcel 69 are not warranted or recommended.

4.3 CHARLES WOOD AREA

In the CWA, two IRP Sites and three ECP Parcels were addressed in this BEE.

4.3.1 LANDFILL, SITE CW-3A (FTMM-25)

Near surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to near surface soils or groundwater, but ecological receptors may be exposed to surface water or sediment. This evaluation identified four pesticides, one PCB, one PAH, and several metals as COPECs in near surface soil. Six metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to near surface soils or groundwater, the COPECs in soil and groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. Two PAHs, cadmium, and zinc were identified as COPECs in surface water. One pesticide, several SVOC, and several metals were identified as COPECs in sediment. Given that the surface water MDL for silver exceeded the applicable ESC and silver was identified as a COPEC in soil, silver is considered a possible COPEC in surface water. **Table 4-50** and **Table 4-51** provide a summary of the COPECs in surface water and sediment at Landfill CW-3A (FTMM-25) as well as background and ambient levels of those constituents. The maximum sediment concentrations of DDD, several PAHs, and chromium exceeded BEE background concentrations; the maximum surface water concentration of benzo(a)anthracene exceeded the BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-52**.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along Shrewsbury Creek (**Figure 4-4**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Landfill CW-3A (FTMM-25) is judged to be minimal for the following reasons:

- Ecological receptors are not frequently exposed to subsurface soils; COPECs are in subsurface soils and ecological exposure is unlikely though contaminants may migrate to potential exposure points.
- One PCB was detected in a soil sample at a concentration exceeding the ESC, but PCBs were not identified as COPECs in surface water or sediment where ecological exposures may occur.
- Though two pesticides (4,4′-DDT and dieldrin) were found in soil at concentrations exceeding the ESC, only one pesticide (4,4′-DDD) was identified as a COPEC in sediment and the concentration was low, within a factor of two of the freshwater sediment ESC.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.

- Several metals were identified as COPECs in groundwater.
- VOCs were not identified as COPECs in environmental media.
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. With the exception of the most upstream sediment sample, the detected concentrations of PAHs identified as COPECs in surface water and sediment were at low concentrations and most were similar to those in background samples (**Table 3-5** and **Table 3-6**); the highest concentrations were immediately downgradient of Pearl Harbor Avenue at the westernmost extreme of the Landfill boundary. Given that PAHs were not identified as COPECs on the landfill (soil or groundwater), it is likely that the PAHs are not related to the landfill.
- The concentrations of metals in surface water were similar to those found in background samples (**Table 3-5**).
- The concentrations of a few metals exceeded the ESC and the concentrations in CWA background samples (arsenic, cadmium, chromium, copper, mercury) (**Table 3-5** and **Table 3-6**), though concentrations were similar to those measured in background samples at the MP (**Table 3-3** and **Table 3-4**), similar to those measure in background samples in the SI (Weston, 1995), or within the range of background soil levels in the region (BEM Systems, Inc., 1998).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for DDD and most PAHs are less than one. Though the NOAEL-based Great Blue Heron HQs for pyrene and chromium based on foraging only at the maximum detected concentrations are greater than one, the HQs based on the size of the potential foraging area are well less than one (0.07 and 0.12, respectively).

Within the landfill, COPECs were identified in soils and groundwater that could migrate to ecological exposure points in nearby surface water or sediment. COPECs in surface water were limited to two PAHs, cadmium and zinc. Several PAHs and metals were identified as COPECs in sediment. PAHs are most likely not due to the landfill since they were only identified as COPECs at the upgradient extent of the landfill near Pearl Harbor Avenue, and PAHs were not identified as COPECs in landfill soil. Most metals were identified at concentrations similar to background. Though chromium concentrations in sediment were greater than measured background concentrations, they were similar to soil concentrations from the region. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Landfill CW-3A (FTMM-25) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Landfill CW-3A (FTMM-25) are not warranted or recommended.

4.3.2 FORMER PESTICIDE STORAGE AREA, SITE CW-6 (FTMM-28)

Surface soil, groundwater, surface water, and wetland sediment data were evaluated. Ecological receptors are not directly exposed to groundwater and have limited exposure to soils in the area, but ecological receptors may be exposed to surface water or sediment. This evaluation identified two pesticides, one PAH, and several metals as COPECs in surface soil. Four metals were identified as COPECs in groundwater. Though there are no direct ecological exposures to groundwater and limited potential for exposure to soil in the area, the COPECs in soil and groundwater have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. One PCB, cadmium and lead were identified as COPECs in surface water. One PCB, one pesticide, one SVOC, and several metals were identified as COPECs in sediment. Given that the surface water MDLs for 4,4′-DDE and silver exceeded the applicable ESC and 4,4′-DDE and silver were identified as COPECs in other site media, 4,4′-DDE and silver are considered possible COPECs in surface water. **Table 4-53** and **Table 4-54** provide a summary of the COPECs in surface water and sediment at Site CW-6 (FTMM-28) as well as background and ambient levels of those constituents. The maximum wetland sediment and soil concentrations of DDT and its metabolites, Dieldrin, PCBs, 2-4-dinitrophenol, chromium, mercury, and silver exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-55**.

GIS digital data available through the NJDEP indicate that the area west and south of Site CW-6 (FTMM-28) is deciduous wooded wetlands (**Figure 4-4**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 2, which is assigned to patches with one or more occurrences of a species of special concern, in this case the Wood Thrush.

The potential for ecological effects from COPECs at Site CW-6 (FTMM-28) is judged to be minimal for the following reasons:

- Soil samples represent concentrations in a small wooded area west of the buildings and operations of Site CW-6 (FTMM-28) and within an active golf course. Ecological receptors are not frequently exposed to these soils.
- Concentrations of pesticides in surface soil, though exceeding the soil ESC, were at low concentrations. The affected area is of limited size and located within an active golf course limiting the potential for ecological exposures.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- A few metals were identified as COPECs in groundwater.
- VOCs were not identified as COPECs in environmental media.
- One concentration of a pesticide, 4,4′-DDE, was detected at a concentration exceeding the freshwater sediment ESC in the wetlands. The potential pathways of exposure in the wetlands are more appropriate to those of soil exposures; the concentration is less than the soil ESC.
- COPECs identified in surface water (Aroclor 1242, cadmium, and lead) were found at greater or similar concentrations in Wampum Brook upgradient of Site CW-6 then downgradient of Site CW-6 (FTMM-28) and metals concentrations were similar to background concentrations.
- PAHs have many anthropogenic sources and are ubiquitous in environmental media. With the exception of the most upstream sediment sample, the detected concentrations of PAHs identified as COPECs were at concentrations similar to those in background samples (**Table 3-3** and **Table 3-4**). The greatest concentrations upstream are likely related to other sources and not Site CW-6 (FTMM-28).
- The concentrations of several metals in sediment exceeded the ESC and the concentrations in CWA background samples (**Table 3-5** and **Table 3-6**), though concentrations for most were similar to those measured in background samples at the MP (**Table 3-3** and **Table 3-4**). Only mercury was detected at concentrations that also exceeded the SELs. The greatest concentrations of mercury were found within the wetland area and not in Wampum Brook, and are similar to the range of ambient mercury soil concentrations reported for the urban coastal plain (BEM Systems, Inc., 1998).
- Conservative wildlife HQs, assuming foraging only at the point of maximum concentration, for DDD, DDE, Dieldrin, PCBs and 2,4-dinitrophenol are less than one. Though the NOAEL-based American Robin HQs for chromium, silver, mercury, and DDT based on the maximum detected concentrations are greater than one, the HQs based on the size of the potential foraging area and average concentrations are well less than one (0.64, 0.23, 0.76, and 0.17, respectively).

COPECs were identified in soils representing a small area but ecological exposures are limited due to the size and its location within an active golf course. Though some metals were identified as COPECS in surface water or sediment as well as soil or groundwater indicating a potential pathway may exist, the COPECs in surface water and sediment of Wampum Brook, south of CW-6 (FTMM-28), were found at greater concentrations at the upstream boundary of the site and are most likely not related to Site CW-6 (FTMM-28). Most metals in wetland sediment were found at concentrations similar to

background, though a few were at elevated concentrations they were within the range of ambient soil concentrations reported for the urban coastal plain (BEM Systems, Inc., 1998). The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Site CW-6 (FTMM-28) are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Site CW-6 (FTMM-28) are not warranted or recommended.

4.3.3 BUILDING 2700 (ECP PARCEL 15)

Groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to groundwater, but ecological receptors may be exposed to surface water or sediment. No VOCs, but several metals, were identified as COPECs in groundwater. Though there are no direct ecological exposures to groundwater and limited potential for exposure to soil in the area, the COPECs in groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. Only lead was identified as a COPEC in surface water; however, given that the surface water MDL for cadmium was greater than the applicable ESC cadmium was identified as a COPEC in groundwater, cadmium is considered a possible COPEC in surface water. Only chromium was identified as a COPEC in sediment. **Table 4-56** and **Table 4-57** provide a summary of the COPECs in surface water and sediment at Parcel 15 as well as background and ambient levels of those constituents. No COPEC concentrations at Parcel 15 were above BEE background concentrations.

GIS digital data available through the NJDEP indicate the presence of deciduous scrub/shrub wetlands along the narrow corridor of Shrewsbury Creek (**Figure 4-4**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Parcel 15 is judged to be minimal for the following reasons:

- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Several metals were identified as COPECs in groundwater that may flow to potential exposure points.
- No VOCs, PCBs, pesticides, or SVOCs were identified as COPECs in environmental media.
- Only lead in surface water and chromium in sediment were identified as COPECs where ecological exposures could occur.
- Lead in surface water was found at concentrations similar to those in background samples (**Table 3-3**) and slightly greater than the freshwater ESC.
- Though cadmium was identified as a potential COPEC in surface water, cadmium concentrations in sediment were similar to those in background samples (**Table 3-4**).
- Chromium in sediment was found at concentrations similar to those in background samples (**Table 3-4**) and slightly greater than the freshwater sediment ESC.

Several metals were identified as COPECs in groundwater that could migrate to ecological exposure points in nearby surface water or sediment. COPECs in surface water were limited to lead and COPECs in sediment were limited to chromium. Both were found at concentrations similar to those in background samples and only slightly greater than the freshwater ESC. Based on these considerations and the information provided in this report, it is concluded that constituents at Parcel 15 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Parcel 15 are not warranted or recommended.

4.3.4 BUILDINGS 2507 AND 2704 (ECP PARCEL 27)

Surface soil, surface water, and sediment data were evaluated. Ecological receptors have limited potential for exposure to surface soils within the area, but ecological receptors may be exposed to surface water or sediment. Several metals were identified as COPECs in surface soil. Cadmium, chromium, and lead were identified as COPECs in surface water. Six metals were identified as COPECs in sediment. **Table 4-58** and **Table 4-59** provide a summary of the COPECs in surface water and sediment at Parcel 27 as well as background and ambient levels of those constituents. The maximum surface water copper concentration and sediment chromium concentration exceeded BEE background concentrations. A summary of the wildlife HQs for these COPECs is presented in **Table 4-60**.

GIS digital data available through the NJDEP indicate the presence of deciduous wooded wetlands along Shrewsbury Creek (**Figure 4-4**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Parcel 27 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of Parcel 27 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- Only metals were identified as COPECs in soil.
- No VOCs, PCBs, pesticides, or SVOCs were identified as COPECs in environmental media.
- Cadmium, chromium, and lead in surface water were found at concentrations similar to those in background samples (**Table 3-3**).
- The concentrations of a few metals in sediment exceeded the ESC and the concentrations in CWA background samples (arsenic, cadmium, copper, lead, and zinc) (**Table 3-6**), though concentrations were similar to those measured in background samples at the MP (**Table 3-4**).
- Though the conservative NOAEL-based Mallard or Great Blue Heron HQs for chromium and copper based on foraging only at the maximum detected concentrations are greater than one, the HQs for copper based on the size of the potential foraging area are well less than one (0.04 for Great Blue Heron and less than 0.01 for Mallard), and the Great Blue Heron HQ for chromium based on the size of the potential foraging area is less than (0.02).

Several metals were identified as COPECs in soil that could migrate to ecological exposure points in nearby surface water or sediment. Metals in surface water and sediment were found at concentrations similar to those in the area-wide background. The wildlife exposure model HQs for this site do not indicate an ecological concern. Based on these considerations and the information provided in this report, it is concluded that constituents at Parcel 27 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Parcel 27 are not warranted or recommended.

4.3.5 BUILDING 2525 (ECP PARCEL 28)

Surface soil, groundwater, surface water, and sediment data were evaluated. Ecological receptors are not directly exposed to groundwater and have limited potential for exposures to soils within the area, but ecological receptors may be exposed to surface water or sediment. Several metals were identified as COPECs in surface soil. No VOCs or SVOCs, but one metal, cadmium, were identified as COPECs in groundwater. Though there are no direct ecological exposures to groundwater and limited potential for exposure to soil in the area, the COPECs in groundwater may have the potential to migrate towards environmentally sensitive habitats where ecological receptors could be exposed to contaminants. Only lead was identified as a COPEC in surface water; however, given that the surface water MDL for cadmium was greater than the applicable ESC, cadmium was identified as a COPEC in groundwater, cadmium is considered a possible COPEC in surface water. Only chromium was identified as a COPEC

in sediment. **Table 4-61** and **Table 4-62** provide a summary of the COPECs in surface water and sediment at Parcel 28 as well as background and ambient levels of those constituents. No COPEC concentrations at Parcel 28 were above BEE background concentrations.

GIS digital data available through the NJDEP indicate the presence of deciduous scrub/shrub wetlands along the narrow corridor of Shrewsbury Creek (**Figure 4-4**) as well as a strip of emergent wetlands located south of Parcel 28 (**Figure 4-5**).

The NJDEP Landscape Project Critical Wildlife Habitat database indicates that the wetland area is habitat Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species but do not have confirmed occurrences of such species.

The potential for ecological effects from COPECs at Parcel 28 is judged to be minimal for the following reasons:

- Soil samples represent concentrations near the buildings and operations of Parcel 28 and are limited in area. Ecological receptors are not frequently exposed to these soils, though contaminants may migrate to potential exposure points.
- A few metals were identified as COPECs in soil at Parcel 28.
- Ecological receptors are not exposed directly to contaminants in groundwater, though groundwater may flow to potential exposure points.
- Only one metal, cadmium, was identified as COPECs in groundwater that may flow to potential exposure points. It was not identified as a COPEC in surface water or sediment.
- Though cadmium was identified as a potential COPEC in surface water, cadmium concentrations in sediment were similar to those in background samples (**Table 3-4**).
- No VOCs, PCBs, pesticides, or SVOCs were identified as COPECs in environmental media. Only lead in surface water and chromium in sediment were identified as COPECs where ecological exposures could occur.
- Lead in surface water was found at concentrations similar to those in background samples (**Table 3-3**) and slightly greater than the freshwater ESC.
- Chromium in sediment was found at concentrations similar to those in background samples (**Table 3-4**) and slightly greater than the freshwater sediment ESC.

A few metals were identified as COPECs in soil that could migrate to ecological exposure points in nearby surface water or sediment. Only cadmium was identified as a COPEC in groundwater, but it was not identified as a COPEC in surface water or sediment where ecological exposures may occur. Metals in surface water and sediment were found at concentrations similar to those in background. Based on these considerations and the information provided in this report, it is concluded that constituents at Parcel 28 are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at Parcel 28 are not warranted or recommended.

Table 4-1
Foodchain Model Target Species Life History Parameters

Common Name	Scientific Name	Foraging Area (HA)	Body Weight (kg wet weight)	Water Intake (L/day)	Food Intake (kg/day)	Food Intake (kg/day)	Incidental Soil Ingestion (kg dry/day)	Dietary Fractions
American Robin	*Turdus migratorius*	0.48[1,a]	0.0773[1,b]	0.0108[1,c]	0.011[1,d] (dry)	0.067[e] (wet)	0.00128[f]	0.93 invertivores[1,j] 0.07 fruit
Mallard	*Anas platyrhynchos*	580[1,k]	1.043[1,l]	0.0605[1,c]	0.0598[1,d] (dry)	0.362[e] (wet)	0.0012[m]	1.00 aquatic vegetation[1,n]
Great Blue Heron	*Ardea herodias*	4.5[1,o]	2.2[1,p]	0.099[1,c]	0.097[1,d] (dry)	0.396[1,q]	0.0019[r]	0.96 fish[s] 0.04 other

Notes:

1 *USEPA, 1993b*
a *Weatherhead and McRae (1990), average data for adults feeding fledglings or nestlings in deciduous forests of Ontario*
b *Clench and Leberman (1978), data for males and females in Pennsylvania*
c *Estimated based on allometic equation of Calder and Braun (1983): IR (L/day) = 0.059 $BW^{0.67}$ (kg)*
d *Estimated based on allometic equation of Nagy (1987): IR (kg dry/day) = 0.0582 $BW^{0.651}$ (kg)*
e *Based on percent moistures of eathworms (84%) and fruit (77%) from USEPA (1993b)*
f *Assumes invertebrate component of diet is 50% earthworms and 50% arthropods, earthworms contain 25% soil by dry weight (Beyer et al., 1993), additional soil ingestion is 2% soil by dry weight of other foods*
j *Wheelwright (1986), adults feeding in the spring in eastern United States*
k *Kirby et al., 1985, average data for adult males and females in Minnesota wetland and river system*
l *Nelson and Martin (1953), average for adult females throughout North America*
m *Assumes 2%, data in USEPA (1993b) list it as <2%.*
n *Dillon (1959), data for mallards in a Louisiana coastal marsh consume 90-99% vegetation; 100% is assumed.*
o *Bayer (1978), average feeding territory size for adults spring and winter in an oregon freshwater marsh and estuary*
p *Quinney (1982) average adult body size in eastern North America*
q *Estimated based on allometric equation of Kushlan (1988) for wading birds.*
r *Assumes 2%*
s *Alexander (1977) for lower Michigan lakes and rivers*

Table 4-2
Soil-to-Invertebrate Bioaccumulation Factors

COPEC	BAF (kg/kg dry)	BAF (kg/kg wet)	Source	
Inorganics				
Chromium	0.31	0.05	USEPA, 2008	Ecological Soil Screening Levels for Chromium
Mercury	1.70	0.28	Sample et al., 1998	
Silver	2.05	0.34	USEPA, 2006b	Ecological Soil Screening Levels for Silver
Pesticides				
DDD	11.20	1.87	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
DDE	11.20	1.87	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
DDT	11.20	1.87	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
Dieldrin	14.7	2.45	USEPA, 2007b	Ecological Soil Screening Levels for Dieldrin
PCBs				
Aroclor 1242	6.77	1.13	USEPA, 1999	*Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Aroclor 1260	6.77	1.13	USEPA, 1999	*Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
SVOCs				
2,4-Dinitrophenol	0.70	0.12	WAC 173	Dry weight for non-chlorinated organics with log K_{OW}<5

Note:
Conversion of literature dry or wet weight BAFs converted assumed 83.3% moisture

Table 4-3
Sediment-to-Aquatic Plant Bioaccumulation Factors

COPEC	BAF (kg/kg dry)	BAF (kg/kg wet)	Source
Inorganics			
Arsenic	0.036	0.0072	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Barium	0.15	0.03	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Chromium	0.0075	0.0015	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Cobalt	0.01	0.002	Geometric Mean of all inorganic BCFs from USEPA, 1999
Copper	0.4	0.08	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Lead	0.045	0.009	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Mercury	0.0375	0.0075	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Nickel	0.032	0.0064	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Silver	0.4	0.08	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Vanadium	0.01	0.002	Geometric Mean of all inorganic BCFs from USEPA, 1999
Zinc	1.2E-12	2.4E-13	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Pesticides			
DDD	0.0165	0.0033	BAF for DDE used as surrogate
DDE	0.00937	0.001874	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
DDT	0.008	0.0016	BAF for DDE used as surrogate
PCBs			
Aroclor 1232	0.01	0.002	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Aroclor 1242	0.01	0.002	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Aroclor 1254	0.01	0.002	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Aroclor 1260	0.01	0.002	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
SVOCs			
Acenaphthene	0.21	0.042	Equation of Travis and Arms (1988) Log K_{OW} = 3.92
Anthracene	0.105	0.021	Equation of Travis and Arms (1988) Log K_{OW} = 4.44
Benzo(a)anthracene	0.0202	0.00404	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Benzo(a)pyrene	0.011	0.0022	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Benzo(g,h,i)perylene	0.0068	0.00136	Equation of Travis and Arms (1988) Log K_{OW} = 6.50
Benzo(k)fluoranthene	0.0101	0.00202	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Chrysene	0.0187	0.00374	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Dibenzo(a,h)anthracene	0.0064	0.00128	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
2,4-Dinitrophenol	0.642	0.1284	Equation of Travis and Arms (1988) Log K_{OW} = 3.08
Flouranthene	0.042	0.0084	Equation of Travis and Arms (1988) Log K_{OW} = 5.12
Flourene	0.143	0.0286	Equation of Travis and Arms (1988) Log K_{OW} = 4.21
Hexachlorobutadiene	0.0714	0.01428	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Indeno(1,2,3-c,d)pyrene	0.0039	0.00078	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for hazardous Waste Combustion Facilities*
Phenanthrene	0.0908	0.01816	Equation of Travis and Arms (1988) Log K_{OW} = 4.55
Pyrene	0.043	0.0086	Equation of Travis and Arms (1988) Log K_{OW} = 5.11

Note:
Conversion of literature dry or wet weight BAFs converted assumed 80% moisture

Table 4-4

Sediment-to-Invertebrate/Fish Bioaccumulation Factors

COPEC	BAF (kg/kg dry)	BAF (kg/kg wet)	Source
Inorganics			
Arsenic	5.4	0.9	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Barium	5.4	0.9	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Chromium	2.3	0.39	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Cobalt	5.4	0.9	Geometric Mean of all inorganic BCFs from USEPA, 1999
Copper	1.8	0.3	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Lead	3.8	0.63	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Mercury	0.4	0.068	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Nickel	5.4	0.9	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Silver	5.4	0.9	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Vanadium	5.4	0.9	Geometric Mean of all inorganic BCFs from USEPA, 1999
Zinc	3.4	0.57	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Pesticides			
DDD	0.0165	0.0033	BAF for DDE used as surrogate
DDE	0.00937	0.001874	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
DDT	0.008	0.0016	BAF for DDE used as surrogate
PCBs			
Aroclor 1232	3.2	0.53	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Aroclor 1242	3.2	0.53	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Aroclor 1254	3.2	0.53	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Aroclor 1260	3.2	0.53	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
SVOCs			
Acenaphthene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Anthracene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Benzo(a)anthracene	8.7	1.45	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Benzo(a)pyrene	9.5	1.59	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Benzo(g,h,i)perylene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Benzo(k)fluoranthene	9.6	1.61	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Chrysene	8.3	1.38	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Dibenzo(a,h)anthracene	9.6	1.61	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
2,4-Dinitrophenol	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Flouranthene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Flourene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Hexachlorobutadiene	2.6	0.44	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Indeno(1,2,3-c,d)pyrene	9.6	1.61	USEPA, 1999 *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Phenanthrene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC
Pyrene	9.0	1.5	USEPA, 2004 National Sediment Quality Survey for Chemical Class and 10.3% lipid and 2% OC

Note:

Conversion of literature dry or wet weight BAFs converted assumed 83.3% moisture

Table 4-5
Avian Toxicity Reference Values

	NOAEL	LOAEL		
Inorganics				
Arsenic	2.24		USEPA, 2005b	Ecological Soil Screening Levels for Arsenic
Barium	20.8	41.7	USEPA, 1999	*Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Chromium	2.66	15.6	USEPA, 2008	Ecological Soil Screening Levels for Chromium
Cobalt	7.61	18.3	USEPA, 2005c	Ecological Soil Screening Levels for Cobalt
Copper	4.05	12.1	USEPA, 2007c	Ecological Soil Screening Levels for Copper
Lead	1.63		USEPA, 2005d	Ecological Soil Screening Levels for Lead
Mercury	0.45	0.9	Sample et al., 1996	
Nickel	6.71	18.6	USEPA, 2007d	Ecological Soil Screening Levels for Nickel
Silver	2.02		USEPA, 2006b	Ecological Soil Screening Levels for Silver
Vanadium	0.344		USEPA, 2005e	Ecological Soil Screening Levels for Vanadium
Zinc	66.1	154	USEPA, 2007e	Ecological Soil Screening Levels for Zinc
Pesticides				
DDD	0.227	2.27	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
DDE	0.227	2.27	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
DDT	0.227	2.27	USEPA, 2007a	Ecological Soil Screening Levels for DDT and Metabolites
Dieldrin	0.0709	0.223	USEPA, 2007b	Ecological Soil Screening Levels for Dieldrin
PCBs				
Aroclor 1232	0.18	1.8	NOAEL and LOAEL from Aroclor 1254 used as surrogate	
Aroclor 1242	0.18	1.8	NOAEL and LOAEL from Aroclor 1254 used as surrogate	
Aroclor 1254	0.18	1.8	Sample et al., 1996	
Aroclor 1260	0.18	1.8	NOAEL and LOAEL from Aroclor 1254 used as surrogate	
SVOCs				
Acenaphthene	22.9	229	Eisler, 1987	From Patton and Dieter, 1980
Anthracene	22.9	229	Eisler, 1987	From Patton and Dieter, 1980
Benzo(a)anthracene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Benzo(a)pyrene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Benzo(g,h,i)perylene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Benzo(k)fluoranthene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Chrysene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Dibenzo(a,h)anthracene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
2,4-Dinitrophenol	0.336	0.561	ATSDR, 1995	Dominguez et al., 1993 applying an uncertainty factor of 0.01
Flouranthene	22.9	229	Eisler, 1987	From Patton and Dieter, 1980
Flourene	22.9	229	Eisler, 1987	From Patton and Dieter, 1980
Hexachlorobutadiene	3.185		USEPA, 1999	*Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*
Indeno(1,2,3-c,d)pyrene	2.0	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	
Phenanthrene	22.9	229	Eisler, 1987	From Patton and Dieter, 1980
Pyrene	2	20	Lowest NOAEL/LOAEL for High Molecular Weight PAHs from USEPA (2007f)	

Table 4-6
Summary of Surface Water COPECs and Background Concentrations at Landfill 2 (FTMM-2)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Inorganics													
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	10.1	(2 of 2)	8.98
Possible COPECs													
DDE	4.51E-09	NAV	ND	ND	0 / 11	NA	NA	NR	NR	NR	NA	NA	NA
Cadmium	0.14	8.8	0.8	0.8	1 / 11	0.3	NA	ND	9.5	6	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-7
Summary of Sediment COPECs and Background Concentrations at Landfill 2 (FTMM-2)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
PCBs															
Aroclor 1242	0.07	0.023	0.064	0.064	1 / 12	0.007	NA	NR	NR	NR	NR	NR	**0.12**	(1 of 13)	0.0289
Aroclor 1254	0.06	0.06	0.086	0.021	2 / 12	0.0264	0.0396	NR	NR	NR	NR	NR	0.064	(1 of 13)	0.0282
Aroclor 1260	0.005	0.005	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.040**	(2 of 13)	0.0123
SVOCs															
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.37	(1 of 13)	0.152
Dibenzo(a,h)anthracene	0.06	0.063	0.088	0.088	1 / 12	0.023	NA	0.12	0.079	ND	0.29	0.02	**0.10**	(1 of 13)	0.030
2,4-Dinitrophenol	0.00621	NAV	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**1.1**	(1 of 13)	0.17
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	0.71	(1 of 13)	0.211
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	8.09	(1 of 13)	4.51
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	**356**	(8 of 13)	80.2
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	2.76	(13 of 13)	1.90
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	125	(13 of 13)	56.8
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	22.5	(1 of 13)	3.16
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	52.8	(4 of 13)	22.5
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.21	(1 of 13)	0.104
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	29.2	(1 of 13)	13.0

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-8
Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfill 2 (FTMM-2)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
PCBs								
Aroclor 1242	0.12	0.0289	ND	ND	0.00	0.00	0.06	0.02
Aroclor 1254	0.064	0.0282	ND	ND	0.00	0.00	0.03	0.02
Aroclor 1260	0.04	0.0123	ND	ND	0.00	0.00	0.02	0.01
SVOCs								
Dibenzo(a,h)anthracene	0.1	0.03	ND	ND	0.00	0.00	0.01	0.00
2,4-Dinitrophenol	1.1	0.17	ND	ND	0.15	0.02	0.89	0.14
Inorganics								
Barium	356	80.2	62.2	61.7	0.20	0.04	2.79	0.63
Barium	NOAEL-Based (AUF = 0.12)						0.33	0.08
Barium	LOAEL-Based (AUF = 1)						1.40	0.32
Barium	LOAEL-Based (AUF = 0.12)						0.17	0.04

Notes:
AUF - Area Use Factor
ND - Not Detected
NOAEL - No Observeable Adverse Effect Level
LOAEL - Lowest Observeable Adverse Effect Level

Table 4-9
Summary of Surface Water COPECs and Background Concentrations at Landfill 3 (FTMM-3)

			BEE Background								Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Sl Bkgd Maximum Surface Water (ug/L)	Sl Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
Sl Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-10
Summary of Sediment COPECs and Background Concentrations at Landfill 3 (FTMM-3)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.0095**	(1 of 12)	0.00263
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	**0.18**	(1 of 12)	0.015
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	22	(12 of 12)	18.1
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	164	(11 of 12)	78.8
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	4.78	(12 of 12)	2.87
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	106	(4 of 12)	67.4
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	12.5	(3 of 12)	6.75
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	**370**	(2 of 12)	41.0
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	154	(5 of 12)	66.0
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.295	(4 of 12)	0.125
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	30	(3 of 12)	16.0
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	8.85	(12 of 12)	6.87
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	2.14	(3 of 12)	0.64
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	90.2	(6 of 12)	56.4
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	352	(6 of 12)	194

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-11
Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfill 3 (FTMM-3)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Pesticides								
DDD	0.0095	0.00263	ND	ND	0.00	0.00	0.01	0.00
DDT	0.18	0.015	ND	ND	0.00	0.00	0.14	0.01
Inorganics								
Copper	370	41	ND	ND	2.64	0.29	5.00	0.55
Copper	NOAEL-Based (AUF = 0.012)						0.06	0.01
Copper	LOAEL-Based (AUF = 1)						1.67	0.19
Copper	LOAEL-Based (AUF = 0.012)						0.02	0.00
Copper	NOAEL-Based (AUF = 0.00009)				0.00	0.00		
Copper	LOAEL-Based (AUF = 1)				0.89	0.10		
Copper	LOAEL-Based (AUF = 0.00009)				0.00	0.00		

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-12
Summary of Surface Water COPECs and Background Concentrations at Landfill 4 (FTMM-4)

			BEE Background								Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-13

Summary of Sediment COPECs and Background Concentrations at Landfill 4 (FTMM-4)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Ambient Soil Levels		Site COPEC Summary		
COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	Maximum Detected (mg/kg)	Minimum Detected (mg/kg)	Frequency of Detection	Mean (mg/kg)	95% UCL of Mean (mg/kg)	Maximum Sediment (mg/kg)	Maximum Soil (mg/kg)	Bkgd Soil (mg/kg)	Maximum Ambient (mg/kg)	90th Percentile (mg/kg)	Maximum Detected (mg/kg)	No Detected Above ESC	Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.0062**	(2 of 6)	0.00278
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	**0.0016**	(1 of 6)	0.00034
PCBs															
Aroclor 1232	0.07	0.023	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.093**	(1 of 6)	0.018
Aroclor 1242	0.07	0.023	0.064	0.064	1 / 12	0.007	NA	NR	NR	NR	NR	NR	**0.075**	(2 of 6)	0.037
Aroclor 1260	0.005	0.005	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.036**	(5 of 6)	0.0195
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	0.12	(1 of 6)	0.033
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	0.15	(1 of 6)	0.0472
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.31	(1 of 6)	0.131
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	0.7	(1 of 6)	0.221
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.097	(1 of 6)	0.034
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	0.62	(1 of 6)	0.245
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	10.2	(1 of 6)	4.96
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	1.49	(3 of 6)	1.22
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	24.6	(4 of 6)	15.1
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	65.1	(2 of 6)	42.3
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.257	(3 of 6)	0.149
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	3.67	(6 of 6)	2.62

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-14
Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfill 4 (FTMM-4)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
PCBs								
Aroclor 1232	0.093	0.018	ND	ND	0.00	0.00	0.05	0.01
Aroclor 1242	0.075	0.037	ND	ND	0.00	0.00	0.04	0.02
Aroclor 1260	0.036	0.0195	ND	ND	0.00	0.00	0.02	0.01
Pesticides								
DDD	0.0062	0.00278	ND	ND	0.00	0.00	0.00	0.00
DDT	0.0016	0.00034	ND	ND	0.00	0.00	0.00	0.00

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

Table 4-15
Summary of Surface Water COPECs and Background Concentrations at Landfill 5 (FTMM-5)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-16

Summary of Sediment COPECs and Background Concentrations at Landfill 5 (FTMM-5)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Ambient Soil Levels		Site COPEC Summary		
COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	Maximum Detected (mg/kg)	Minimum Detected (mg/kg)	Frequency of Detection	Mean (mg/kg)	95% UCL of Mean (mg/kg)	Maximum Sediment (mg/kg)	Maximum Soil (mg/kg)	Bkgd Soil (mg/kg)	Maximum Ambient (mg/kg)	90th Percentile (mg/kg)	Maximum Detected (mg/kg)	No Detected Above ESC	Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.016**	(3 of 7)	0.00463
DDE	0.005	0.0022	0.0034	0.0017	2 / 12	0.00184	0.00219	0.096	0.071	NR	NR	NR	**0.0072**	(3 of 7)	0.00306
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	**0.0021**	(4 of 7)	0.0014
SVOCs															
Acenaphthylene	0.044	0.044	1.6	0.089	2 / 12	0.215	0.958	NR	0.041	ND	NR	NR	0.15	(1 of 7)	0.033
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	0.23	(3 of 7)	0.104
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.34	(1 of 7)	0.147
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	0.67	(1 of 7)	0.444
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.27	(1 of 7)	0.056
2-Methylnaphthalene	0.07	0.07	1.3	1.3	1 / 12	0.12	NA	NR	NR	NR	NR	NR	0.4	(1 of 7)	0.079
Naphthalene	0.16	0.16	4.4	4.4	1 / 12	0.383	NA	NR	NR	NR	NR	NR	0.26	(1 of 7)	0.053
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	0.96	(2 of 7)	0.284
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	0.7	(1 of 7)	0.431
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	43.5	(3 of 7)	11.5
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	50.7	(1 of 7)	26.8
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	6.65	(3 of 7)	2.13
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	119	(1 of 7)	47.3
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	13.3	(1 of 7)	7.8
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	62.4	(1 of 7)	29.6
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.155	(1 of 7)	0.08
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	27.6	(1 of 7)	13.9
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	13.2	(7 of 7)	4.81
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	1.29	(1 of 7)	0.413
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	71.6	(1 of 7)	31.0
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	203	(2 of 7)	109

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-17
Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfill 5 (FTMM-5)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Pesticides								
DDD	0.016	0.00463	ND	ND	0.00	0.00	0.01	0.00
DDE	0.0072	0.00306	ND	ND	0.00	0.00	0.01	0.00
DDT	0.0021	0.0014	ND	ND	0.00	0.00	0.00	0.00

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

Table 4-18
Summary of Surface Water COPECs and Background Concentrations at Landfill 8 (FTMM-8)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-19
Summary of Sediment COPECs and Background Concentrations at Landfill 8 (FTMM-8)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Ambient Soil Levels		Site COPEC Summary		
COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	Maximum Detected (mg/kg)	Minimum Detected (mg/kg)	Frequency of Detection	Mean (mg/kg)	95% UCL of Mean (mg/kg)	Maximum Sediment (mg/kg)	Maximum Soil (mg/kg)	Bkgd Soil (mg/kg)	Maximum Ambient (mg/kg)	90th Percentile (mg/kg)	Maximum Detected (mg/kg)	No Detected Above ESC	Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	0.0033	(3 of 12)	0.0022
PCBs															
Aroclor 1242	0.07	0.023	0.064	0.064	1 / 12	0.007	NA	NR	NR	NR	NR	NR	**0.17**	(2 of 12)	0.06
Aroclor 1260	0.005	0.005	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.011**	(1 of 12)	0.0038
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	18.9	(6 of 12)	18.9
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	103	(6 of 12)	49.3
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	6.85	(11 of 12)	3.70
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**131**	(4 of 12)	69.6
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	**116**	(10 of 12)	39.6
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	64.5	(4 of 12)	25.57
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	179	(7 of 12)	82.3
Manganese	630	260	551	4.36	12 / 12	105.6	218.2	70.2	90.7	59	1030	206	364	(1 of 12)	76.8
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.853**	(9 of 12)	0.365
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	**60.5**	(7 of 12)	24.8
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	13.8	(12 of 12)	6.47
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	5.85	(3 of 12)	2.29
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	99.1	(4 of 12)	46.9
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	415	(7 of 12)	195

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-20
Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfill 8 (FTMM-8)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
PCBs								
Aroclor 1242	0.17	0.06	ND	ND	0.00	0.00	0.09	0.03
Aroclor 1260	0.011	0.0038	ND	ND	0.00	0.00	0.01	0.00
Inorganics								
Chromium	131	69.6	ND	ND	0.08	0.04	3.50	1.86
Cobalt	116	39.6	ND	ND	0.03	0.01	2.48	0.85
Mercury	0.853	0.365	0.0001	0.000063	0.01	0.00	0.02	0.01
Nickel	60.5	24.8	0.00825	0.00772	0.03	0.01	1.47	0.60

Chromium	NOAEL-Based (AUF = 0.16)	0.56	0.30
Chromium	LOAEL-Based (AUF = 1)	0.59	0.32
Chromium	LOAEL-Based (AUF = 0.16)	0.10	0.05
Cobalt	NOAEL-Based (AUF = 0.16)	0.40	0.14
Cobalt	LOAEL-Based (AUF = 1)	0.42	0.14
Cobalt	LOAEL-Based (AUF = 0.16)	0.07	0.02
Nickel	NOAEL-Based (AUF = 0.16)	0.24	0.10
Nickel	LOAEL-Based (AUF = 1)	0.53	0.22
Nickel	LOAEL-Based (AUF = 0.16)	0.08	0.03

Notes:
AUF - Area Use Factor
ND - Not Detected
NOAEL - No Observeable Adverse Effect Level
LOAEL - Lowest Observeable Adverse Effect Level

Table 4-21
Summary of Surface Water COPECs and Background Concentrations at Landfill 12 (FTMM-12)

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-22
Summary of Sediment COPECs and Background Concentrations at Landfill 12 (FTMM-12)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.0091**	(9 of 13)	0.0046
DDE	0.005	0.0022	0.0034	0.0017	2 / 12	0.00184	0.00219	0.096	0.071	NR	NR	NR	**0.0071**	(8 of 13)	0.0029
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	**0.013**	(4 of 13)	0.0025
PCBs															
Aroclor 1254	0.06	0.06	0.086	0.021	2 / 12	0.0264	0.0396	NR	NR	NR	NR	NR	**0.23**	(1 of 13)	0.022
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	**0.64**	(1 of 13)	0.076
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	**0.6**	(3 of 13)	0.083
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.83	(6 of 13)	0.265
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	0.68	(3 of 13)	0.231
Benzo(g,h,i)perylene	0.17	0.17	0.89	0.38	4 / 12	0.466	0.577	0.67	0.64	ND	NR	NR	0.36	(2 of 13)	0.323
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	0.31	(2 of 13)	0.273
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.83	(6 of 13)	0.465
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	2.2	(6 of 13)	0.702
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.32	(1 of 13)	0.061
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.98	0.095	5 / 12	0.275	0.45	0.7	0.46	ND	0.57	0.23	0.36	(2 of 13)	0.342
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	1.9	(5 of 13)	0.534
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	1.5	(5 of 13)	0.815
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	18.6	(1 of 13)	3.37
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	54	(1 of 13)	9.83
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	14	(2 of 13)	1.69
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	101	(1 of 13)	28.1
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	13.7	(1 of 13)	2.62
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	77.3	(2 of 13)	16.7
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	171	(1 of 13)	24.2
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	29.2	(1 of 13)	5.72
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	5.99	(10 of 13)	1.83
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	3.54	(1 of 13)	0.49
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	61.1	(1 of 13)	16.7
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	218	(1 of 13)	58.8

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-23

Summary of Wildlife Hazard Quotients for Sediment COPECs at Landfills 12 and 14 (FTMM-12 and FTMM-14)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
PCBs								
Aroclor 1254	0.23	0.022	ND	ND	0.00	0.00	0.12	0.01
Pesticides								
DDD	0.0091	0.0046	ND	ND	0.00	0.00	0.01	0.00
DDE	0.0071	0.0029	ND	ND	0.00	0.00	0.01	0.00
DDT	0.013	0.0025	ND	ND	0.00	0.00	0.01	0.00
SVOCs								
Acenaphthene	0.64	0.076	ND	ND	0.00	0.00	0.01	0.00
Anthracene	0.60	0.083	0.00013	0.000073	0.00	0.00	0.01	0.00

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

Table 4-24
Summary of Surface Water COPECs and Background Concentrations at Landfill 14 (FTMM-14)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-25
Summary of Sediment COPECs and Background Concentrations at Landfill 14 (FTMM-14)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.0091**	(9 of 13)	0.0046
DDE	0.005	0.0022	0.0034	0.0017	2 / 12	0.00184	0.00219	0.096	0.071	NR	NR	NR	**0.0071**	(8 of 13)	0.0029
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	**0.013**	(4 of 13)	0.0025
PCBs															
Aroclor 1254	0.06	0.06	0.086	0.021	2 / 12	0.0264	0.0396	NR	NR	NR	NR	NR	**0.23**	(1 of 13)	0.022
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	**0.64**	(1 of 13)	0.076
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	**0.6**	(3 of 13)	0.083
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.83	(6 of 13)	0.265
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	0.68	(3 of 13)	0.231
Benzo(g,h,i)perylene	0.17	0.17	0.89	0.38	4 / 12	0.466	0.577	0.67	0.64	ND	NR	NR	0.36	(2 of 13)	0.323
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	0.31	(2 of 13)	0.273
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.83	(6 of 13)	0.465
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	2.2	(6 of 13)	0.702
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.32	(1 of 13)	0.061
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.98	0.095	5 / 12	0.275	0.45	0.7	0.46	ND	0.57	0.23	0.36	(2 of 13)	0.342
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	1.9	(5 of 13)	0.534
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	1.5	(5 of 13)	0.815
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	18.6	(1 of 13)	3.37
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	54	(1 of 13)	9.83
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	14	(2 of 13)	1.69
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	101	(1 of 13)	28.1
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	13.7	(1 of 13)	2.62
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	77.3	(2 of 13)	16.7
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	171	(1 of 13)	24.2
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	29.2	(1 of 13)	5.72
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	5.99	(10 of 13)	1.83
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	3.54	(1 of 13)	0.49
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	61.1	(1 of 13)	16.7
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	218	(1 of 13)	58.8

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-26
Summary of Sediment COPECs and Background Concentrations Site 15 (FTMM-15)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Ambient Soil Levels		Site COPEC Summary		
COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	Maximum Detected (mg/kg)	Minimum Detected (mg/kg)	Frequency of Detection	Mean (mg/kg)	95% UCL of Mean (mg/kg)	Maximum Sediment (mg/kg)	Maximum Soil (mg/kg)	Bkgd Soil (mg/kg)	Maximum Ambient (mg/kg)	90th Percentile (mg/kg)	Maximum Detected (mg/kg)	No Detected Above ESC	Average Concentration (mg/kg)
Pesticides															
DDT	0.008	0.001	ND	ND	0 / 12	NA	NA	0.11	0.11	NR	NR	NR	0.0041	(1 of 4)	0.0011
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	14.9	(3 of 4)	11.3
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	2.97	(4 of 4)	2.28
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	95.5	(1 of 4)	73.6
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	108	(2 of 4)	56.9
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.293	(3 of 4)	0.2
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	6.98	(4 of 4)	5.21
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	1.44	(3 of 4)	1.19
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	83.2	(1 of 4)	50.0
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	262	(2 of 4)	165

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-27
Summary of Surface Water COPECs and Background Concentrations at Site FTMM-16

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-28
Summary of Sediment COPECs and Background Concentrations at Site FTMM-16

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
SVOCs															
Hexachlorobutadiene	0.0265	0.0013	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.008**	(1 of 5)	0.0020
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	24.5	(4 of 5)	16.9
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	12.3	(4 of 5)	8.86
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**144**	(4 of 5)	108
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	124	(4 of 5)	82.1
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	212	(4 of 5)	133
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.502**	(3 of 5)	0.317
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	35.2	(3 of 5)	22.4
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	11	(4 of 5)	7.65
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	6.44	(4 of 5)	4.35
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	106	(3 of 5)	66.7
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	**500**	(4 of 5)	324

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-29
Summary of Wildlife Hazard Quotients for Sediment COPECs at Site FTMM-16

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
SVOCs								
Hexachlorobutadiene	0.008	0.002	ND	ND	0.00	0.00	0.00	0.00
Inorganics								
Chromium	144	108	ND	ND	0.09	0.07	3.84	2.88
Mercury	0.502	0.317	ND	ND	0.00	0.00	0.01	0.01
Zinc	500	324	0.0471	0.0408	0.01	0.01	0.79	0.51

Chromium	NOAEL-Based (AUF = 0.07)	0.27	0.20
Chromium	LOAEL-Based (AUF = 1)	0.65	0.49
Chromium	LOAEL-Based (AUF = 0.07)	0.05	0.03

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-30
Summary of Surface Water COPECs and Background Concentrations at Site FTMM-18

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-31
Summary of Sediment COPECs and Background Concentrations at Site FTMM-18

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	22.8	(2 of 5)	9.748
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	5.65	(4 of 5)	3.462
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**132**	(3 of 5)	86.02
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	**56**	(2 of 5)	16.36
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	82.9	(1 of 5)	25.8
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	166	(2 of 5)	56.93
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.669**	(3 of 5)	0.389
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	45.1	(2 of 5)	18.7
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	12.3	(5 of 5)	7.116
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	27.9	(2 of 5)	10.9
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	63	(1 of 5)	41.54
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	358	(3 of 5)	175.3

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-32
Summary of Wildlife Hazard Quotients for Sediment COPECs at Site FTMM-18

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Inorganics								
Chromium	132	86	ND	ND	0.08	0.05	3.52	2.30
Cobalt	56	16.4	ND	ND	0.01	0.00	1.20	0.35
Mercury	0.669	0.389	0.0001	0.000073	0.01	0.00	0.02	0.01
Chromium	NOAEL-Based (AUF = 0.37)						1.30	0.85
Chromium	LOAEL-Based (AUF = 1)						0.60	0.39
Chromium	LOAEL-Based (AUF = 0.37)						0.22	0.14
Cobalt	NOAEL-Based (AUF = 0.37)						0.44	0.13
Cobalt	LOAEL-Based (AUF = 1)						0.50	0.15
Cobalt	LOAEL-Based (AUF = 0.37)						0.18	0.05

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-33
Summary of Surface Water COPECs and Background Concentrations at Site FTMM-20

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-34
Summary of Sediment COPECs and Background Concentrations at Site FTMM-20

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	23.8	(2 of 2)	16.6
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	2.87	(2 of 2)	2.09
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	99.4	(1 of 2)	83.5
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	71.2	(1 of 2)	41.6
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	59.4	(1 of 2)	46.4
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	0.322	(1 of 2)	0.215
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	21.6	(1 of 2)	15.7
Selenium	NAV	1	19	0.95	12 / 12	6.645	9.337	1.7	1.9	0.11	ND	ND	6.86	(2 of 2)	5.45
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	8.07	(2 of 2)	4.71
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	60.9	(1 of 2)	48.3
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	184	(1 of 2)	132

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-35
Summary of Surface Water COPECs and Background Concentrations at Building 1122, Site FTMM-59, Parcel 43

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
SVOCs													
Anthracene	0.035	NAV	0.12	0.052	3 / 11	0.0635	0.0798	NR	NR	NR	0.12	(2 of 2)	0.12
Benzo(a)anthracene	0.025	NAV	0.23	0.23	2 / 11	0.049	NA	NR	NR	NR	**0.24**	(2 of 2)	0.24
Benzo(a)pyrene	0.014	NAV	ND	ND	0 / 11	NA	NA	NR	NR	NR	**0.31**	(1 of 2)	0.16
Inorganics													
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	11.5	(2 of 2)	9.4
Possible COPECs													
Cadmium	0.14	8.8	0.8	0.8	1 / 11	0.3	NA	ND	9.5	6	NA	NA	NA

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-36
Summary of Sediment COPECs and Background Concentrations at Building 1122, Site FTMM-59, Parcel 43

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
SVOCs															
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.61	(2 of 3)	0.44
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	0.61	(2 of 3)	0.44
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	0.39	(2 of 3)	0.30
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.88	(2 of 3)	0.66
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	1.4	(2 of 3)	1.03
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	0.7	(1 of 3)	0.48
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	1.6	(2 of 3)	1.15
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	10.2	(3 of 3)	8.6
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	1.86	(2 of 3)	1.3
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**161**	(3 of 3)	157
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	53.6	(3 of 3)	40.7
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	116	(3 of 3)	78.5
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.47**	(3 of 3)	0.33
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	36.4	(3 of 3)	29.5
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	286	(2 of 3)	215
Possible COPECs															
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	NA	NA	NA

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-37
Summary of Wildlife Hazard Quotients for Sediment COPECs at Building 1122, Site FTMM-59, Parcel 43

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration
SVOCs								
Benzo(a)anthracene	0.61	0.44	0.24	0.24	0.00	0.00	0.08	0.06
Benzo(a)pyrene	0.61	0.44	0.31	0.16	0.00	0.00	0.09	0.06
Inorganics								
Chromium	161	157	ND	ND	0.10	0.10	4.30	4.19
Mercury	0.47	0.33	ND	ND	0.00	0.00	0.01	0.01

Chromium	NOAEL-Based (AUF = 0.05)	0.21	0.21
Chromium	LOAEL-Based (AUF = 1)	0.73	0.71
Chromium	LOAEL-Based (AUF = 0.05)	0.04	0.04

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-38
Summary of Surface Water COPECs and Background Concentrations at Building 1150, Parcel 39

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
SVOCs													
Anthracene	0.035	NAV	0.12	0.052	3 / 11	0.0635	0.0798	NR	NR	NR	0.11	(1 of 1)	0.11
Benzo(a)anthracene	0.025	NAV	0.23	0.23	2 / 11	0.049	NA	NR	NR	NR	0.22	(1 of 1)	0.22
Inorganics													
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	10.1	(1 of 1)	10.1
Possible COPECs													
Cadmium	0.14	8.8	0.8	0.8	1 / 11	0.3	NA	ND	9.5	6	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-39
Summary of Sediment COPECs and Background Concentrations at Building 1150, Parcel 39

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
PCBs															
Aroclor 1254	0.06	0.06	0.086	0.021	2 / 12	0.0264	0.0396	NR	NR	NR	NR	NR	0.064	(1 of 4)	0.027
SVOCs															
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.54	(1 of 6)	0.23
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.71	(3 of 6)	0.29
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	0.99	(2 of 6)	0.53
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	0.67	(1 of 6)	0.21
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	2	(3 of 6)	0.72
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	8.89	(2 of 6)	4.49
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	2.09	(6 of 6)	1.52
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**131**	(6 of 6)	68.2
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	41	(2 of 6)	11.9
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	61.7	(1 of 6)	26.0
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.67**	(1 of 6)	0.17
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	32.4	(1 of 6)	14.4
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	210	(1 of 6)	103

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-40
Summary of Wildlife Hazard Quotients for Sediment COPECs at Building 1150, Parcel 39

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Inorganics								
Chromium	131	68.2	ND	ND	0.08	0.04	3.50	1.82
Mercury	0.67	0.17	ND	ND	0.01	0.00	0.02	0.00

Chromium	NOAEL-Based (AUF = 0.01)	0.03	0.02
Chromium	LOAEL-Based (AUF = 1)	0.59	0.31
Chromium	LOAEL-Based (AUF = 0.01)	0.01	0.00

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-41
Summary of Surface Water COPECs and Background Concentrations at Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-42
Summary of Sediment COPECs and Background Concentrations at Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	29.7	(4 of 4)	10.5
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	96.4	(4 of 4)	81.1
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	5.5	(3 of 4)	3.29
Chromium	**26**	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**353**	(4 of 4)	230
Cobalt	**50**	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	**29.3**	(2 of 4)	13.9
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	111	(3 of 4)	72.2
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	148	(1 of 4)	58.9
Mercury	**0.2**	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.53**	(3 of 4)	0.33
Nickel	**16**	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	**68.5**	(2 of 4)	34.2
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	1.4	(1 of 4)	NA
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	125	(4 of 4)	101
Zinc	**120**	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	**2090**	(3 of 4)	917
Possible COPECs															
2-Methylnaphthalene	0.07	0.07	1.3	1.3	1 / 12	0.12	NA	NR	NR	NR	NR	NR	NA	NA	NA
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	NA	NA	NA

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-43

Summary of Wildlife Hazard Quotients for Sediment COPECs at Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Inorganics								
Chromium	353	230	ND	ND	0.22	0.14	9.43	6.14
Cobalt	29.3	13.9	ND	ND	0.01	0.00	0.63	0.30
Mercury	0.53	0.33	ND	ND	0.00	0.00	0.02	0.01
Nickel	68.5	34.2	0.0076	0.00485	0.03	0.02	1.66	0.83
Zinc	2090	917	0.0464	0.04455	0.04	0.02	3.28	1.44
Chromium	NOAEL-Based (AUF = 0.19)						1.79	1.17
Chromium	LOAEL-Based (AUF = 1)						1.60	1.04
Chromium	LOAEL-Based (AUF = 0.19)						0.30	0.20
Nickel	NOAEL-Based (AUF = 0.19)						0.32	0.16
Nickel	LOAEL-Based (AUF = 1)						0.60	0.30
Nickel	LOAEL-Based (AUF = 0.19)						0.11	0.06
Zinc	NOAEL-Based (AUF = 0.19)						0.62	0.27
Zinc	LOAEL-Based (AUF = 1)						1.41	0.62
Zinc	LOAEL-Based (AUF = 0.19)						0.27	0.12

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-44
Summary of Surface Water COPECs and Background Concentrations at Building 1075, Parcel 61

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-45
Summary of Sediment COPECs and Background Concentrations at Building 1075, Parcel 61

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	**1.6**	(1 of 2)	0.83
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	0.29	(2 of 2)	0.23
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	0.74	(2 of 2)	0.62
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	0.65	(2 of 2)	0.54
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	0.38	(1 of 2)	0.22
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	0.92	(2 of 2)	0.82
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	1.7	(2 of 2)	1.5
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.14	(1 of 2)	0.10
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	1.2	(2 of 2)	0.94
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	2.2	(2 of 2)	1.9
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	13.3	(1 of 2)	7.5
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	86	(1 of 2)	63

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-46
Summary of Wildlife Hazard Quotients for Sediment COPECs at Building 1075, Parcel 61

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Semivolatile Organics								
Acenaphthene	1.60	0.83	ND	ND	0.00	0.00	0.02	0.01

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

Table 4-47
Summary of Surface Water COPECs and Background Concentrations at Building 900, Parcel 69

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Possible COPECs													
Copper	6.5	3.1	ND	ND	0 / 11	NA	NA	10.2	65.6	730	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-48
Summary of Sediment COPECs and Background Concentrations at Building 900, Parcel 69

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	**1.2**	(2 of 2)	0.85
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	2.8	(2 of 2)	1.8
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	3.1	(2 of 2)	2.1
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	36.2	(1 of 2)	19.4
Barium	NAV	48	196	4.41	12 / 12	74.56	108.5	87.6	32.3	NR	154	65.8	89.6	(1 of 2)	52.2
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	14.1	(1 of 2)	7.1
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**345**	(1 of 2)	210
Cobalt	50	10	16.8	1.05	12 / 12	7.253	9.891	119	4.5	NR	32	3.2	**20.3**	(1 of 2)	11.2
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	**203**	(2 of 2)	117
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	410	(1 of 2)	223
Manganese	630	260	551	4.36	12 / 12	105.6	218.2	70.2	90.7	59	1030	206	339	(1 of 2)	197
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	**0.83**	(1 of 2)	0.45
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	53.1	(1 of 2)	31.2
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	9.9	(1 of 2)	5.1
Vanadium	NAV	57	218	6.82	12 / 12	53.18	91.47	49.1	94.1	1.3	202	35.5	185	(1 of 2)	115
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	**515**	(2 of 2)	321

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-49
Summary of Wildlife Hazard Quotients for Sediment COPECs at Building 900, Parcel 69

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
SVOCs								
Acenaphthene	1.2	0.06	ND	ND	0.01	0.00	0.01	0.00
Inorganics								
Chromium	345	210	ND	ND	0.22	0.13	9.21	5.61
Cobalt	20.3	11.2	ND	ND	0.00	0.00	0.43	0.24
Copper	203	117	ND	ND	1.45	0.84	2.74	1.58
Mercury	0.83	0.45	ND	ND	0.01	0.00	0.02	0.01
Zinc	515	321	0.0535	0.0535	0.01	0.01	0.81	0.50
Chromium	NOAEL-Based (AUF = 0.19)						1.75	1.07
Chromium	LOAEL-Based (AUF = 1)						1.57	0.95
Chromium	LOAEL-Based (AUF = 0.19)						0.30	0.18
Copper	NOAEL-Based (AUF = 0.19)						0.52	0.30
Copper	LOAEL-Based (AUF = 1)						0.92	0.53
Copper	LOAEL-Based (AUF = 0.19)						0.17	0.10
Copper	NOAEL-Based (AUF = 0.0014)				0.00	0.00		
Copper	LOAEL-Based (AUF = 1)				0.49	0.28		
Copper	LOAEL-Based (AUF = 0.0014)				0.00	0.00		

Notes:
AUF - Area Use Factor
ND - Not Detected
NOAEL - No Observeable Adverse Effect Level
LOAEL - Lowest Observeable Adverse Effect Level

Table 4-50
Summary of Surface Water COPECs and Background Concentrations at Landfill CW-3A (FTMM-25)

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	Maximum Surface Water (ug/L)	Maximum Ground Water (ug/L)	Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
SVOCs													
Anthracene	0.035	NAV	0.12	0.052	3 / 11	0.0635	0.0798	NR	NR	NR	0.11	(2 of 2)	0.11
Benzo(a)anthracene	0.025	NAV	0.23	0.23	2 / 11	0.049	NA	NR	NR	NR	**0.31**	(1 of 2)	0.16
Inorganics													
Cadmium	0.14-0.17	8.8	0.8	0.8	1 / 11	0.3	NA	NR	9.5	6	0.79	(1 of 2)	0.52
Zinc	88-108	81	79.9	38.1	11 / 11	48.45	54.55	215	233	60	99.8	(1 of 2)	77.6
Possible COPECs													
Silver	0.12	1.9	ND	ND	0 / 11	NA	NA	NR	ND	<10	NA	NA	NA

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-51
Summary of Sediment COPECs and Background Concentrations at Landfill CW-3A (FTMM-25)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Pesticides															
DDD	0.008	0.002	0.0047	0.0022	4 / 12	0.00248	0.00291	0.015	0.0096	NR	NR	NR	**0.013**	(1 of 6)	0.004
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	**0.78**	(1 of 6)	0.144
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	**4.1**	(1 of 6)	0.69
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	**7.0**	(1 of 6)	1.19
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	**4.6**	(1 of 6)	0.78
Benzo(g,h,i)perylene	0.17	0.17	0.89	0.38	4 / 12	0.466	0.577	0.67	0.64	ND	NR	NR	**2**	(1 of 6)	0.353
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	**2.3**	(1 of 6)	0.406
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	**5.6**	(1 of 6)	0.956
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	**17**	(1 of 6)	2.84
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	**1.4**	(1 of 6)	0.252
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.98	0.095	5 / 12	0.275	0.45	0.7	0.46	ND	0.57	0.23	**2**	(1 of 6)	0.35
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	**15**	(1 of 6)	2.51
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	**13**	(1 of 6)	2.23
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	6.59	(1 of 6)	1.99
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	3.38	(3 of 6)	1.19
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	**145**	(5 of 6)	82.6
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	31.6	(2 of 6)	13.3
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	31.2	(1 of 6)	14.4

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-52

Summary of Wildlife Hazard Quotients for Surface Water and Sediment COPECs at Landfill CW-3A (FTMM-25)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration
Pesticides								
DDD	0.013	0.004	ND	ND	0.00	0.00	0.01	0.00
SVOCs								
Acenaphthene	0.78	0.144	ND	ND	0.00	0.00	0.01	0.00
Anthracene	4.1	0.69	0.00011	0.00011	0.00	0.00	0.05	0.01
Benzo(a)anthracene	7	1.19	ND	ND	0.01	0.00	0.92	0.16
Benzo(a)pyrene	4.6	0.78	0.00031	0.00016	0.00	0.00	0.66	0.11
Benzo(g,h,i)perylene	2	0.353	ND	ND	0.00	0.00	0.27	0.05
Benzo(k)fluoranthene	2.3	0.406	ND	ND	0.00	0.00	0.33	0.06
Chrysene	5.6	0.956	ND	ND	0.01	0.00	0.70	0.12
Fluoranthene	17	2.84	ND	ND	0.00	0.00	0.20	0.03
Fluorene	1.4	0.252	ND	ND	0.00	0.00	0.02	0.00
Indeno(1,2,3-c,d)pyrene	2	0.35	ND	ND	0.00	0.00	0.29	0.05
Phenanthrene	15	2.51	ND	ND	0.00	0.00	0.18	0.03
Pyrene	13	2.23	ND	ND	0.00	0.00	1.76	0.30
Inorganics								
Chromium	145	82.6	0.00443	0.00328	0.09	0.05	3.10	1.77
Chromium	NOAEL-Based (AUF = 0.04)						0.12	0.07
Chromium	LOAEL-Based (AUF = 1)						0.53	0.30
Chromium	LOAEL-Based (AUF = 0.04)						0.02	0.01
Pyrene	NOAEL-Based (AUF = 0.04)						0.07	0.01
Pyrene	LOAEL-Based (AUF = 1)						0.18	0.03
Pyrene	LOAEL-Based (AUF = 0.04)						0.01	0.00

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-53
Summary of Surface Water COPECs and Background Concentrations at Site CW-6 (FTMM-28)

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
PCBs													
Aroclor-1242	0.014	0.03	0.3	0.3	1 / 11	0.0307	NA	NR	NR	NR	0.3	(2 of 2)	0.215
Inorganics													
Cadmium	0.14-0.17	8.8	0.8	0.8	1 / 11	0.3	NA	NR	9.5	6	0.8	(1 of 2)	0.53
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	8.79	(2 of 2)	7.56
Possible COPECs													
DDE	4.51E-09	NAV	ND	ND	0 / 11	NA	NA	NR	NR	NR	NA	NA	NA
Silver	0.12	1.9	ND	ND	0 / 11	NA	NA	NR	ND	<10	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-54
Summary of Sediment COPECs and Background Concentrations at Site CW-6 (FTMM-28)

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Pesticides															
DDE	0.005	0.0022	0.0034	0.0017	2 / 12	0.00184	0.00219	0.096	0.071	NR	NR	NR	**0.006**	(1 of 6)	0.0013
PCBs															
Aroclor 1260	0.005	0.005	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	**0.1**	(1 of 6)	0.0212
SVOCs															
Acenaphthene	0.016	0.016	0.47	0.11	3 / 12	0.141	0.204	NR	0.1	ND	NR	NR	0.47	(1 of 6)	0.0928
Acenaphthylene	0.044	0.044	1.6	0.089	2 / 12	0.215	0.958	NR	0.041	ND	NR	NR	1.6	(1 of 6)	0.28
Anthracene	0.22	0.085	0.3	0.011	9 / 12	0.0931	0.15	0.061	0.1	ND	NR	NR	0.3	(1 of 6)	0.055
Benzo(a)anthracene	0.32	0.261	1.2	0.018	9 / 12	0.342	0.564	1.3	0.65	ND	1.82	0.43	1	(1 of 6)	0.196
Benzo(a)pyrene	0.37	0.43	1.2	0.025	10 / 12	0.333	0.901	1.2	0.6	ND	1.8	0.42	1.2	(1 of 6)	0.292
Benzo(g,h,i)perylene	0.17	0.17	0.89	0.38	4 / 12	0.466	0.577	0.67	0.64	ND	NR	NR	0.89	(1 of 6)	0.169
Benzo(k)fluroanthene	0.24	0.24	0.74	0.13	5 / 12	0.248	0.368	0.58	0.43	ND	4.1	0.66	0.74	(1 of 6)	0.148
Chrysene	0.34	0.384	1.9	0.064	6 / 12	0.526	0.89	0.37	0.65	3	1.78	0.47	1.9	(1 of 6)	0.34
2,4-Dinitrophenol	0.00621	NAV	ND	ND	0 / 12	NA	NA	NR	NR	NR	NR	NR	1.7	(2 of 6)	1.28
Fluoranthene	0.75	0.6	4.9	0.064	7 / 12	1.42	2.454	1.5	0.46	ND	NR	NR	4.9	(1 of 6)	0.92
Fluorene	0.19	0.019	0.82	0.13	3 / 12	0.203	0.326	NR	0.074	ND	NR	NR	0.82	(1 of 6)	0.156
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.98	0.095	5 / 12	0.275	0.45	0.7	0.46	ND	0.57	0.23	0.98	(1 of 6)	0.18
2-Methylnaphthalene	0.07	0.07	1.3	1.3	1 / 12	0.12	NA	NR	NR	NR	NR	NR	1.3	(1 of 6)	0.23
Naphthalene	0.16	0.16	4.4	4.4	1 / 12	0.383	NA	NR	NR	NR	NR	NR	4.4	(1 of 6)	0.751
Phenanthrene	0.56	0.24	8.3	0.15	6 / 12	1.359	2.655	0.39	0.39	ND	NR	NR	8.3	(1 of 6)	1.4
Pyrene	0.49	0.665	3.3	0.12	6 / 12	0.987	1.652	2	1.5	ND	NR	NR	3.3	(1 of 6)	0.63
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	13.1	(2 of 6)	5.45
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	5.56	(5 of 6)	2.00
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	150	(6 of 6)	71.8
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	56.2	(4 of 6)	26.2
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	218	(4 of 6)	105
Mercury	0.2	0.15	0.424	0.02	11 / 12	0.0909	0.247	1.7	ND	NR	6.1	0.21	6.6	(3 of 6)	1.60
Nickel	16	21	56.2	2.55	12 / 12	22.57	37.42	131	8.4	3.2	16.9	12.3	56.2	(3 of 6)	22.3
Silver	1	1	11.2	11.2	1 / 12	1.03	NA	NR	1.1	0.21	6.3	0.65	12.1	(4 of 6)	3.72
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	168	(1 of 6)	87.2

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-55

Summary of Wildlife Hazard Quotients for Soils and Wetland Sediment COPECs at Site CW-6 (FTMM-28)

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1) American Robin	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Sediment Concentration	Based on Average Sediment Concentration
Pesticides						
DDD	0.02	0.00476	ND	ND	0.14	0.03
DDE	0.006	0.0013	ND	ND	0.04	0.01
DDT	0.23	0.0465	ND	ND	1.66	0.34
Dieldrin	0.0092	0.00133	ND	ND	0.28	0.04
PCBs						
Aroclor 1242	ND	ND	0.0003	0.000215	0.00	0.00
Aroclor 1260	0.1	0.02	ND	ND	0.55	0.11
SVOCs						
2,4-Dinitrophenol	1.7	0.43	ND	ND	0.60	0.15
Inorganics						
Chromium	150	54.3	ND	ND	3.38	1.22
Mercury	6.6	2.58	ND	ND	3.74	1.46
Silver	12.1	2.9	ND	ND	1.86	0.45

Chromium	NOAEL-Based (AUF = 0.52)	1.76	0.64
Chromium	LOAEL-Based (AUF = 1)	0.57	0.21
Chromium	LOAEL-Based (AUF = 0.52)	0.30	0.11
Silver	NOAEL-Based (AUF = 0.52)	0.97	0.23
Silver	LOAEL-Based (AUF = 1)	0.32	0.08
Silver	LOAEL-Based (AUF = 0.52)	0.16	0.04
Mercury	NOAEL-Based (AUF = 0.52)	1.95	0.76
Mercury	LOAEL-Based (AUF = 1)	0.64	0.25
Mercury	LOAEL-Based (AUF = 0.52)	0.33	0.13
DDT	NOAEL-Based (AUF = 0.52)	0.86	0.17
DDT	LOAEL-Based (AUF = 1)	0.28	0.06
DDT	LOAEL-Based (AUF = 0.52)	0.15	0.03

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-56
Summary of Surface Water COPECs and Background Concentrations at Building 2700, Parcel 15

COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Inorganics													
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	8.27	(1 of 2)	6.3
Possible COPECs													
Cadmium	0.14	8.8	0.8	0.8	1 / 11	0.3	NA	ND	9.5	6	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-57
Summary of Sediment COPECs and Background Concentrations at Building 2700, Parcel 15

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Inorganics															
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	37	(3 of 3)	32.5

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-58
Summary of Surface Water COPECs and Background Concentrations at Buildings 2507 and 2704, Parcel 27

			BEE Background								Site COPEC Summary		
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	Maximum Detected (ug/L)	Minimum Detected (ug/L)	Frequency of Detection	Mean (ug/L)	95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Maximum Detected (ug/L)	Number Detected Above ESC	Average Concentration (ug/L)
Inorganics													
Cadmium	0.14-0.17	8.8	0.8	0.8	1 / 11	0.3	NA	NR	9.5	6	0.69	(2 of 2)	0.61
Chromium	19-23	50	2.55	2.55	1 / 11	0.732	NA	ND	191	<50	**28.5**	(1 of 2)	14.5
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	8.18	(2 of 2)	7.00

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-59
Summary of Sediment COPECs and Background Concentrations at Buildings 2507 and 2704, Parcel 27

			BEE Background					SI Bkgd	SI Bkgd	Mo. Cty	Ambient Soil Levels		Site COPEC Summary		
COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	Maximum Detected (mg/kg)	Minimum Detected (mg/kg)	Frequency of Detection	Mean (mg/kg)	95% UCL of Mean (mg/kg)	Maximum Sediment (mg/kg)	Maximum Soil (mg/kg)	Bkgd Soil (mg/kg)	Maximum Ambient (mg/kg)	90th Percentile (mg/kg)	Maximum Detected (mg/kg)	No Detected Above ESC	Average Concentration (mg/kg)
Inorganics															
Arsenic	6	8.2	61.6	0.68	12 / 12	14.38	28.33	14.5	31.6	4.56	83.1	13.6	6.11	(1 of 2)	4.7
Cadmium	0.6	1.2	17.2	0.38	12 / 12	4.252	8.021	NR	ND	0.116	2.7	0.32	1.76	(2 of 2)	1.24
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	49.8	(2 of 2)	49.7
Copper	16	34	165	1.88	9 / 12	24.01	84.56	48.4	8	6.05	93	33.3	**187**	(1 of 2)	101
Lead	31	47	945	5.61	12 / 12	106	439.5	142	19.5	25.9	344	144	84.9	(1 of 2)	53.4
Zinc	120	150	423	15.3	12 / 12	135.1	215.4	162	81.4	44.6	259	106	264	(1 of 2)	172

Note: Bold and Highlighted COPEC and maximum detected COPEC site concentration indicates that maximum detected site concentration is greater than maximum detected background concentration measured during BEE investigation

FW = Freshwater

SW = Saltwater

ESC = Ecological Screening Criteria

BEE = Baseline Ecological Evaluation data

95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.

SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)

Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)

Ambient Soil Levels from BEM Systems, Inc. (1998)

COPEC = Constituent of Potential Ecological Concern

NA = Not applicable

ND = Not detected

NR = Not reported

NAV = Not available

Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-60

Summary of Wildlife Hazard Quotients for Surface Water and Sediment COPECs at Buildings 2507 and 2704, Parcel 27

	Sediment Concentrations		Surface Water Concentrations		NOAEL-Based Hazard Quotients (AUF = 1)			
					Mallard		Great Blue Heron	
	Maximum (mg/kg)	Average (mg/kg)	Maximum (mg/L)	Average (mg/L)	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration	Based on Maximum Surface Water and Sediment Concentration	Based on Average Surface Water and Sediment Concentration
Inorganics								
Chromium	49.8	49.7	0.0285	0.0145	0.03	0.03	1.33	1.33
Copper	187	101	ND	ND	1.34	0.72	2.53	1.37
Chromium	NOAEL-Based (AUF = 0.017)						0.02	0.02
Chromium	LOAEL-Based (AUF = 1)						0.23	0.23
Chromium	LOAEL-Based (AUF = 0.017)						0.00	0.00
Copper	NOAEL-Based (AUF = 0.00013)				0.00	0.00		
Copper	LOAEL-Based (AUF = 1)				0.45	0.24		
Copper	LOAEL-Based (AUF = 0.00013)				0.00	0.00		
Copper	NOAEL-Based (AUF = 0.017)						0.04	0.02
Copper	LOAEL-Based (AUF = 1)						0.85	0.46
Copper	LOAEL-Based (AUF = 0.017)						0.01	0.01

Notes:

AUF - Area Use Factor

ND - Not Detected

NOAEL - No Observeable Adverse Effect Level

LOAEL - Lowest Observeable Adverse Effect Level

Table 4-61
Summary of Surface Water COPECs and Background Concentrations at Building 2525, Parcel 28

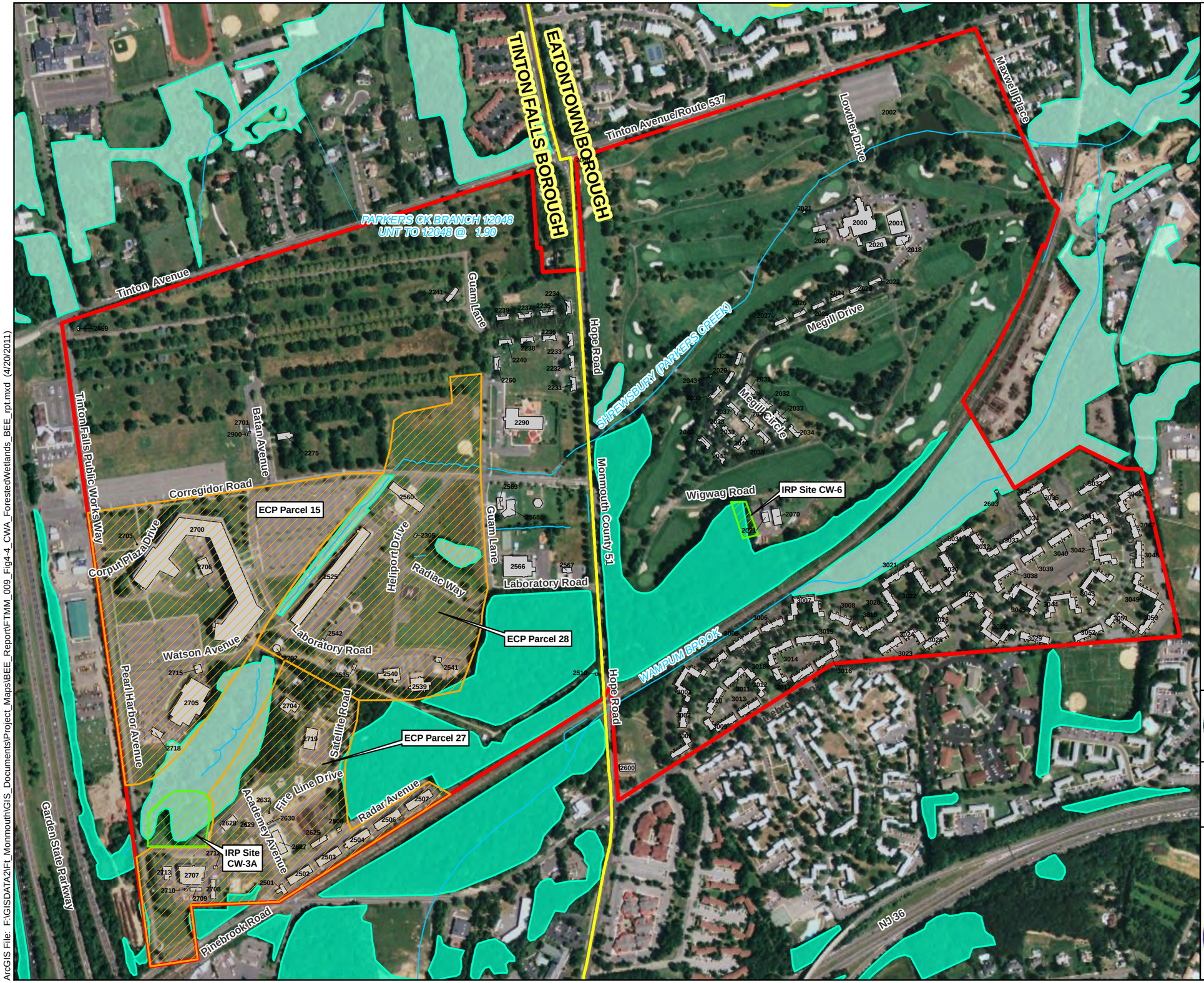
COPEC	FW ESC (ug/L)	SW ESC (ug/L)	BEE Background Maximum Detected (ug/L)	BEE Background Minimum Detected (ug/L)	BEE Background Frequency of Detection	BEE Background Mean (ug/L)	BEE Background 95% UCL of Mean (ug/L)	SI Bkgd Maximum Surface Water (ug/L)	SI Bkgd Maximum Ground Water (ug/L)	Mo. Cty Bkgd Ground Water (ug/L)	Site COPEC Summary Maximum Detected (ug/L)	Site COPEC Summary Number Detected Above ESC	Site COPEC Summary Average Concentration (ug/L)
Inorganics													
Lead	5.4	24	18.8	5.79	10 / 11	8.93	11.56	65.9	22.7	<100	7.14	(2 of 2)	6.44
Possible COPECs													
Cadmium	0.14	8.8	0.8	0.8	1 / 11	0.3	NA	ND	9.5	6	NA	NA	NA

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.

Table 4-62
Summary of Sediment COPECs and Background Concentrations at Building 2525, Parcel 28

COPEC	FW ESC (mg/kg)	SW ESC (mg/kg)	BEE Background Maximum Detected (mg/kg)	BEE Background Minimum Detected (mg/kg)	BEE Background Frequency of Detection	BEE Background Mean (mg/kg)	BEE Background 95% UCL of Mean (mg/kg)	SI Bkgd Maximum Sediment (mg/kg)	SI Bkgd Maximum Soil (mg/kg)	Mo. Cty Bkgd Soil (mg/kg)	Ambient Soil Levels Maximum Ambient (mg/kg)	Ambient Soil Levels 90th Percentile (mg/kg)	Site COPEC Summary Maximum Detected (mg/kg)	Site COPEC Summary No Detected Above ESC	Site COPEC Summary Average Concentration (mg/kg)
Inorganics															
Chromium	26	81	125	9.24	12 / 12	68.52	86.5	88.1	269	0.104	171	34.7	43	(2 of 2)	39.9

FW = Freshwater
SW = Saltwater
ESC = Ecological Screening Criteria
BEE = Baseline Ecological Evaluation data
95% UCL = 95% Upper Confidence Limit of Mean from ProUCL Ver. 4.00.05.
SI Bkgd= Background Data as presented in the Site Investigation Report (Weston, 1995)
Mo. Cty Bkgd = Monmouth County Background Concentration as reported in Weston (1995)
Ambient Soil Levels from BEM Systems, Inc. (1998)
COPEC = Constituent of Potential Ecological Concern
NA = Not applicable
ND = Not detected
NR = Not reported
NAV = Not available
Average Concentrations from ProUCL Ver. 4.00.05 - 1/2 detection limit or Kaplan-Meir Method used when non-detects present.



LEGEND

- Water Feature
- Building
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Forested Wetland

- Suitable (1)
- Priority Species (2)

Notes:
1) Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.
2) Forested wetlands data was obtained from New Jersey Department of Environmental Protection (NJDEP), Division of Fish, Wildlife, and Endangered Nongame Species Program (ENSP), Lanscape Project GIS Data, Version 2.1, November 2007.

N

Scale:

0 290 580 1,160 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 4-4

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

CHARLES WOOD AREA - FORESTED WETLANDS

FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_009_Fig4-4_CWA_ForestedWetlands_BEE_rpt.mxd (4/20/2011)



ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_008_Fig4-3_MP_BaldEagleForaging_BEE_rpt.mxd (4/20/2011)

LEGEND

- Water Feature
- Building
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary
- Bald Eagle Foraging Area

Notes:
1) Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.
2) Bald Eagle foraging data was obtained from New Jersey Department of Environmental Protection (NJDEP), Division of Fish, Wildlife, and Endangered Nongame Species Program (ENSP), Lanscape Project GIS Data, Version 2.1, November 2007.

N

Scale:

0 450 900 1,800 Feet

Base Realignment and Closure 2005

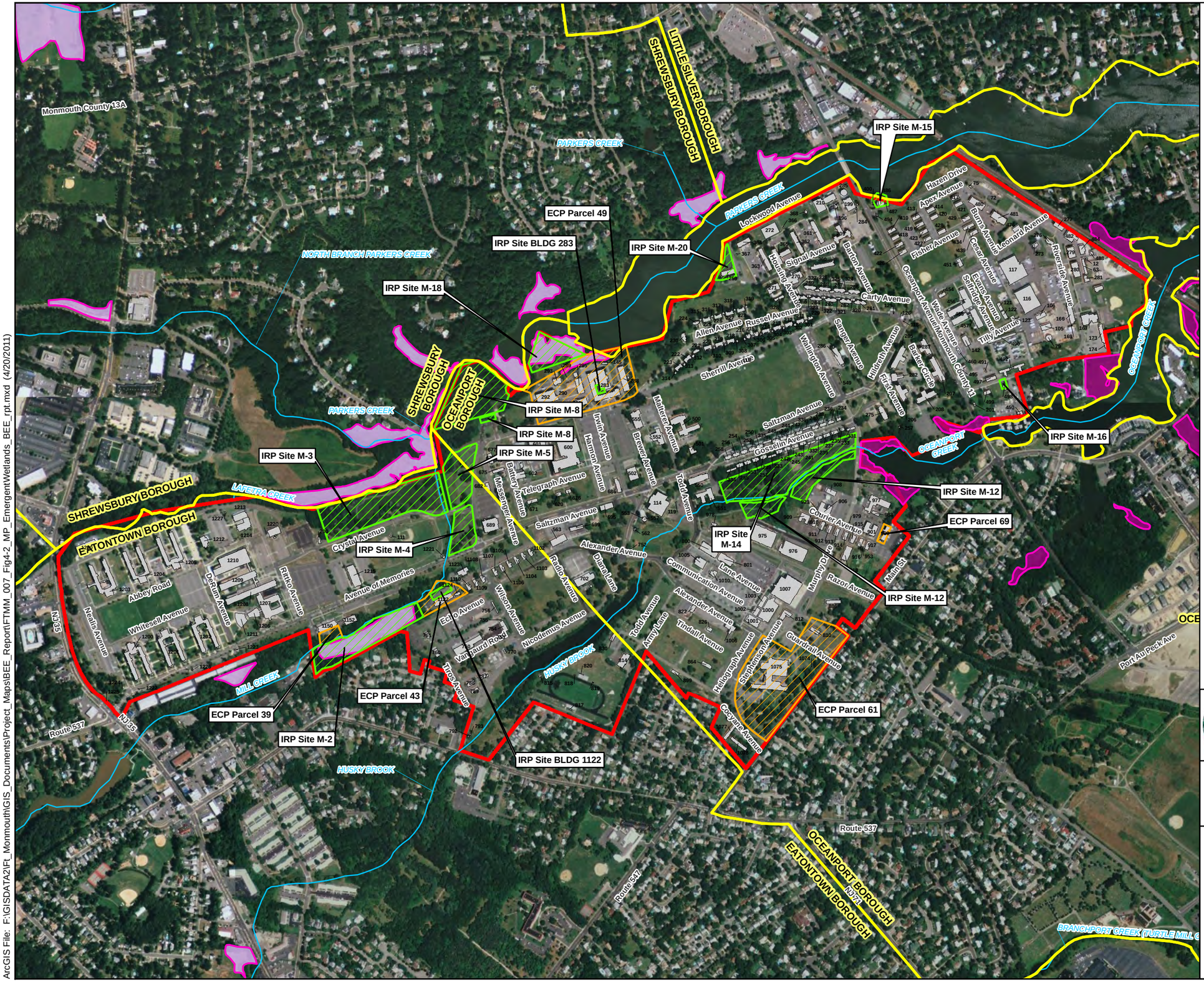
U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 4-3
FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT
MAIN POST - BALD EAGLE FORAGING AREAS

FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_007_Fig4-2_MP_EmergentWetlands_BEE_rpt.mxd (4/20/2011)



LEGEND

- Water Feature
- Building
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Emergent Wetland

- Suitable Habitat (1)
- State Endangered (4)

Notes:
1) Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.
2) Emergent wetlands data was obtained from New Jersey Department of Environmental Protection (NJDEP), Division of Fish, Wildlife, and Endangered Nongame Species Program (ENSP), Lanscape Project GIS Data, Version 2.1, November 2007.

N

Scale:

0 450 900 1,800 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

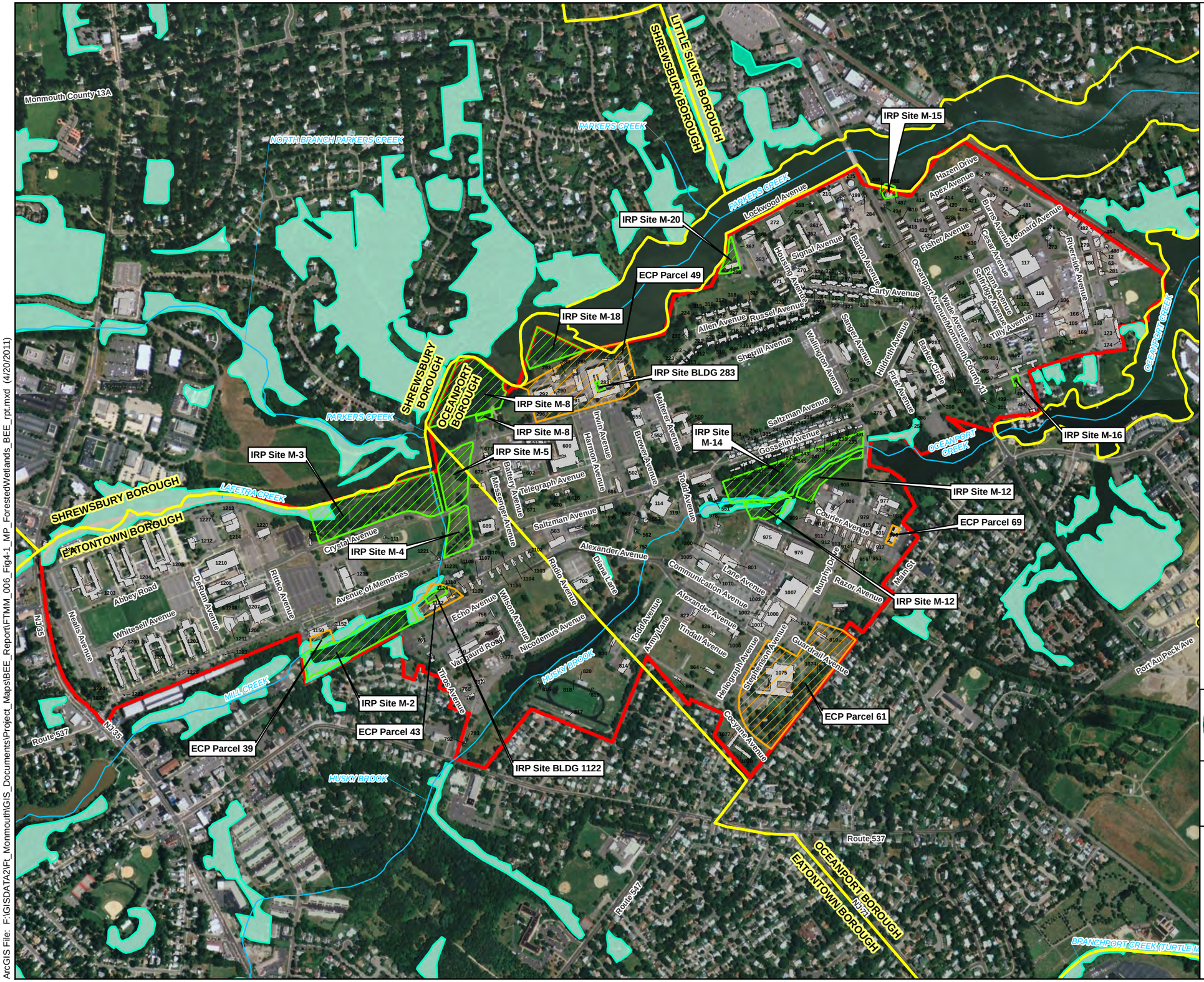
FIGURE 4-2

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

MAIN POST - EMERGENT WETLANDS

FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_006_Fig4-1_MP_ForestedWetlands_BEE_rpt.mxd (4/20/2011)



LEGEND

- Water Feature
- Building
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Forested Wetland

- Suitable (1)
- Priority Species (2)

Notes:
1) Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.
2) Forested wetlands data was obtained from New Jersey Department of Environmental Protection (NJDEP), Division of Fish, Wildlife, and Endangered Nongame Species Program (ENSP), Lanscape Project GIS Data, Version 2.1, November 2007.

N

Scale:

0 450 900 1,800 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

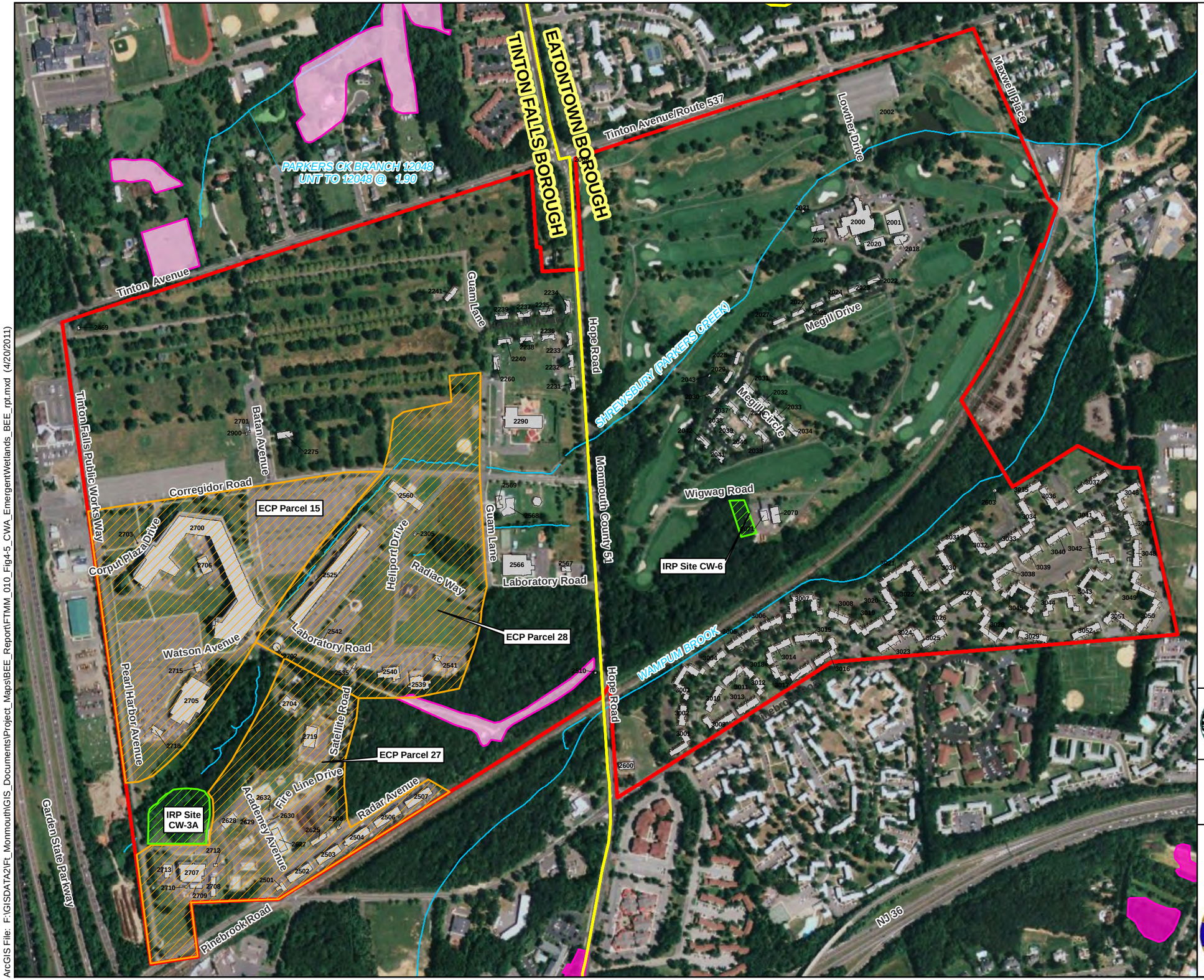
Shaw® Shaw Environmental, Inc.

FIGURE 4-1

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

MAIN POST - FORESTED WETLANDS

FORT MONMOUTH
NEW JERSEY



ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_010_Fig4-5_CWA_EmergentWetlands_BEE_rpt.mxd (4/20/2011)

LEGEND

- Water Feature
- Building
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Emergent Wetland

- Suitable Habitat (1)
- Priority Species (2)

Notes:
1) Aerial photography (0.5-meter resolution) was obtained from ESRI ArcOnline USA Imagery Map Services.
2) Emergent wetlands data was obtained from New Jersey Department of Environmental Protection (NJDEP), Division of Fish, Wildlife, and Endangered Nongame Species Program (ENSP), Lanscape Project GIS Data, Version 2.1, November 2007.

N

Scale:

0 290 580 1,160 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw Environmental, Inc.

FIGURE 4-5

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

CHARLES WOOD AREA - EMERGENT WETLANDS

FORT MONMOUTH
NEW JERSEY

5.0 SUMMARY AND CONCLUSIONS

Within the FTMM MP and CWA are 27 active/open IRP Sites. Fourteen of the 27 IRP Sites were considered to require additional evaluation through the BEE process. In addition to these IRP Sites, it was determined that a BEE should also be conducted related to one other IRP site (FTMM-20), which had been listed as Response Complete in the 2007 Installation Action Plan for FTMM (Fort Monmouth, 2007). Additionally, eight parcels identified through the FTMM ECP SI were deemed to require additional evaluation through the BEE process to fully evaluate the environmental condition of the property; NJDEP concurred with the determination that a BEE is required for these eight ECP sites in correspondence dated October 28, 2008. The BEE and supporting sampling and analyses were performed based on the Scope of Work dated June 3, 2008, and information obtained through consultation with FTMM, U.S. Army Environmental Command, USACE, and NJDEP personnel and in accordance with the final BEE WP (Shaw, 2010). A draft final WP, dated July 2009, was submitted to the NJDEP for review. NJDEP comments (dated September 1, 2009) were addressed and a conference call was held on November 13, 2009, to finalize the WP. The final WP was submitted to the NJDEP for review and approval prior to implementation of the work and an approval letter was obtained from the NJDEP on April 28, 2010 (**Appendix I**).

The objective of the BEE at FTMM is to assess whether the presence of constituents of concern in sediments, surface water, soil, and groundwater on the MP and CWA has the potential for adverse effects to biological receptors. This assessment is determined by examining information on each of the sites and the sample results from sediment, surface water, soil, and groundwater at the sites for the co-occurrence of 1) COPECs, 2) environmentally sensitive natural resources, and 3) a chemical migration pathway to these sensitive natural resources. This objective was accomplished based on the results of a data and literature review, a qualitative site visit, field sampling, data analysis and ecological hazard characterization (including conservative wildlife exposure models), and an evaluation of the general background characteristics of surface water and sediment in the FTMM area.

The occurrence of COPECs is determined through a comparison of existing site data with ecological screening levels. The occurrence of environmentally sensitive natural resources and potential chemical migration pathways is determined from existing literature for the site, a qualitative site visit, and other available information such as the NJDEP Natural Heritage database, NJDEP tidal and freshwater wetland maps, the USGS topographic maps, and the USDA Soil Conservation Service soil survey maps.

In order to evaluate the nature of contaminants detected at the FTMM sites and to identify the COPECs, several steps were followed. The first step was a review of the analytical data collected from the environmental media with regards to the sites and selection of the data appropriate for use in the BEE. The second step was the identification of the most appropriate and applicable criteria or benchmarks for comparison to data. The third step was the identification of the COPECs at the sites and an evaluation of these COPECs in terms of potential ecological impact.

Site data addressed in this BEE is comprised of data previously collected for RIs (e.g., near surface soil data for former landfills), ECP SIs, and routine environmental monitoring (e.g., groundwater data) and data collected specifically to fill data gaps for the BEE.

Exposure of ecological receptors to contaminants in soil predominantly occurs within the surface soils. Ecological receptors are not frequently exposed to subsurface soils; therefore, surface soils at 2 feet bgs or below are not evaluated in this BEE. Soil data evaluated in this BEE were from various RI reports (**Appendix A**), the ECP SI report (**Appendix B**), and the BEE investigation samples (**Appendix D**). Though ecological receptors are not exposed directly to contaminants in groundwater, pathways may exist by which groundwater may flow to potential exposure points (e.g., discharge of groundwater into surface water bodies). Where applicable, the most recent 2-year period of readily available groundwater data from routine environmental monitoring were evaluated in this BEE to best represent current conditions (**Appendix C**; **Appendix B**). Though groundwater may discharge to surface water bodies, groundwater contaminant concentrations are not meant to represent potential surface water concentrations. Ecological receptors may be exposed directly to contaminants in surface water and sediment of the various creeks and ponds that drain the sites. As with soils, ecological receptors are not frequently exposed to contaminants in subsurface sediments. The top 6 inches of sediment is usually

considered to be the biotic zone, and only data from the top 6 inches of sediments is evaluated in this BEE. Though sediment data from the ECP SI (**Appendix B**) was evaluated in this BEE, the majority of the surface water and sediment data were from the extensive sampling conducted during the BEE investigation (**Appendix D**). Sampling and analyses were performed in accordance with the final BEE WP (Shaw, 2010), which was approved by the NJDEP on April 28, 2010 (**Appendix I**).

COPECs are defined for the purposes of this BEE as those constituents that were detected at concentrations exceeding the appropriate screening benchmarks in any of the samples from a given medium from a site. These ESC are intentionally conservative values and exceedances of these concentrations are not meant to imply ecological risks. A qualitative determination of the potential for adverse effects from site constituents was made based on the COPECs, the presence of environmentally sensitive areas, and the potential migration pathways of site constituents, as well as site history, natural geology, and other potential sources.

The character of the land use surrounding the FTMM properties typifies mixed use, small town development in New Jersey. Commercial services and shopping centers populate main roads interspersed with residential structures, apartments and office buildings. Business and light industrial parks are found along highways, streams and railroad tracks. Surrounding properties include NPL, SHWS, LUST, and VCP sites. These, as well as general small urban development activities lend to an increase in general anthropogenic inputs in the area.

Elevated concentrations of many metals, in relation to the conservatively low ESC, are naturally found within the urban coastal plain region in which FTMM is located. In particular, glauconitic soils which are prevalent at FTMM and have been reported in the creek sediments are naturally high in arsenic, beryllium, chromium, nickel and vanadium as well as other metals.

COPECs identified in soils generally represent limited potential for direct ecological exposure being either from subsurface (e.g., landfill near surface samples) or not within ecological habitats (e.g., near buildings, roads, and parking areas). COPECs identified in groundwater are not representative of direct ecological exposures. COPECs in both soil and groundwater, however, may migrate to nearby surface water or sediment where ecological exposures may occur.

Many organic COPECs identified in soil or groundwater were not identified as COPECs in surface water or sediment, suggesting limited organic contaminant migration to sensitive ecological receptors. Most of these were detected infrequently in soil or groundwater or at low concentrations in relation to the ESC.

Many organic COPECs identified in surface water or sediment were not identified as COPECs in soil or groundwater, suggesting the sources are unrelated to the sites under investigation, or were at low concentrations in relation to the ESC, which are intentionally conservative values. PAHs, in particular, though identified as COPECs, were found in sediments and surface water at concentrations similar to background sample concentrations or at locations indicative of other sources (e.g., at the upstream extent of the site and downstream of active roads or parking areas).

In surface water, lead was most often identified as a COPEC; however, it was found at similar concentrations at most of the sites and in the background samples. Most of the sediment metals identified as COPECs were at concentrations similar to background. Some metals (chromium, copper, lead, mercury, silver, and zinc) were detected at a few locations exceeding background concentrations measured during the BEE investigation, but many of these are similar to those reported for ambient soil in the region (BEM Systems, Inc., 1998) or, in particular, glauconitic soils (Dooley, 2001). Though there may be a potential for some ecological risk due to elevated metals in these limited areas, it is likely that these metals are related to natural geology or other anthropogenic sources.

Figure 5-1 depicts the concentration distribution of chromium in sediment throughout the MP, based on samples evaluated in this BEE. Samples where chromium was not detected are shown as clear symbols. Those samples where chromium is detected at concentrations below both the freshwater sediment and saltwater sediment ESC are shown in gray. Those samples where chromium concentrations are between the freshwater sediment and saltwater sediment ESC are shown in green. Those samples where chromium concentrations are above both the freshwater sediment and saltwater sediment ESC but within the range of most background (represented by the lower 75th percent of all

background concentrations from both the MP and CWA areas) are shown in yellow, and those samples where chromium concentrations are above both the freshwater sediment and saltwater sediment ESC and above all background concentrations measured as part of the 2010 BEE are shown in red. Similar figures are presented for copper (**Figure 5-2**), lead (**Figure 5-3**), mercury (**Figure 5-4**), silver (**Figure 5-5**), and zinc (**Figure 5-6**) for the MP and for chromium (**Figure 5-7**), copper (**Figure 5-8**), mercury (**Figure 5-9**), and silver (**Figure 5-10**) for the CWA.

The potential wildlife risks associated with COPECs present at concentrations above background was assessed through conservative food chain models as well as conservative TRVs. **Table 5-1** indicates the sites and COPECs where maximum COPEC concentrations were greater than the background concentrations measured during the BEE investigation; wildlife exposure models were evaluated for these sites and COPECs. The potential wildlife risk for three representative target species (the Great Blue Heron which would be exposed to contaminants in surface water, sediment, aquatic invertebrates, and forage fish; the Mallard Duck which would be exposed to contaminants in surface water, sediment, and aquatic vegetation; and the American Robin which would be exposed to contaminants in surface water, soils and wetland sediments, and terrestrial invertebrates such as earthworms) was assessed through HQs. These HQs compare the conservatively modeled ADD of COPECs to the conservative TRVs. Since the HQs in a screening level assessment are conservative, HQs less than one (indicating ADDs less than TRVs), it can be assumed that there is no risk; since the HQs are conservative measures, HQs greater than one do not necessarily indicate that a risk is present. **Table 5-2** summarizes the conservative HQs for each site that were greater than one, and **Table 5-3** summarizes those HQs based on realistic foraging areas and average detected concentrations (though based on biased sampling).

The conservative wildlife food chain model screening level HQs were less than or only marginally greater than one for most sites. With the exception of chromium, conservative HQs for other COPECs in sediment (barium, copper, nickel, cobalt, zinc and pyrene) were greater than one at only one or two sites; these HQs are based on the overly conservative assumption that the target species forage only at the contaminated site at the point of maximum concentration. When more realistic foraging areas were used, resulting HQs were almost all less than one. Although the conservative chromium HQs, assuming foraging only at the point of maximum concentration, are greater than one at several sites, most sediment concentrations are similar to background (**Figure 5-1** and **Figure 5-7**). With the exception of one chromium concentration in Oceanport Creek (345 mg/kg) and one chromium concentration in Parkers Creek (353 mg/kg), the maximum concentrations in MP sediment (176 mg/kg) and CWA (187 mg/kg) were not much greater than the maximum background concentration (125 mg/kg) and all concentrations were well within the range expected for glauconitic soils (Dooley, 2001). Additionally, HQs for chromium were mostly less than one, or marginally greater than one, when more realistic foraging areas and concentration assumptions are used.

Screening level food chain models are intended to be overly conservative estimators of exposure and risk to wildlife; they use conservative TRV values, assume bioavailability of contaminants in environmental media, and assume preferential feeding at sites that may not provide adequate habitat needs. Based on the conservative nature of the models as well as the BEE investigation sampling design which targeted worst-case conditions, it is unlikely that site conditions provide any significant risk to wildlife from food chain exposure.

Although metals may be present at concentrations greater than the background concentrations measured in limited areas during the 2010 BEE, many of these concentrations may be related to natural or general anthropogenic sources and the differences in site concentrations from the measured background concentrations can be a function of the greater number of site samples collected compared to background samples. Regardless, **Figure 5-1 through Figure 5-10** show that the area of metal concentrations greater than the measured background concentrations is limited in extent, with no definitive spatial distribution that would suggest the source of metals are related to site activities addressed in the BEE. Based on wildlife exposure models for these sites, the HQs do not indicate an ecological concern. It is concluded that constituents at FTMM are unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments at FTMM are not warranted or recommended.

Table 5-1
Summary of Sites with COPECs Above Background in Sediment or Surface Water

Site	COPECs																														
	Aroclor-1232	Aroclor-1242	Aroclor-1254	Aroclor-1260	DDD	DDE	DDT	Dieldrin	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	2,4-Dinitrophenol	Flouranthene	Fluorene	Hexachlorobutadiene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Barium	Chromium	Cobalt	Copper	Mercury	Nickel	Silver	Zinc
Main Post																															
Landfill 2 (FTMM-2)		●		●												●	●							●							
Landfill 3 (FTMM-3)					●		●																				●				
Landfill 4 (FTMM-4)	●	●		●	●		●																								
Landfill 5 (FTMM-5)					●	●	●																								
Landfill 8 (FTMM-8)		●		●																					●	●		●	●		
Landfill 12 (FTMM-12)			●		●	●	●		●	●																					
Landfill 14 (FTMM-14)			●		●	●	●		●	●																					
Site FTMM-16																				●					●			●			●
Site FTMM-18																									●	●		●			
Site FTMM-20																															
Building 1122, Site FTMM-59, Parcel 43											●	●													●			●			
Building 1150, Parcel 39																									●			●			
Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49																									●	●		●	●		●
Building 1075, Parcel 61									●																						
Building 900, Parcel 69									●																●	●	●	●			●
Charles Wood Area																															
Landfill CW-3A (FTMM-25)					●				●	●	●	●	●	●	●			●	●		●	●	●		●						
Site CW-6 (FTMM-28)		●		●	●	●	●	●									●								●			●		●	
Building 2700, Parcel 15																															
Building 2704, Parcel 27																									●		●				
Building 2525, Parcel 28																															

Note:

● indicates that maximum detected COPEC concentration at site was above background concentrations measured during BEE investigation; Wildlife exposure was evaluated for these COPECs.

Table 5-2

Summary of Screening Level Hazard Quotients for COPECs Above Background in Sediment or Surface Water

Site	COPECs											
	Barium	Cobalt	Copper	Chromium	Nickel	Zinc	Pyrene	Copper	Chromium	Mercury	Silver	DDT
	Great Blue Heron HQs							Mallard Duck HQs	American Robin HQs			
Main Post												
Landfill 2 (FTMM-2)	2.8											
Landfill 3 (FTMM-3)			5.0					2.6				
Landfill 4 (FTMM-4)												
Landfill 5 (FTMM-5)												
Landfill 8 (FTMM-8)		2.5		3.5	1.5							
Landfill 12 (FTMM-12)												
Landfill 14 (FTMM-14)												
Site FTMM-16				3.8								
Site FTMM-18		1.2		3.5								
Site FTMM-20												
Building 1122, Site FTMM-59, Parcel 43				4.3								
Building 1150, Parcel 39				3.5								
Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49				9.4	1.7	3.2						
Building 1075, Parcel 61												
Building 900, Parcel 69			2.7	9.2				1.5				
Charles Wood Area												
Landfill CW-3A (FTMM-25)				3.1			1.8					
Site CW-6 (FTMM-28)									3.4	3.7	1.9	1.7
Building 2700, Parcel 15												
Building 2704, Parcel 27			2.5	1.3				1.3				
Building 2525, Parcel 28												

Note:

Screening Level HQs are based on NOAELs, maximum detected concentrations, and Area Use Factors of 1 (i.e., Species forages only at point of maximum concentration).

Blanks indicate that HQs are less than one.

Table 5-3

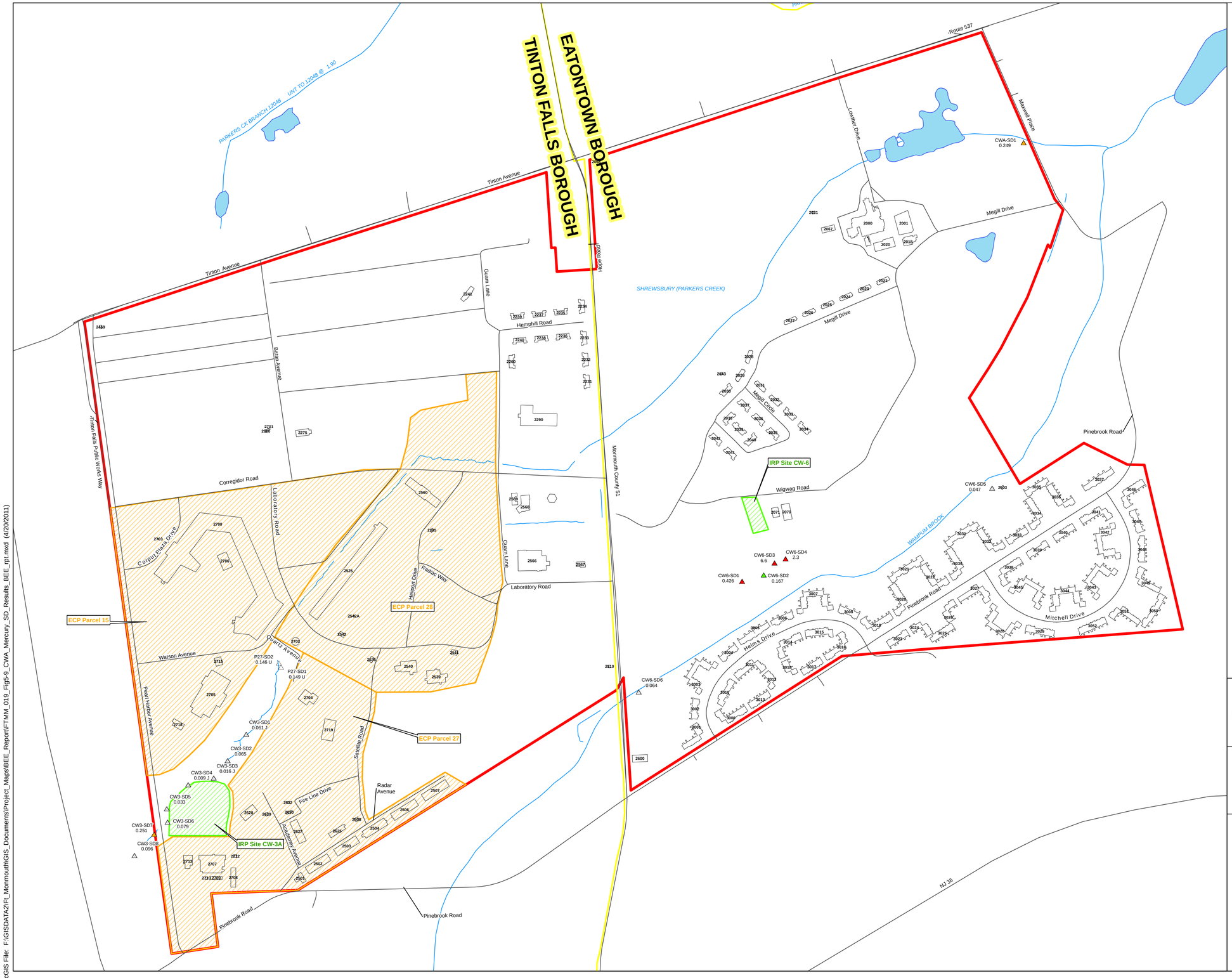
Summary of Average-Concentrations Based Screening Level Hazard Quotients for COPECs Above Background in Sediment or Surface Water

Site	COPECs											
	Barium	Cobalt	Copper	Chromium	Nickel	Zinc	Pyrene	Copper	Chromium	Mercury	Silver	DDT
	Great Blue Heron HQs							Mallard Duck HQs	American Robin HQs			
Main Post												
Landfill 2 (FTMM-2)	<0.1											
Landfill 3 (FTMM-3)			<0.1					<0.1				
Landfill 4 (FTMM-4)												
Landfill 5 (FTMM-5)												
Landfill 8 (FTMM-8)		0.1		0.3	0.1							
Landfill 12 (FTMM-12)												
Landfill 14 (FTMM-14)												
Site FTMM-16				0.2								
Site FTMM-18		0.13		0.9								
Site FTMM-20												
Building 1122, Site FTMM-59, Parcel 43				0.2								
Building 1150, Parcel 39				<0.1								
Buildings 283 (FTMM-61), 288, 291, 293, 295, Parcel 49				1.2	0.2	0.3						
Building 1075, Parcel 61												
Building 900, Parcel 69			0.3	1.1				<0.1				
Charles Wood Area												
Landfill CW-3A (FTMM-25)				<0.1			<0.1					
Site CW-6 (FTMM-28)									0.6	0.8	0.2	0.2
Building 2700, Parcel 15												
Building 2704, Parcel 27			<0.1	<0.1				<0.1				
Building 2525, Parcel 28												

Note:

Screening Level HQs are based on NOAELs, average detected concentrations, and Site-Specific Area Use Factors .

Blanks indicate that HQs are less than one when using NOAELs, maximum detected concentrations and Area Use Factos of 1 (see Table 5-1).



LEGEND

Mercury in Sediment (mg/kg)

- Non-Detect
- 0 - 0.15 (Below ESCs)
- 0.15 - 0.20 (Between Freshwater and Saltwater Sediment ESCs)
- 0.20 - 0.212 (Above ESCs and Below 1/2 Maximum Background)
- 0.212 - 0.424 (Above ESCs and Above 1/2 Maximum Background)
- > 0.424 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 300 600 1,200 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 5-9

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

MERCURY RESULTS IN SEDIMENT

CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\FL_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_019_Fig5-9_CWA_Mercury_SD_Results_BEE_rpt.mxd (4/20/2011)

TINTON FALLS BOROUGH

EATONTOWN BOROUGH

PARKERS CK BRANCH 12046 UNT TO 12046 @ 1.90

Tinton Avenue

Route 537

Hope Road

Guam Lane

Hemphill Road

Ralston Avenue

Tinton Falls Public Works Way

Corregidor Road

Laboratory Road

Corpus Christi Drive

Harbor Drive

Radiac Way

Quartz Avenue

Watson Avenue

Pearl Harbor Avenue

Satellite Road

Fire Line Drive

Radar Avenue

Pinebrook Road

Monmouth County 51

SHREWSBURY (PARKERS CREEK)

Lowther Drive

Maxwell Place

Megill Drive

Megill Circle

Wigwag Road

WAMPUM BROOK

Pinebrook Road

Helms Drive

Mitchell Drive

NJ 36

ECP Parcel 15

ECP Parcel 28

ECP Parcel 27

IRP Site CW-6

IRP Site CW-3A

P28SD-2 11.5 B

P28SD-1 5.92 B

15SD-2 10.7 B

15SD-3 13 B

15SD-1 8.23 B

P27-SD2 15.1 B

P27-SD1 187 B

CW3-SD1 11.1

CW3-SD2 7.65

CW3-SD3 31.6

CW3-SD4 23.3

CW3-SD5 1719 J

CW3-SD6 4.75

CW3-SD7 7.02

CW3-SD8 7.09

CWA-SD1 15.6

CW6-SD1 26.2

CW6-SD2 39.5

CW6-SD3 28.2

CW6-SD4 56.2

CW6-SD5 4.63

CW6-SD6 2.49

LEGEND

Copper in Sediment (mg/kg)

- Non-Detect
- 0 - 16 (Below ESCs)
- 16 - 34 (Between Freshwater and Saltwater Sediment ESCs)
- 34 - 41 (Above ESCs and Within Lower 75% of Background)
- 41 - 165 (Above ESCs and Within Top 25% of Background)
- > 165 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaulation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 300 600 1,200 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 5-8

FORT MONMOUTH
BASELINE ECOLOGICAL
EVALUATION REPORT

COPPER RESULTS IN SEDIMENT

CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_018_Fig5-8_CWA_Copper_SD_Results_BEE_rpt.mxd (4/20/2011)

TINTON FALLS BOROUGH

EATONTOWN BOROUGH

PARKERS CK BRANCH 12046

UNT TO 12046 @ 1.90

SHREWSBURY (PARKERS CREEK)

WAMPUM BROOK

Tinton Avenue

Route 537

Hope Road

Guam Lane

Hemphill Road

Baldy Avenue

Corregidor Road

Laboratory Road

Corpus Hara Drive

Heliport Drive

Radiac Way

Quartz Avenue

Watson Avenue

Pearl Harbor Avenue

Satellite Road

Fire Line Drive

Radar Avenue

Accelerometry Avenue

Monmouth County 51

Lowther Drive

Maxwell Place

Megill Drive

Megill Circle

Wigwag Road

Pinebrook Road

Helms Drive

Mitchell Drive

NJ 36

Tinton Falls Public Works Way

ECP Parcel 15

ECP Parcel 26

ECP Parcel 27

IRP Site CW-3A

IRP Site CW-6

CW3-SD1 145

CW3-SD2 129

CW3-SD3 29.3

CW3-SD4 18.1

CW3-SD5 53.3

CW3-SD6 121

CW3-SD7 60.7

CW3-SD8 97.3

P27-SD1 49.8 B

P27-SD2 49.6 B

P28SD-1 43

P28SD-2 36.8

15SD-1 29.4

15SD-2 31.1

15SD-3 37

CW6-SD1 35.3

CW6-SD2 64.2

CW6-SD3 55.4

CW6-SD4 150

CW6-SD5 50.2

CW6-SD6 75.8

CWA-SD1 32.8

LEGEND

Chromium in Sediment (mg/kg)

- Non-Detect
- 0 - 26 (Below ESCs)
- 26 - 81 (Between Freshwater and Saltwater Sediment ESCs)
- 81 - 106.65 (Above ESCs and Within Lower 75% of Background)
- 106.65 - 125 (Above ESCs and Within Top 25% of Background)
- > 125 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 300 600 1,200 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 5-7

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

CHROMIUM RESULTS IN SEDIMENT

CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_017_Fig5-7_CWA_Chrom_SD_Results_BEE_rpt.mxd (4/20/2011)

LEGEND

Zinc in Sediment (mg/kg)

- Non-Detect
- 0 - 81 (Below ESCs)
- 81 - 86 (Between Freshwater and Saltwater Sediment ESCs)
- 86 - 162.5 (Above ESCs and Within Lower 75% of Background)
- 162.5 - 423 (Above ESCs and Within Top 25% of Background)
- > 423 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:
0 450 900 1,800
Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

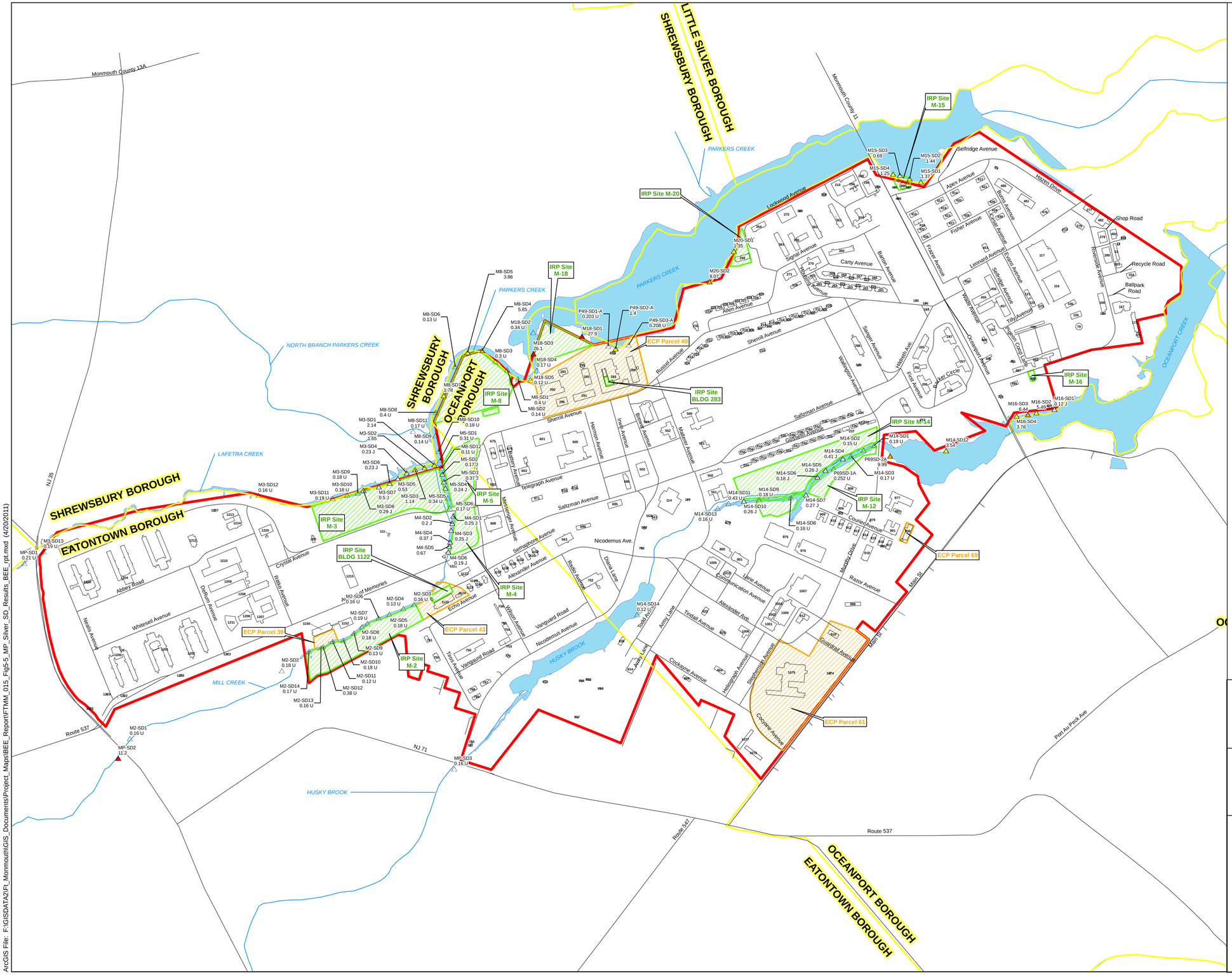
FIGURE 5-6

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

ZINC RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GIS\DATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_016_Fig5-6_MP_Zinc_SD_Results_BEE_rpt.mxd (4/20/2011)



LEGEND

Silver in Sediment (mg/kg)

- Non-Detect
- 0 - 1 (Below ESCs)
- 1 - 5.6 (Above ESCs and Within Range of Most Background)
- 2.6 - 11.2 (Above ESCs and Above 1/2 Maximum Background)
- > 11.2 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 450 900 1,800 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

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FIGURE 5-5

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

SILVER RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_015_Fig5-5_MP_Silver_SD_Results_BEE_rpt.mxd (4/20/2011)

LEGEND

Mercury in Sediment (mg/kg)

- Non-Detect
- 0 - 0.15 (Below ESCs)
- 0.15 - 0.20 (Between Freshwater and Saltwater Sediment ESCs)
- 0.20 - 0.212 (Above ESCs and Below 1/2 Maximum Background)
- 0.212 - 0.424 (Above ESCs and Above 1/2 Maximum Background)
- > 0.424 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 450 900 1,800 Feet

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FIGURE 5-4

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

MERCURY RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_014_Fig5-4_MP_Mercury_SD_Results_BEE_rpt.mxd (4/20/2011)

LEGEND

Lead in Sediment (mg/kg)

- Non-Detect
- 0 - 31 (Below ESCs)
- 31 - 47 (Between Freshwater and Saltwater Sediment ESCs)
- 47 - 63.9 (Above ESCs and Within Lower 75% of Background)
- 63.9 - 945 (Above ESCs and Within Top 25% of Background)
- > 945 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:
0 450 900 1,800
Feet

Base Realignment and Closure 2005

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FIGURE 5-3

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

LEAD RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GIS\DATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_013_Fig5-3_MP_Lead_SD_Results_BEE_rpt.mxd (4/20/2011)

LEGEND

Copper in Sediment (mg/kg)

- Non-Detect
- 0 - 16 (Below ESCs)
- 16 - 34 (Between Freshwater and Saltwater Sediment ESCs)
- 34 - 41 (Above ESCs and Within Lower 75% of Background)
- 41 - 165 (Above ESCs and Within Top 25% of Background)
- > 165 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:
0 450 900 1,800 Feet

Base Realignment and Closure 2005

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FIGURE 5-2

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

COPPER RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_012_Fig5-2_MP_Copper_SD_Results_BEE_rpt.mxd (4/20/2011)

LEGEND

Chromium in Sediment (mg/kg)

- Non-Detect
- 0 - 26 (Below ESCs)
- 26 - 81 (Between Freshwater and Saltwater Sediment ESCs)
- 81 - 106.65 (Above ESCs and Within Lower 75% of Background)
- 106.65 - 125 (Above ESCs and Within Top 25% of Background)
- > 125 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:
0 450 900 1,800
Feet

Base Realignment and Closure 2005

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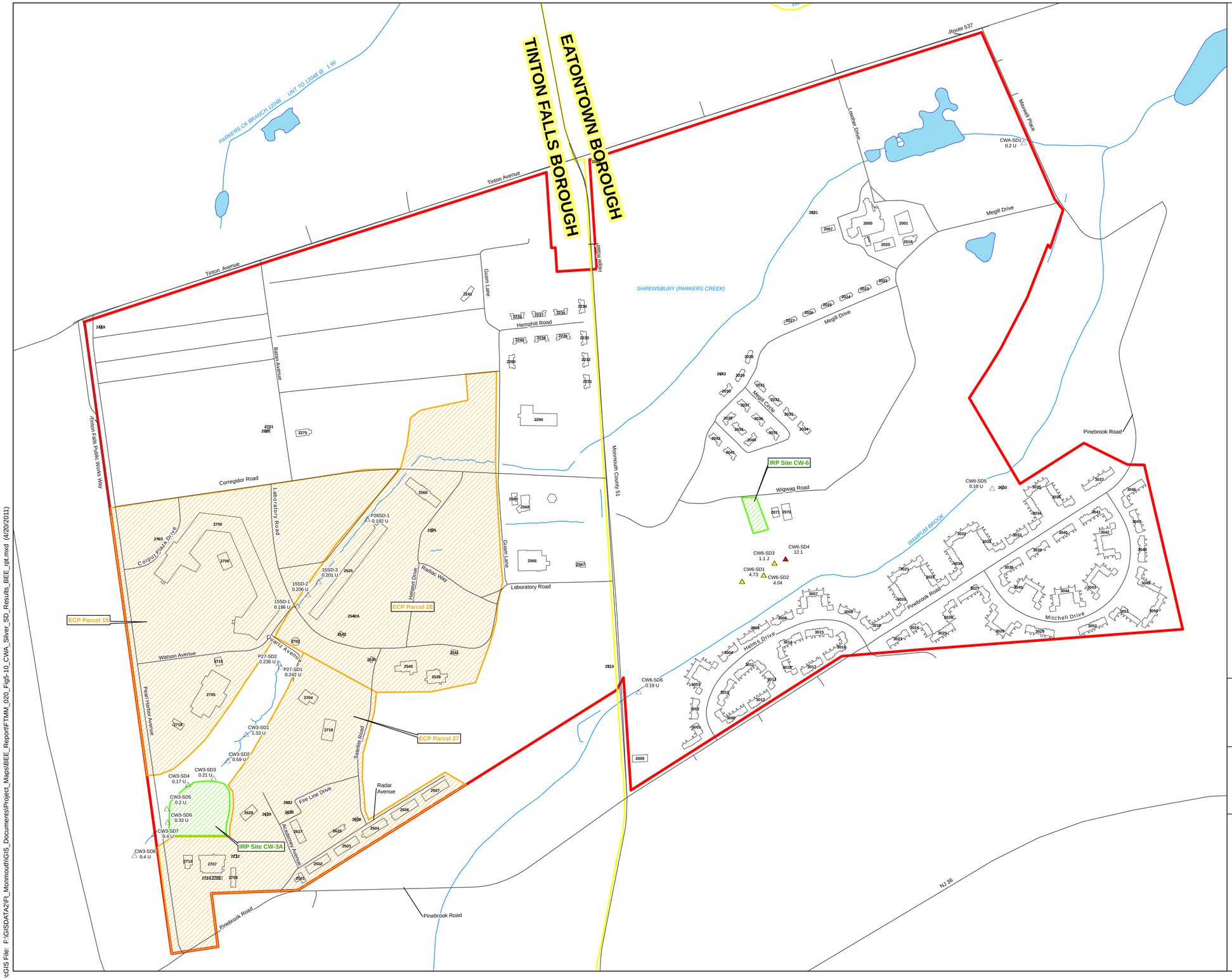
FIGURE 5-1

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

CHROMIUM RESULTS IN SEDIMENT

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_011_Fig5-1_MP_Chrom_SD_Results_BEE_rpt.mxd (4/20/2011)



LEGEND

Silver in Sediment (mg/kg)

- Non-Detect
- 0 - 1 (Below ESCs)
- 1 - 5.6 (Above ESCs and Within Range of Most Background)
- 2.6 - 11.2 (Above ESCs and Above 1/2 Maximum Background)
- > 11.2 (Above Background)
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Results include samples collected in 2007 for the Environmental Condition of Property (ECP) Site Investigation (SI) and the 2010 Baseline Ecological Evaluation (BEE).
2) ESC = Ecological Screening Value

N

Scale:

0 300 600 1,200 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

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FIGURE 5-10

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

SILVER RESULTS IN SEDIMENT

CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

ArcGIS File: F:\GISDATA2\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_020_Fig5-10_CWA_Silver_SD_Results_BEE_rpt.mxd (4/20/2011)

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APPENDIX A
Remedial Investigation Data Evaluated in the BEE

APPENDIX B
Site Investigation Data Evaluated in the BEE

APPENDIX C
Groundwater Monitoring Data Evaluated in the BEE

APPENDIX D
Baseline Ecological Evaluation Investigation Data Evaluated in the BEE

APPENDIX E
New Jersey Department of Environmental Protection Ecological Screening Criteria

APPENDIX F
Laboratory Data Packages

See Included DVD

APPENDIX G
Field Documentation and Field Measured Parameters

APPENDIX H
Fort Monmouth Maximum Background Concentrations from the 1995 SI Report

APPENDIX I
NJDEP Correspondence

APPENDIX J
Fort Monmouth Surface Water Salinity Data for Main Post (2004-2009)

APPENDIX K
Fort Monmouth Utility Maps

APPENDIX L
Sediment Quality Investigation Data

APPENDIX A
Remedial Investigation Data Evaluated in the BEE

Table A-1
Soil Sampling Analytical Results
M-2 Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4286.02 B4 (6-12") 2/19/1999	4286.04 B5 (6-12") 2/19/1999	4286.06 B6 (6-12") 2/19/1999	4295.02 B13 (6-12") 2/23/1999	4295.04 B14 (6-12") 2/23/1999	4295.06 B15 (6-12") 2/23/1999	4298.02 B19 (6-12") 2/24/1999	4298.04 B20 (6-12") 2/24/1999	4298.06 B21 (6-12") 2/24/1999	4298.08 B25 (6-12") 2/24/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	0.42J	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	0.3J	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	0.22J	ND	ND	ND	2.7	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	0.2J	ND	ND	ND	**2.9**	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	0.16J	ND	ND	ND	4.5	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	0.13J	ND	ND	ND	1.5	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	0.18J	ND	ND	ND	3.1	ND
bis(2-Ethylhexyl)phthalate	0.925	0.23JB	0.12JB	0.14JB	0.11J	0.16 J	0.21J	0.14J	0.16J	0.18J	0.22J
Chrysene	4.73	ND	ND	0.17J	ND	0.44J	ND	ND	ND	**6.3**	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	0.81J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.28JB	0.28JB	0.84JB	0.74JB	1.3B	0.43JB	0.88JB	0.68JB	1.3B	1.1JB
Fluoranthene	122	ND	ND	0.17J	ND	0.46J	ND	ND	ND	1.4	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.12 J	ND	ND	ND	1.5	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	0.39 J	ND	ND	ND	ND	ND
Pyrene	78.5	ND	ND	0.15 J	ND	0.46 J	ND	ND	ND	1.9	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	0.021	ND	0.069	0.113	0.04	0.032	0.078	ND
4,4'-DDE	0.596	ND	0.016	0.019	ND	0.069	0.072	0.11	0.012	0.128	0.063
4,4'-DDT	0.0035	ND	**0.04**	ND	ND	**0.079**	ND	**0.176**	ND	**0.199**	**0.092**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	**0.03**	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	**1.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-1
Soil Sampling Analytical Results
M-2 Landfill Site
Fort Monmouth, New Jersey
Page 2 of 40

Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4286.02 B4 (6-12") 2/19/1999	4286.04 B5 (6-12") 2/19/1999	4286.06 B6 (6-12") 2/19/1999	4295.02 B13 (6-12") 2/23/1999	4295.04 B14 (6-12") 2/23/1999	4295.06 B15 (6-12") 2/23/1999	4298.02 B19 (6-12") 2/24/1999	4298.04 B20 (6-12") 2/24/1999	4298.06 B21 (6-12") 2/24/1999	4298.08 B25 (6-12") 2/24/1999
Metals (mg/kg)											
Aluminum	50	**8220**	**3930**	**14800**	**4850**	**11100**	**17400**	**4370**	**5320**	**11400**	**16300**
Antimony	0.27	**1.1**	**1.4**	**0.941**	**0.653**	**0.919**	**2.04**	**0.48**	**0.527**	**0.527**	**0.492**
Arsenic	9.9	8.01	**11.2**	**12.7**	5.41	**12.3**	**22.5**	2.22	3.68	**10.8**	**19**
Barium	283	29.6	12.9	46.3	9.51	68.3	198	7.44	12.6	54.3	28
Beryllium	10	0.871	0.488	1.49	0.492	2.11	2.67	0.177	0.394	1.31	1.53
Cadmium	0.36	0.245	**0.525**	**0.506**	0.158	**0.674**	**4.17**	**0.384**	0.248	0.181	ND
Calcium	NAV	521	275	1900	212	1030	1830	92.4	372	2050	434
Chromium	0.4	**99.3**	**69.6**	**88.9**	**81.5**	**106**	**182**	**19.4**	**29.7**	**145**	**153**
Cobalt	13	2.1	2.26	3.81	0.918	3.72	8.88	0.86	1.08	1.55	1.86
Copper	28	**41.3**	**29.6**	16.4	7.61	**35.6**	**391**	**66.6**	**69.8**	**71.5**	**72.6**
Iron	NAV	26000	16700	39900	18800	34000	74600	7890	12000	35900	42600
Lead	11	**31.7**	**28.9**	**21.1**	8.5	**48.7**	**187**	4.46	**27.7**	**62.4**	**31.6**
Magnesium	NAV	1930	986	3310	1170	2650	4490	437	742	4990	5230
Manganese	220	51.5	**2450**	89.5	14	49.1	**242**	12.3	13.2	57.4	51.1
Mercury	0.00051	**1.58**	**0.39**	**0.14**	**0.64**	**0.61**	**4.73**	**0.09**	**0.04**	**0.15**	**0.05**
Nickel	30	6.59	7.16	15.1	3.11	15.4	**32.8**	2.51	3.55	6.69	7.38
Potassium	NAV	4450	2430	6950	3040	5140	8990	849	1530	10600	11200
Selenium	0.21	**1.03**	**1.66**	**0.727**	**0.65**	**1.31**	**2.53**	ND	ND	**0.977**	**1.29**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	171	80.2	110	58.6	76.4	164	146	223	140	155
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**78.9**	**51.7**	**60.3**	**69.7**	**58.5**	**91.5**	**17.9**	**23.7**	**60.3**	**81.9**
Zinc	8.5	122	**2720**	**242**	**42.8**	**187**	**605**	**9.61**	**41**	**140**	**50.4**

See Notes at End of Table

Table A-1
Soil Sampling Analytical Results
M-2 Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4298.10 B26 (6-12") 2/24/1999	4298.12 B27 (6-12") 2/24/1999	4327.02 B31 (6-12") 3/8/1999	4327.04 B32 (6-12") 3/8/1999	4327.06 B33 (6-12") 3/8/1999	4331.02 B34 (6-12") 3/9/1999	4331.04 B35 (6-12") 3/9/1999	4331.06 B36 (6-12") 3/9/1999	4331.08 B37 (6-12") 3/9/1999	4335.02 B38 (6-12") 3/10/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.14J	0.15 J	0.34 J	ND	0.18 J	ND	ND	0.2 J	ND	0.12 J
Benzo[a]pyrene	1.52	0.17J	0.19 J	0.39 J	ND	0.19 J	ND	ND	0.21 J	ND	0.12 J
Benzo[b]fluoranthene	59.8	0.2J	0.22 J	0.34 J	ND	0.17 J	ND	ND	0.21 J	ND	ND
Benzo[g,h,I]perylene	119	0.12J	0.12 J	0.2 J	ND	0.12 J	ND	ND	0.14 J	ND	ND
Benzo[k]fluoranthene	148	0.17J	0.28 J	0.4 J	ND	0.18 J	ND	0.12 J	0.18 J	ND	0.12 J
bis(2-Ethylhexyl)phthalate	0.925	0.2J	0.28 J	0.53JB	0.13JB	0.2JB	0.19JB	0.18JB	0.29JB	ND	0.22JB
Chrysene	4.73	0.31J	0.34 J	0.68J	0.17J	0.36 J	0.16 J	0.17 J	0.35 J	ND	0.28 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	0.11 J	0.32JB	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.21JB	0.29JB	1.2JB	0.64JB	0.58JB	0.36JB	0.62JB	0.6JB	ND	1.6B
Fluoranthene	122	0.24J	0.22J	0.6 J	0.17J	0.42 J	0.14J	0.19 J	0.46 J	ND	0.2 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.12 J	0.21 J	ND	ND	ND	ND	0.14 J	ND	ND
Naphthalene	0.0994	ND	ND	**0.64 J**	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.14 J	ND	0.32 J	0.11 J	0.24 J	ND	ND	0.3 J	ND	0.23 J
Pyrene	78.5	0.26 J	0.23 J	0.67 J	0.15 J	0.37 J	0.15 J	0.15 J	0.37 J	ND	0.27 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.086	0.021	0.042	0.092	0.022	0.031	ND	0.062	ND	0.035
4,4'-DDE	0.596	0.22	0.05	0.052	0.041	0.015	0.028	0.02	0.027	ND	0.048
4,4'-DDT	0.0035	**0.61**	**0.064**	**0.044**	**0.037**	ND	ND	ND	**0.126**	ND	**0.187**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	0.024	ND	ND
Dieldrin	0.0049	ND	ND	**0.040**	**0.014**	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	0.029	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4298.10 B26 (6-12") 2/24/1999	4298.12 B27 (6-12") 2/24/1999	4327.02 B31 (6-12") 3/8/1999	4327.04 B32 (6-12") 3/8/1999	4327.06 B33 (6-12") 3/8/1999	4331.02 B34 (6-12") 3/9/1999	4331.04 B35 (6-12") 3/9/1999	4331.06 B36 (6-12") 3/9/1999	4331.08 B37 (6-12") 3/9/1999	4335.02 B38 (6-12") 3/10/1999
Metals (mg/kg)											
Aluminum	50	**9000**	**7550**	**25400**	**10400**	**13000**	**9360**	**7460**	**4470**	**5850**	**9820**
Antimony	0.27	**0.555**	**0.54**	**2.48**	**2.31**	ND	ND	ND	**0.698**	**0.571**	ND
Arsenic	9.9	**10.2**	8.33	**37.7**	**10.2**	**16.3**	**11**	7.62	5.81	4.3	**11.4**
Barium	283	45.6	40	226	40.6	73.1	109	22.2	15.8	22.1	54.1
Beryllium	10	0.954	0.823	7.22	1.25	1.85	1.42	0.649	0.366	0.504	1.31
Cadmium	0.36	**505**	**0.58**	**11.4**	**0.917**	ND	ND	0.207	0.322	**4.97**	**26.3**
Calcium	NAV	2680	1970	2750	1500	958	1320	885	767	461	1050
Chromium	0.4	**98.7**	**76.8**	**165**	**379**	**228**	**156**	**66.1**	**40.7**	**49.7**	**132**
Cobalt	13	3.33	1.56	**35.9**	2.46	0.948	1.2	1.45	1.13	1.09	1.31
Copper	28	**161**	**64.2**	**337**	**153**	**66.5**	**48.2**	**44**	**45.6**	**43.2**	**54.8**
Iron	NAV	29900	24500	118000	25900	51200	34500	18900	13400	14400	30800
Lead	11	**80.1**	**38.4**	**163**	**897**	**20.6**	9.81	**18.6**	**16.4**	3.88	**17.3**
Magnesium	NAV	4670	2820	3740	2480	7330	4770	1700	726	1520	3950
Manganese	220	117	65.4	**775**	23.5	24.7	28.5	41.9	21.2	20.1	32.5
Mercury	0.00051	**0.24**	**0.13**	**1.87**	**1.07**	**0.04**	**0.04**	**0.09**	**0.05**	**0.04**	**0.08**
Nickel	30	9.68	5.39	**100**	14.1	4.79	5.19	5.08	4.57	3.04	4.87
Potassium	NAV	7280	5980	7240	5350	17800	11200	4040	1450	3400	9150
Selenium	0.21	**0.863**	**0.982**	**3.72**	**0.704**	**1.4**	**1.09**	ND	ND	ND	**1.13**
Silver	2	ND	ND	ND	1.15	ND	ND	ND	ND	ND	ND
Sodium	NAV	236	126	233	208	128	141	194	96.8	75.9	124
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**53.3**	**41.5**	**123**	**49.7**	**82.4**	**51.7**	**51.2**	**37.5**	**28.7**	**58.6**
Zinc	8.5	**102**	**66.9**	**683**	**106**	**72.6**	**65.4**	**44.6**	**38.2**	**20.8**	**57.4**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4335.04 B39 (6-12") 3/10/1999	4335.06 B40 (6-12") 3/10/1999	4335.08 B41 (6-12") 3/10/1999	4335.10 B42 (6-12") 3/10/1999	4340.02 B43 (6-12") 3/11/1999	4340.04 B44 (6-12") 3/11/1999	4349.02 B45 (6-12") 3/16/1999	4349.04 B46 (6-12") 3/16/1999	4349.06 B47 (6-12") 3/16/1999	4349.08 B48 (6-12") 3/16/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	0.16J	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	0.21J	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	0.7J	ND	0.35 J	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.11 J	ND	2.2	ND	0.84 J	0.19J	0.19 J	ND	0.14 J
Benzo[a]pyrene	1.52	ND	0.12 J	ND	**2.2**	0.14 J	0.86 J	0.21 J	0.17 J	0.66 J	0.17 J
Benzo[b]fluoranthene	59.8	ND	ND	ND	2.1	ND	0.7 J	0.2 J	0.12 J	0.13 J	0.14 J
Benzo[g,h,I]perylene	119	ND	ND	ND	1.3	ND	0.49 J	0.15 J	0.12 J	0.16 J	ND
Benzo[k]fluoranthene	148	ND	ND	ND	1.8	ND	0.81 J	0.24 J	0.16 J	0.14 J	0.16 J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.14JB	0.14JB	0.15JB	0.15JB	0.15JB	ND	0.32JB	ND	0.19JB
Chrysene	4.73	ND	0.24 J	0.2 J	3.7	0.19 J	1.5	0.38 J	0.4 J	0.61 J	0.28 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	0.64J	ND	0.22 J	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.89JB	0.4JB	1.1JB	0.33JB	0.98JB	0.38JB	0.3JB	0.76JB	038JB	0.55JB
Fluoranthene	122	ND	0.21 J	0.17 J	5.5	0.13 J	1.8	0.38 J	0.27 J	0.15 J	0.23 J
Fluorene	122	ND	ND	ND	0.16J	ND	0.13 J	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	1.3	ND	0.48 J	0.14 J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.18 J	0.15 J	2.4	ND	1.2	0.18 J	0.3 J	ND	0.14 J
Pyrene	78.5	ND	0.25 J	0.19 J	4.1	0.15 J	1.5	0.36 J	0.39 J	0.18 J	0.25 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.022	0.087	0.059	0.023	0.173	0.043	ND	0.116	0.038	0.029
4,4'-DDE	0.596	0.015	0.083	0.04	0.029	0.078	0.041	0.095	0.098	0.05	0.032
4,4'-DDT	0.0035	ND	ND	ND	ND	**0.047**	ND	ND	**0.058**	**0.305**	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.017
Dieldrin	0.0049	ND	ND	ND	ND	**0.091**	ND	ND	**0.015**	**0.019**	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	**0.019**	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	**0.009**	ND
gamma-Chlordane	0.224	ND	ND	ND	0.013	ND	ND	ND	ND	ND	0.021
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4335.04 B39 (6-12") 3/10/1999	4335.06 B40 (6-12") 3/10/1999	4335.08 B41 (6-12") 3/10/1999	4335.10 B42 (6-12") 3/10/1999	4340.02 B43 (6-12") 3/11/1999	4340.04 B44 (6-12") 3/11/1999	4349.02 B45 (6-12") 3/16/1999	4349.04 B46 (6-12") 3/16/1999	4349.06 B47 (6-12") 3/16/1999	4349.08 B48 (6-12") 3/16/1999
Metals (mg/kg)											
Aluminum	50	**18400**	**9770**	**8030**	**12200**	**12200**	**7990**	**11600**	**8680**	**11400**	**8380**
Antimony	0.27	ND	ND	ND	ND	**1.34**	ND	ND	ND	**0.475**	ND
Arsenic	9.9	**11.7**	**10.3**	**10.3**	**13.5**	7.23	7.93	9.04	**15**	**13.2**	**13.9**
Barium	283	117	64.3	58.1	77.8	34.6	53	95	54.9	47.7	69.6
Beryllium	10	2.71	1.39	1.11	1.81	1.73	1.12	2.03	1.15	1.52	1.32
Cadmium	0.36	0.166	**1.17**	ND	ND	ND	0.30	**0.756**	ND	ND	**0.431**
Calcium	NAV	1810	4230	862	1630	1260	1280	1740	1040	1770	1570
Chromium	0.4	**326**	**143**	**125**	**191**	**160**	**108**	**196**	**126**	**139**	**118**
Cobalt	13	0.756	1.73	1.45	1.72	1.14	1.12	1.65	1.27	1.53	1.26
Copper	28	**43.6**	**45.7**	**41.2**	**46.2**	**383**	**38.4**	**35.6**	27.2	**34.6**	**44**
Iron	NAV	60200	31900	31700	44000	36600	24200	44500	31400	40400	29900
Lead	11	4.27	**19.2**	**26.4**	**17.8**	**38.1**	**17.6**	**16.2**	**20**	**16.2**	**28.3**
Magnesium	NAV	10600	4410	3860	6130	5030	3300	6620	3840	4960	3870
Manganese	220	33.1	27.3	17.9	42.7	14.7	26.5	27.3	21.4	29.6	40.3
Mercury	0.00051	**0.03**	**0.07**	**0.05**	**0.03**	**0.39**	**0.07**	**0.22**	**0.1**	**0.06**	**0.05**
Nickel	30	5.1	8.43	9.16	6.54	6.95	5.24	11.1	5.35	7.59	5.7
Potassium	NAV	25800	10300	8540	14400	12200	7630	15200	8900	11700	9240
Selenium	0.21	**2.01**	**1.07**	**1.19**	**1.25**	ND	**1.09**	**1.7**	**1.72**	**0.818**	**1.63**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	243	188	124	176	106	195	207	292	147	178
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**116**	**58.4**	**49.8**	**70.6**	**74.4**	**47.4**	**85.9**	**51.3**	**76.4**	**43**
Zinc	8.5	**122**	**61.5**	**41.6**	**95.6**	**48.7**	**62.1**	**240**	**49.2**	**76.8**	**82.4**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4356.02 B49 (6-12") 3/17/1999	4356.04 B50 (6-12") 3/17/1999	4356.06 B51 (6-12") 3/17/1999	4356.08 B52 (6-12") 3/17/1999	4356.10 B53 (6-12") 3/17/1999	4356.12 B54 (6-12") 3/17/1999	4356.14 B55 (6-12") 3/17/1999	4359.02 B56 (6-12") 3/18/1999	4359.04 B57 (6-12") 3/18/1999	4359.06 B58 (6-12") 3/18/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.18 J	0.26 J	ND	ND	ND	ND	0.88 J	0.13 J	ND	0.22 J
Benzo[a]pyrene	1.52	0.17 J	0.31 J	ND	ND	ND	ND	1.0 J	0.12 J	ND	0.24 J
Benzo[b]fluoranthene	59.8	0.32 J	0.29 J	ND	ND	ND	ND	1.1 J	ND	ND	0.25 J
Benzo[g,h,I]perylene	119	0.13 J	0.32 J	ND	ND	ND	ND	0.76 J	ND	ND	0.15 J
Benzo[k]fluoranthene	148	0.29 J	0.21 J	ND	ND	ND	ND	0.97 J	ND	ND	0.2 J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.19JB	0.15JB	ND	ND	0.15 JB	0.14 J	0.19 J	0.15 J	0.13 J
Chrysene	4.73	0.61 J	0.53 J	0.18 J	ND	0.20 J	ND	1.5	0.22 J	ND	0.42 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	0.25 J	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.38JB	0.7JB	0.16JB	0.83 JB	ND	0.64 JB	0.43JB	0.13JB	0.4JB	0.15JB
Fluoranthene	122	ND	0.37 J	0.15 J	ND	0.20 J	ND	0.78 J	0.23 J	ND	0.46 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.14 J	0.21 J	ND	ND	ND	ND	0.78 J	ND	ND	0.14 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.2 J	ND	ND	0.13 J	ND	ND	ND	ND	0.25 J
Pyrene	78.5	0.17 J	0.42 J	0.19 J	ND	0.27 J	ND	0.63 J	0.22 J	ND	0.4 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.195	0.133	0.106	0.024	0.037	ND	0.015	0.017	0.023	0.03
4,4'-DDE	0.596	0.158	0.109	0.047	0.031	0.048	0.014	0.028	0.018	0.016	0.033
4,4'-DDT	0.0035	**0.105**	**0.116**	**0.083**	**0.052**	ND	ND	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	**0.074**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	0.329	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4356.02 B49 (6-12") 3/17/1999	4356.04 B50 (6-12") 3/17/1999	4356.06 B51 (6-12") 3/17/1999	4356.08 B52 (6-12") 3/17/1999	4356.10 B53 (6-12") 3/17/1999	4356.12 B54 (6-12") 3/17/1999	4356.14 B55 (6-12") 3/17/1999	4359.02 B56 (6-12") 3/18/1999	4359.04 B57 (6-12") 3/18/1999	4359.06 B58 (6-12") 3/18/1999
Metals (mg/kg)											
Aluminum	50	**12500**	**6730**	**7310**	**8120**	**5860**	**5840**	**6320**	**4140**	**4690**	**4590**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	**0.677**	ND	ND
Arsenic	9.9	**12.4**	7.92	**10.4**	8.57	**11.1**	6.67	6.67	9.78	6.36	5.85
Barium	283	27.1	54.3	67.3	48.6	63.6	36.3	26.2	46.5	34.5	19.1
Beryllium	10	1.47	1.16	1.19	0.966	1.00	0.637	0.669	0.535	0.741	0.569
Cadmium	0.36	ND	ND	ND	ND	ND	0.219	ND	0.323	ND	ND
Calcium	NAV	1920	907	1130	611	2910	5050	767	4310	629	459
Chromium	0.4	**163**	**89.3**	**101**	**104**	**72.7**	**63.7**	**56.9**	**49.5**	**64.6**	**58.4**
Cobalt	13	2.29	1.01	1.17	0.964	2.49	1.4	1.02	1.49	0.83	0.804
Copper	28	11.6	6.23	7.88	4.99	11.7	20.5	2.17	**33.4**	6.75	6.88
Iron	NAV	37700	23000	24900	24000	21300	19300	19700	15900	17700	13800
Lead	11	**21.7**	**15.8**	**18.1**	**16.2**	**18.1**	**36.7**	5.27	**41.9**	8.49	**13**
Magnesium	NAV	4610	2530	2480	2720	1900	2350	1790	1770	1860	1480
Manganese	220	41.4	19.9	20.1	16.4	28.2	123	39.6	83.4	13.3	8.5
Mercury	0.00051	**0.089**	**0.052**	**0.026**	**0.027**	**0.027**	**0.216**	ND	**0.401**	**0.078**	**0.091**
Nickel	30	8.21	5.1	5.72	4.33	9.07	6.42	3.81	5.9	3.69	3.44
Potassium	NAV	11100	6300	5980	6180	4900	4890	4270	3300	4400	3510
Selenium	0.21	**2.02**	**1.67**	**2.12**	**1.56**	**1.94**	**1.28**	ND	**1.11**	**1.41**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	253	97.9	103	91.8	103	120	45.1	165	94.4	118
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**45.2**	**30.9**	**38.1**	**41.8**	**26.2**	**30.7**	**27.6**	**25.9**	**25.9**	**26.5**
Zinc	8.5	**91.8**	**54.6**	**50.4**	**42.2**	**49.6**	**96.8**	**20.8**	**126**	**34.7**	**27.9**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4359.08 B59 (6-12") 3/18/1999	4367.02 B59A (6-12") 3/23/1999	4367.04 B60 (6-12") 3/23/1999	4367.06 B61 (6-12") 3/23/1999	4367.08 B62 (6-12") 3/23/1999	4367.10 B63 (6-12") 3/23/1999	4367.12 B64 (6-12") 3/23/1999	4367.14 B65 (6-12") 3/23/1999	4380.02 B66 (6-12") 3/30/1999	4380.04 B67 (6-12") 3/30/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	0.23 J	ND	ND	ND	0.24 J	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.12 J	ND	0.13 J	0.67 J	0.18 J	0.16 J	ND	0.75 J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.51 J	0.15 J	0.14 J	ND	0.6 J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.41 J	0.12 J	0.14 J	ND	0.58 J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.36 J	ND	ND	ND	0.24 J	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.44 J	0.13 J	0.15 J	ND	0.53 J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.11 J	ND	ND	ND	0.18 J	0.2 J	0.22J	ND	0.14JB
Chrysene	4.73	0.2 J	0.18 J	0.18 J	0.9 J	0.27 J	0.28 J	ND	1.2	0.16 J	0.14 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	ND	0.16JB	0.18JB	0.12JB	0.13JB	0.77JB	1.5JB	0.13JB	0.47JB	0.21JB
Fluoranthene	122	0.15 J	0.14 J	0.18 J	1.5	0.28 J	0.25 J	ND	1.3	ND	0.14 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.31 J	ND	ND	ND	0.23 J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.15 J	0.14 J	ND	0.89 J	0.15 J	0.17 J	ND	0.82 J	ND	ND
Pyrene	78.5	0.23 J	0.22 J	0.21 J	1.3	0.27 J	0.26 J	ND	1.3	0.13 J	0.13 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.046	0.047	0.044	0.02	0.047	0.03	ND	0.131	0.025	ND
4,4'-DDE	0.596	0.028	0.026	ND	0.017	0.024	0.025	0.015	0.019	0.041	0.016
4,4'-DDT	0.0035	**0.041**	**0.065**	ND	**0.026**	ND	ND	ND	ND	**0.051**	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	**0.012**	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	**0.651**	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4359.08 B59 (6-12") 3/18/1999	4367.02 B59A (6-12") 3/23/1999	4367.04 B60 (6-12") 3/23/1999	4367.06 B61 (6-12") 3/23/1999	4367.08 B62 (6-12") 3/23/1999	4367.10 B63 (6-12") 3/23/1999	4367.12 B64 (6-12") 3/23/1999	4367.14 B65 (6-12") 3/23/1999	4380.02 B66 (6-12") 3/30/1999	4380.04 B67 (6-12") 3/30/1999
Metals (mg/kg)											
Aluminum	50	**8650**	**7740**	**6100**	**10400**	**2990**	**5320**	**32000**	**4540**	**8390**	**8220**
Antimony	0.27	ND	ND	ND	**0.903**	**0.529**	**0.516**	ND	**0.538**	**0.788**	**0.49**
Arsenic	9.9	**11.8**	**12.3**	8.53	**11.4**	3.34	3.72	**26.8**	2.58	2.16	9.76
Barium	283	57.3	60	38.1	39.8	19.2	13.3	220	159	17.1	48.6
Beryllium	10	1.41	1.26	0.92	1.66	0.255	0.304	**10.6**	0.662	0.246	1.05
Cadmium	0.36	**0.484**	ND	ND	0.225	**0.655**	0.27	**1.36**	**0.578**	0.157	ND
Calcium	NAV	1220	990	759	1390	299	483	325	2170	267	1250
Chromium	0.4	**133**	**118**	**89.4**	**126**	**14.3**	**22.2**	**271**	**11.9**	**21.5**	**99.4**
Cobalt	13	1.37	1.19	0.93	1.45	0.727	1.11	**13.1**	7.29	0.988	1.21
Copper	28	11.5	10.2	7.05	12.8	10.6	5.18	**134**	**48**	13.4	10.3
Iron	NAV	30000	28400	23800	31200	4420	7850	89600	7670	6840	25600
Lead	11	**13.8**	**17.1**	**13.8**	**18.2**	**22.7**	7.45	**119**	6.85	6.86	**25**
Magnesium	NAV	3710	3220	2450	3880	285	506	4960	544	507	2720
Manganese	220	19.1	19.2	16.9	31.5	9.40	15.5	42.5	29.4	19	18.8
Mercury	0.00051	**0.071**	**0.079**	**0.06**	**0.133**	**0.074**	**0.08**	**16.7**	**0.173**	**0.078**	**0.117**
Nickel	30	5.9	5.18	3.97	6.85	3.47	5.93	**70.7**	19.6	4.44	5.9
Potassium	NAV	8580	7640	5710	8710	479	903	8570	274	1080	6160
Selenium	0.21	**1.8**	**1.66**	**1.29**	**0.938**	ND	ND	**2.01**	**1.06**	ND	**1.57**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	219	225	89.7	160	84	113	291	358	133	148
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**44.7**	**43.8**	**32**	**46.8**	**11**	**16.3**	**189**	**17.3**	**17.1**	**39.6**
Zinc	8.5	**62.8**	**61.4**	**55.6**	**85**	**30.2**	**25.6**	**283**	**61.8**	**30.4**	**53.3**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4380.06 B68 (6-12") 3/30/1999	4380.08 B69 (6-12") 3/30/1999	4380.10 B70 (6-12") 3/30/1999	4395.02 B71 (6-12") 4/6/1999	4395.04 B72 (6-12") 4/6/1999	4395.06 B73 (6-12") 4/6/1999	4406.02 B74 (6-12") 4/9/1999	4406.04 B75 (6-12") 4/9/1999	4406.06 B76 (6-12") 4/9/1999	4415.02 B77 (6-12") 4/13/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	0.3 J	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	0.12 J	ND	0.19 J	0.17 J	1.4
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	0.13 J	ND	0.24 J	0.17 J	1.4
Benzo[b]fluoranthene	59.8	ND	ND	0.19 J	ND	ND	0.13 J	ND	0.19 J	0.18 J	1.1
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	0.25 J	ND	0.83 J
Benzo[k]fluoranthene	148	ND	ND	0.15 J	ND	ND	0.12 J	ND	0.19 J	0.14 J	1.2
bis(2-Ethylhexyl)phthalate	0.925	0.16JB	ND	0.33 JB	ND	ND	0.18 J	ND	ND	ND	ND
Chrysene	4.73	ND	0.19 J	0.34 J	0.15 J	ND	0.25 J	ND	0.45 J	0.3 J	2.4
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.68JB	0.13JB	1.5B	2.6 B	0.12JB	0.38JB	0.3JB	0.6JB	0.79JB	2.3B
Fluoranthene	122	ND	0.16 J	0.22 J	ND	ND	0.22 J	ND	0.21 J	0.4 J	3.4
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	0.78 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.17 J	ND	ND	ND	ND	ND	ND	0.3 J	2.0
Pyrene	78.5	ND	0.19 J	0.23 J	0.14 J	ND	0.23J	ND	0.34 J	0.32 J	2.7
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	0.062	0.14	0.059	0.295	0.081	0.168	ND	0.021	0.056
4,4'-DDE	0.596	0.012	0.023	0.056	0.028	0.072	0.049	0.038	0.013	0.03	0.039
4,4'-DDT	0.0035	ND	**0.044**	ND	ND	ND	**0.032**	**0.057**	ND	**0.073**	**0.028**
alpha-Chlordane	0.224	0.021	ND	ND	ND	ND	ND	0.022	ND	0.013	ND
Dieldrin	0.0049	ND	ND	ND	ND	**0.024**	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.022	ND	ND	ND	ND	ND	0.019	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4380.06 B68 (6-12") 3/30/1999	4380.08 B69 (6-12") 3/30/1999	4380.10 B70 (6-12") 3/30/1999	4395.02 B71 (6-12") 4/6/1999	4395.04 B72 (6-12") 4/6/1999	4395.06 B73 (6-12") 4/6/1999	4406.02 B74 (6-12") 4/9/1999	4406.04 B75 (6-12") 4/9/1999	4406.06 B76 (6-12") 4/9/1999	4415.02 B77 (6-12") 4/13/1999
Metals (mg/kg)											
Aluminum	50	**8220**	**10300**	**15300**	**8120**	**2400**	**7890**	**9570**	**3670**	**12400**	**9740**
Antimony	0.27	ND	**0.432**	**0.913**	ND	ND	**0.856**	ND	**2.31**	ND	ND
Arsenic	9.9	8.46	9.48	9.34	8.68	2.15	**81.3**	9.55	**15.1**	9.54	**11.9**
Barium	283	56.2	53.2	97.1	49.9	22.8	76.6	23.8	13.2	40.5	60.4
Beryllium	10	1.3	1.08	2.73	1.03	0.409	1.06	0.896	0.332	0.928	1.14
Cadmium	0.36	ND	ND	ND	ND	**1.7**	ND	ND	ND	ND	**2.89**
Calcium	NAV	864	819	660	1050	482	1340	1810	493	1350	4930
Chromium	0.4	**134**	**102**	**81.8**	**104**	**5.69**	**115**	**101**	**32.5**	**77.8**	**95.1**
Cobalt	13	1.39	2.00	8.05	1.12	3.32	0.861	1.53	3.58	3.38	2.59
Copper	28	8.25	16.8	**34**	3.97	18.9	3.19	16.1	**55.4**	14.1	27
Iron	NAV	28500	26000	29400	25200	3110	36400	25700	45400	32200	26800
Lead	11	**19.1**	**24.4**	**46.8**	**17.9**	3.73	**15.1**	**32.3**	**24.2**	**21.2**	**54**
Magnesium	NAV	3480	2830	2640	3110	341	3730	2760	443	2190	3780
Manganese	220	21.9	28.9	42.5	18.7	15.5	18	87.8	184	98	**685**
Mercury	0.00051	**0.062**	**0.13**	**0.161**	**0.066**	**0.092**	**0.051**	**0.103**	**0.058**	**0.083**	**0.623**
Nickel	30	6.21	7.69	**31.6**	4.33	12.5	3.86	6.18	6.72	10	11.9
Potassium	NAV	7660	5960	5820	8650	246	11700	6440	863	4600	7500
Selenium	0.21	**1.56**	**1.3**	**1.78**	**1.08**	ND	**1.45**	**0.759**	ND	ND	**1.23**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	117	119	240	290	142	301	188	166	494	151
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**56**	**49.3**	**52.2**	**37.4**	**12.8**	**33**	**61.8**	**31.7**	**74.6**	**42.7**
Zinc	8.5	**46.4**	**52.5**	**108**	**41.6**	**47**	**47.9**	**63.7**	**43.6**	**80.5**	**422**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4415.04 B78 (6-12") 4/13/1999	4415.06 B79 (6-12") 4/13/1999	4415.08 B80 (6-12") 4/13/1999	4418.02 B81 (6-12") 4/14/1999	4418.04 B82 (6-12") 4/14/1999	4418.06 B83 (6-12") 4/14/1999	4418.08 B84 (6-12") 4/14/1999	4418.10 B85 (6-12") 4/14/1999	4418.12 B86 (6-12") 4/14/1999	4423.02 B87 (6-12") 4/16/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND
Anthracene	1,480	0.15 J	ND	ND	ND	0.78 J	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.51 J	ND	ND	ND	**9.5**	0.16 J	0.14 J	0.14 J	ND	ND
Benzo[a]pyrene	1.52	0.73 J	ND	ND	ND	**10 D**	0.15 J	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.68 J	ND	ND	ND	13 D	0.15 J	0.15 J	ND	ND	ND
Benzo[g,h,I]perylene	119	0.38 J	ND	ND	ND	2.7	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.74 J	ND	ND	ND	11 D	0.15 J	0.14 J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.18 J	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND
Chrysene	4.73	0.84 J	0.18 J	ND	ND	**14 D**	0.26 J	0.24 J	0.31 J	ND	0.12 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	3.5 D	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.62JB	0.18JB	0.23JB	2.B	0.26 JB	0.17JB	1.2JB	22 BD	0.84JB	0.22JB
Fluoranthene	122	0.64 J	0.15 J	ND	ND	5.4	0.27 J	0.23 J	0.25 J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.34 J	ND	ND	ND	5.7 D	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.27 J	ND	ND	ND	0.22 J	0.16 J	0.1 J	0.39 J	ND	ND
Pyrene	78.5	0.76 J	0.18 J	ND	ND	12 D	0.3 J	0.25 J	0.38 J	ND	0.13 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.024	0.023	0.043	0.065	0.142	0.018	0.017	0.098	0.14	0.149
4,4'-DDE	0.596	0.028	0.028	0.047	0.087	0.088	0.038	0.055	0.068	0.098	0.044
4,4'-DDT	0.0035	ND	ND	**0.035**	ND	**0.114**	**0.027**	**0.085**	ND	ND	ND
alpha-Chlordane	0.224	0.017	ND	ND	ND	0.018	ND	0.02	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.018	ND	ND	ND	0.016	ND	0.028	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4415.04 B78 (6-12") 4/13/1999	4415.06 B79 (6-12") 4/13/1999	4415.08 B80 (6-12") 4/13/1999	4418.02 B81 (6-12") 4/14/1999	4418.04 B82 (6-12") 4/14/1999	4418.06 B83 (6-12") 4/14/1999	4418.08 B84 (6-12") 4/14/1999	4418.10 B85 (6-12") 4/14/1999	4418.12 B86 (6-12") 4/14/1999	4423.02 B87 (6-12") 4/16/1999
Metals (mg/kg)											
Aluminum	50	**6670**	**6570**	**7540**	**13900**	**5470**	**7290**	**5280**	**6500**	**6390**	**9620**
Antimony	0.27	**0.753**	ND	ND	**0.782**	**0.669**	**1.1**	**1.46**	**0.629**	**0.775**	**1.00**
Arsenic	9.9	6.13	6.87	**15.5**	**18.4**	6.31	**14**	7.15	**12.7**	**12.7**	**15.3**
Barium	283	45.2	37.9	34.4	80.9	27.2	47.5	48.8	88.7	74.1	47.3
Beryllium	10	0.499	0.574	0.68	1.59	0.647	0.915	0.571	1.14	1.6	0.944
Cadmium	0.36	**0.742**	**0.408**	ND	ND	0.112	0.22	**0.771**	0.174	**2.94**	ND
Calcium	NAV	10100	6570	1950	4200	621	2240	4870	8710	5160	1430
Chromium	0.4	**55.6**	**53.1**	**89.6**	**189**	**56.3**	**102**	**52.8**	**92.4**	**75.5**	**66.9**
Cobalt	13	2.11	2.11	1.01	1.42	1.1	1.34	3.5	1.73	2.53	1.31
Copper	28	26.7	**99**	11.7	9.12	6.57	17.6	**38.6**	7.22	7.53	12.3
Iron	NAV	18000	17600	24100	45000	18200	25200	17600	25500	18700	20900
Lead	11	**87.2**	**57.7**	**18.5**	**38.6**	**11.3**	**42.8**	**89.9**	**33.4**	**21.4**	**38.9**
Magnesium	NAV	2390	2580	2110	6090	1650	2770	1870	2900	2200	1860
Manganese	220	**311**	158	31.2	34.1	19.3	102	198	28.7	22.5	28
Mercury	0.00051	**0.31**	**0.376**	**0.083**	**0.117**	**0.119**	**0.566**	**0.254**	**0.097**	**0.121**	**0.136**
Nickel	30	8.11	6.97	4.9	7.61	4.39	5.65	12.9	6.44	15.7	7.53
Potassium	NAV	3540	4440	5070	13100	3340	5950	2760	6990	5020	3800
Selenium	0.21	ND	ND	**0.93**	**1.97**	**0.787**	**1.44**	**1.37**	**2.5**	**2.49**	**1.77**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	115	158	252	203	93.4	116	185	380	648	544
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**30.5**	**30**	**78.9**	**70.1**	**26.2**	**53.7**	**28.3**	**22.1**	**20.6**	**27.1**
Zinc	8.5	**145**	**126**	**46.1**	**74.4**	**59.6**	**82.1**	**215**	**81.8**	**106**	**56.7**

See Notes at End of Table

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Soil Sampling Analytical Results
M-2 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4423.04 B88 (6-12") 4/16/1999	4423.06 B89 (6-12") 4/16/1999	4423.08 B90 (6-12") 4/16/1999	4423.10 B91 (6-12") 4/16/1999	4434.02 B92 (6-12") 4/20/1999	4434.04 B93 (6-12") 4/20/1999	4434.06 B94 (6-12") 4/20/1999	4434.08 B95 (6-12") 4/20/1999	4434.10 B96 (6-12") 4/20/1999	4443.02 B97 (6-12") 4/26/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	0.12 J	ND	0.47 J	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	0.099 J	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.5 J	ND	0.19 J	ND	0.13 J	ND	1.4 J	0.44 J
Benzo[a]pyrene	1.52	ND	ND	0.48 J	ND	0.21 J	ND	ND	ND	1.0 J	0.38 J
Benzo[b]fluoranthene	59.8	0.13 J	ND	0.44 J	ND	0.21 J	ND	0.12 J	ND	1.0 J	0.33 J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	0.54 J	0.15 J
Benzo[k]fluoranthene	148	ND	ND	0.49 J	ND	0.21 J	ND	0.15 J	ND	1.1 J	0.38 J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	0.18JB	0.18JB	ND	0.21JB	**2.0 B**
Chrysene	4.73	0.23 J	ND	0.82 J	0.15 J	0.34 J	ND	0.23 J	ND	2.4	0.5 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.1JB	0.2JB	1.0 JB	0.56JB	ND	0.51JB	0.21JB	0.44JB	0.62JB	0.19JB
Fluoranthene	122	0.18 J	0.15 J	0.77 J	0.15 J	0.39 J	ND	0.17 J	ND	3.6	0.3 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	0.16 J	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.29 J	ND	ND	ND	ND	ND	0.47 J	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.44 J	ND	0.29 J	ND	0.12 J	ND	2.8	ND
Pyrene	78.5	0.19 J	0.2 J	0.96 J	0.18 J	0.43 J	ND	0.18 J	ND	3.3	0.31 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.13	0.014	ND	ND	0.037	0.027	0.118	ND	0.041	0.033
4,4'-DDE	0.596	0.089	ND	0.055	0.018	0.055	0.022	0.095	0.066	0.066	0.082
4,4'-DDT	0.0035	**0.171**	ND	**0.066**	**0.037**	**0.031**	ND	ND	**0.044**	**0.194**	**0.225**
alpha-Chlordane	0.224	ND	ND	0.022	ND	0.046	ND	ND	0.029	ND	ND
Dieldrin	0.0049	**0.018**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	0.014	ND	ND	0.041	ND	ND	0.028	0.013	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Analytical Results
M-2 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4423.04 B88 (6-12") 4/16/1999	4423.06 B89 (6-12") 4/16/1999	4423.08 B90 (6-12") 4/16/1999	4423.10 B91 (6-12") 4/16/1999	4434.02 B92 (6-12") 4/20/1999	4434.04 B93 (6-12") 4/20/1999	4434.06 B94 (6-12") 4/20/1999	4434.08 B95 (6-12") 4/20/1999	4434.10 B96 (6-12") 4/20/1999	4443.02 B97 (6-12") 4/26/1999
Metals (mg/kg)											
Aluminum	50	**8960**	**12700**	**11600**	**13100**	**11000**	**6590**	**8610**	**12000**	**10700**	**11300**
Antimony	0.27	**1.02**	**0.863**	**1.02**	**1.78**	**1.16**	**0.525**	**0.728**	**1.62**	**1.15**	**3.19**
Arsenic	9.9	8.91	**9.98**	7.36	**14.9**	**10.6**	9.64	9.41	9.77	7.74	9.27
Barium	283	43.8	49.4	53.3	34	75.4	44.8	39.2	104	44.2	41.3
Beryllium	10	1.23	1.12	0.843	1.08	0.983	1.19	1.35	1.07	0.835	0.83
Cadmium	0.36	0.286	0.353	**1.17**	ND	0.287	**0.639**	0.171	**0.772**	**156**	2.68
Calcium	NAV	1290	3940	7830	1940	5850	769	1550	14900	3110	3770
Chromium	0.4	**105**	**104**	**79.1**	**114**	**99.4**	**92.8**	**119**	**86.3**	**81.4**	**80.9**
Cobalt	13	1.65	1.83	3.7	1.84	2.42	1.69	2.34	3.06	2.48	2.53
Copper	28	9.7	20.2	25.4	15.4	**39.6**	7.38	9.85	**53.7**	**33.4**	**30.6**
Iron	NAV	26000	30800	27000	31200	29600	21500	28700	29800	24400	27600
Lead	11	**19.6**	**36.1**	**76.6**	**122**	**74.9**	**17.6**	**23.4**	**121**	**59.6**	**69.4**
Magnesium	NAV	3200	3590	4180	3810	3830	2350	3580	4170	2970	3130
Manganese	220	31.3	62.4	131	71.5	123	20.7	27.9	**362**	204	121
Mercury	0.00051	**0.034**	**0.034**	**0.034**	**0.034**	**0.332**	**0.108**	**0.135**	**0.458**	**0.259**	**0.146**
Nickel	30	7.71	8.31	15	7.75	16.6	7.3	9.14	14.4	9.31	8.83
Potassium	NAV	6130	7710	5300	7020	6700	5050	7410	6760	5560	5170
Selenium	0.21	**1.62**	**0.837**	**1.39**	**1.28**	**1.27**	**1.97**	**1.76**	**1.25**	ND	**1.19**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	141	770	328	113	279	101	142	217	165	143
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**41**	**52.7**	**77.8**	**58.4**	**52**	**39.4**	**45.4**	**49.8**	**43.5**	**47.9**
Zinc	8.5	**91**	**99.9**	**150**	**84.9**	**294**	**63.4**	**81.1**	**273**	**131**	**164**

See Notes at End of Table

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Soil Sampling Analytical Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4443.04 B98 (6-12") 4/26/1999	4443.06 B99 (6-12") 4/26/1999	4443.08* B100 (6-12") 4/26/1999	4443.10 B101 (6-12") 4/26/1999	4446.02 B102 (6-12") 4/27/1999	4446.04 B103 (6-12") 4/27/1999	4446.06 B104 (6-12") 4/27/1999	4446.08 B105 (6-12") 4/27/1999	4446.10 B106 (6-12") 4/27/1999	4446.12 B107 (6-12") 4/27/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	0.12 J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	0.12JB	ND	0.14 J	0.23 J	ND	ND	ND
Chrysene	4.73	0.22 J	0.17 J	0.17 J	0.17 J	ND	ND	0.14 J	ND	0.17 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.33JB	0.14JB	0.17JB	ND	ND	0.31 J	0.3 J	0.24 J	0.18 J	0.37 J
Fluoranthene	122	0.18 J	0.13 J	0.12 J	0.16 J	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.17 J	0.17 J	0.13 J	0.16 J	ND	ND	0.13 J	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.026	0.088	0.186	ND	0.482	ND	0.021	0.299	**0.941**	ND
4,4'-DDE	0.596	0.067	0.044	0.119	0.03	0.028	0.014	0.027	0.295	0.257	ND
4,4'-DDT	0.0035	**0.076**	**0.047**	**0.073**	ND	ND	**0.031**	ND	**0.036**	**0.293**	ND
alpha-Chlordane	0.224	0.023	ND	ND	ND	0.017	ND	ND	ND	0.048	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.027	ND	ND	ND	0.025	ND	ND	ND	0.046	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4443.04 B98 (6-12") 4/26/1999	4443.06 B99 (6-12") 4/26/1999	4443.08* B100 (6-12") 4/26/1999	4443.10 B101 (6-12") 4/26/1999	4446.02 B102 (6-12") 4/27/1999	4446.04 B103 (6-12") 4/27/1999	4446.06 B104 (6-12") 4/27/1999	4446.08 B105 (6-12") 4/27/1999	4446.10 B106 (6-12") 4/27/1999	4446.12 B107 (6-12") 4/27/1999
Metals (mg/kg)											
Aluminum	50	**7130**	**12700**	**7660**	**10800**	**14100**	**14200**	**14800**	**15200**	**13100**	**8810**
Antimony	0.27	**1.34**	**0.731**	**0.665**	**1.06**	**0.495**	**0.665**	**1.16**	**0.692**	**0.781**	**0.903**
Arsenic	9.9	7.03	**11.3**	7.18	7.9	9.09	**13.6**	**13**	**10.5**	**11.9**	7.07
Barium	283	47.7	31.1	27.9	50.1	86.4	46.6	39	35	18.3	34.7
Beryllium	10	0.651	1.67	0.959	0.757	1.21	1.65	1.43	1.15	1.28	0.708
Cadmium	0.36	**0.71**	**0.384**	ND	0.177	**0.687**	ND	ND	ND	ND	ND
Calcium	NAV	5210	1060	576	8560	3540	1750	1790	1180	695	4140
Chromium	0.4	**59.9**	**188**	**108**	**70.9**	**110**	**166**	**91.6**	**96.2**	**147**	**59.7**
Cobalt	13	2.15	0.852	0.742	2.45	3.15	1.85	2.49	2.56	0.955	2.97
Copper	28	27.2	8.96	6.09	26	20.8	15.8	16.3	9.13	9.69	**35.9**
Iron	NAV	19200	42600	27700	24400	24100	47000	40700	35100	36700	23400
Lead	11	**147**	**14.9**	9.58	**57.6**	**77.2**	**21.9**	**69.9**	**49.7**	**22.7**	**52.5**
Magnesium	NAV	2520	5910	3170	4290	3090	5810	2640	3480	3950	3060
Manganese	220	195	26.6	14.7	**267**	95.9	68.2	84.6	37.4	21.8	83.9
Mercury	0.00051	**0.177**	**0.092**	**0.041**	**0.228**	**0.119**	**0.052**	**8.091**	**5.465**	**0.315**	**0.071**
Nickel	30	7.52	5.04	3.41	9.28	11.2	9.29	9.15	8.63	5.9	12.2
Potassium	NAV	4280	13700	7170	5130	6480	12600	4900	8100	8980	4270
Selenium	0.21	ND	**1.1**	**1.16**	**1.05**	**1.35**	**0.936**	**0.763**	ND	**1.05**	**0.704**
Silver	2	ND	ND	ND	ND	ND	ND	ND	**5.08**	ND	ND
Sodium	NAV	197	118	104	227	432	124	142	142	125	146
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**32.7**	**64.8**	**41**	**43.4**	**54.6**	**77.6**	**74.8**	**61.6**	**57.8**	**45.7**
Zinc	8.5	**208**	**70.9**	**51.4**	**130**	**101**	**95.9**	**99.6**	**117**	**58.6**	**105**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4462.02 B108 (6-12") 5/4/1999	4462.04 B109 (6-12") 5/4/1999	4462.06 B110 (6-12") 5/4/1999	4462.08 B111 (6-12") 5/4/1999	4462.10 B112 (6-12") 5/4/1999	4466.02 B113 (6-12") 5/6/1999	4466.04 B114 (6-12") 5/6/1999	4466.06 B115 (6-12") 5/6/1999	4466.08 B116 (6-12") 5/6/1999	4466.10 B117 (6-12") 5/6/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	0.17 J	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	0.14 J	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	0.14 J	ND
bis(2-Ethylhexyl)phthalate	0.925	0.22 J	0.13 J	0.18 J	0.17 J	0.13 J	0.12 J	ND	0.19 J	0.14 J	0.18 J
Chrysene	4.73	ND	0.15 J	ND	0.12 J	0.2 J	0.22 J	0.14 J	ND	0.3 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.4 J	0.61 J	0.3 J	0.65 J	ND	0.35JB	0.34JB	0.54JB	0.54JB	0.13JB
Fluoranthene	122	ND	0.14 J	ND	ND	ND	0.18 J	0.12 J	0.17 J	0.27 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	0.14 J	0.26 J	ND
Pyrene	78.5	ND	0.16 J	ND	ND	0.13 J	0.19 J	0.15 J	0.15 J	0.36 J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	0.029	0.156	0.02	0.027	ND	ND	ND
4,4'-DDE	0.596	ND	0.011	ND	0.02	0.173	0.079	0.044	0.013	ND	ND
4,4'-DDT	0.0035	ND	ND	ND	ND	**0.121**	**0.121**	**0.028**	**0.034**	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	0.014	0.017	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	0.014	0.024	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4462.02 B108 (6-12") 5/4/1999	4462.04 B109 (6-12") 5/4/1999	4462.06 B110 (6-12") 5/4/1999	4462.08 B111 (6-12") 5/4/1999	4462.10 B112 (6-12") 5/4/1999	4466.02 B113 (6-12") 5/6/1999	4466.04 B114 (6-12") 5/6/1999	4466.06 B115 (6-12") 5/6/1999	4466.08 B116 (6-12") 5/6/1999	4466.10 B117 (6-12") 5/6/1999
Metals (mg/kg)											
Aluminum	50	**13500**	**17600**	**5290**	**11700**	**8390**	**8310**	**9570**	**11500**	**5010**	**16200**
Antimony	0.27	**0.939**	**0.952**	**0.954**	**0.765**	**2.1**	**1.11**	**1.24**	**0.72**	**1.28**	**0.789**
Arsenic	9.9	**11.9**	**12.4**	4.43	7.79	**23.7**	8.96	8.85	**10.7**	4.37	**17.1**
Barium	283	41.9	31.8	16.4	21	200	28.4	26.3	32.6	11.5	42.5
Beryllium	10	1.34	1.42	0.377	0.892	0.99	0.702	0.754	0.762	0.327	1.38
Cadmium	0.36	ND	ND	**8.11**	ND	**0.569**	ND	**4.3**	ND	ND	ND
Calcium	NAV	356	1200	5850	1420	2730	1350	1790	3650	852	2850
Chromium	0.4	**124**	**148**	**41.8**	**79.8**	**80.6**	**64.9**	**64.1**	**79.7**	**58.3**	**143**
Cobalt	13	1.36	1.72	1.62	1.89	2.56	1.72	2.74	2.32	1.15	2.46
Copper	28	6.28	8.48	14.5	7.48	**79.9**	19.5	26.6	15.1	15.2	**29**
Iron	NAV	38700	40400	13500	26800	24900	18800	26000	25600	14000	40600
Lead	11	10.5	**17**	**40.5**	**16.4**	**107**	**48.1**	**37.9**	**30.4**	**16.1**	**42.1**
Magnesium	NAV	3650	4590	1400	2290	2180	1680	2140	2190	799	4660
Manganese	220	32.5	53.6	60	48.7	**551**	49.9	69.7	212	41.4	153
Mercury	0.00051	**0.046**	**0.04**	**0.045**	**0.031**	**0.267**	**0.153**	**0.073**	**0.071**	ND	**0.08**
Nickel	30	6.48	7.49	5.26	9.73	8.21	6.4	7.32	7.96	3.01	**69.4**
Potassium	NAV	10200	11800	2420	5630	5900	4080	4490	4130	1880	11300
Selenium	0.21	**1.03**	**1.04**	ND	ND	**1.66**	**1.07**	**0.781**	**0.808**	ND	**0.897**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	112	104	105	97.1	147	89.1	178	201	218	215
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**53.2**	**67.5**	**24.7**	**77.5**	**31.4**	**33.4**	**44.9**	**43.3**	**43.1**	**59.8**
Zinc	8.5	**56**	**89.8**	**47.7**	**47.6**	**606**	**95.5**	**83.9**	**87.2**	**52.4**	**102**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4466.12 B118 (6-12") 5/6/1999	4468.02 B119 (6-12") 5/7/1999	4468.04 B120 (6-12") 5/7/1999	4468.06 B121 (6-12") 5/7/1999	4468.08 B122 (6-12") 5/7/1999	4468.10 B123 (6-12") 5/7/1999	4468.12 B124 (6-12") 5/7/1999	4468.14 B125 (6-12") 5/7/1999	4468.16 B126 (6-12") 5/7/1999	4468.18 B127 (6-12") 5/7/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	0.23 J	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.14 J	ND	ND	0.72 J	0.15 J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.11 J	ND	ND	0.54 J	0.16 J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	0.44 J	0.14 J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	0.44 J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	0.44 J	0.13 J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.12 J	0.32 J	ND	0.12 J	ND	ND	ND	0.39 J	ND	ND
Chrysene	4.73	ND	ND	0.18 J	0.24 J	ND	ND	1.1 J	0.25 J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.7JB	0.87JB	0.22JB	0.67JB	0.17JB	0.25JB	ND	ND	0.29JB	0.56JB
Fluoranthene	122	ND	0.13 J	0.15 J	0.25 J	ND	ND	1.6	0.2 J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.2 J	ND	ND	1.3	ND	ND	ND
Pyrene	78.5	ND	0.14 J	0.21 J	0.24 J	ND	ND	1.8	0.27 J	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	0.172	0.022	0.014	ND	ND	ND	0.022	ND	0.017
4,4'-DDE	0.596	ND	0.34	0.019	0.023	ND	0.013	0.012	0.026	ND	0.013
4,4'-DDT	0.0035	ND	**1.836**	**0.124**	**0.057**	ND	ND	ND	ND	ND	**0.038**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	0.012	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	**1.764**	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4466.12 B118 (6-12") 5/6/1999	4468.02 B119 (6-12") 5/7/1999	4468.04 B120 (6-12") 5/7/1999	4468.06 B121 (6-12") 5/7/1999	4468.08 B122 (6-12") 5/7/1999	4468.10 B123 (6-12") 5/7/1999	4468.12 B124 (6-12") 5/7/1999	4468.14 B125 (6-12") 5/7/1999	4468.16 B126 (6-12") 5/7/1999	4468.18 B127 (6-12") 5/7/1999
Metals (mg/kg)											
Aluminum	50	**10100**	**18400**	**13200**	**17700**	**12000**	**17200**	**18600**	**12800**	**5780**	**12600**
Antimony	0.27	**0.538**	**1.25**	**0.913**	**0.942**	**0.57**	**1.12**	**0.932**	**1.1**	**1.02**	**1.1**
Arsenic	9.9	5.19	**17.7**	**15.5**	**12.4**	**10.1**	**13.2**	**15.6**	**10.4**	4.47	**21.2**
Barium	283	21.7	19.7	29.8	37.4	20.4	38.7	49.9	37.6	9.7	19.2
Beryllium	10	0.383	1.52	1.19	1.13	1.18	1.32	1.68	0.949	0.29	1.01
Cadmium	0.36	**0.802**	ND	ND	ND	ND	ND	**0.885**	ND	ND	ND
Calcium	NAV	275	868	1640	1170	705	3480	2810	2710	111	1260
Chromium	0.4	**44**	**135**	**128**	**111**	**99**	**157**	**136**	**97.5**	**30.9**	**103**
Cobalt	13	1.39	2.02	1.38	2.39	1.86	2.88	3.64	2.84	1.08	1.3
Copper	28	7.12	12.9	21.8	20	9.03	25.5	21.4	22.9	4.32	12.1
Iron	NAV	15400	45400	33200	33300	34500	40400	48900	30700	13100	29000
Lead	11	8.74	**30.4**	**30.1**	**32**	9.95	**36.5**	**43.3**	**47.6**	5.27	**18.7**
Magnesium	NAV	899	4540	3770	3310	3180	4520	4670	3320	575	2430
Manganese	220	54.7	52.9	57	51.8	37.5	**298**	147	175	35.3	56.1
Mercury	0.00051	**0.035**	**0.043**	**0.063**	**0.269**	**0.04**	**0.054**	**0.099**	**0.101**	**0.066**	**0.153**
Nickel	30	4.46	8.97	6.78	7.78	6.58	9.28	11.2	17	3.53	6.12
Potassium	NAV	2320	11600	9600	8270	9010	10100	12700	7370	1450	5980
Selenium	0.21	ND	**1.34**	**0.817**	**0.913**	ND	**1.08**	**1.02**	**0.902**	**0.711**	**2.28**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	58.2	132	247	203	131	222	199	222	94.4	111
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**35.6**	**63.1**	**51.1**	**65.2**	**50.7**	**65.6**	**63.1**	**49.9**	**26.5**	**40**
Zinc	8.5	**35.2**	**70.5**	**71.7**	**62.3**	**54.1**	**95.6**	**125**	**125**	**29.6**	**72**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4472.02 B128 (6-12") 5/10/1999	4472.04 B129 (6-12") 5/10/1999	4472.06 B130 (6-12") 5/10/1999	4472.08 B131 (6-12") 5/10/1999	4472.10 B132 (6-12") 5/10/1999	4472.12 B133 (6-12") 5/10/1999	4472.14 B134 (6-12") 5/10/1999	4472.16 B135 (6-12") 5/10/1999	4472.18 B136 (6-12") 5/10/1999	4472.20 B137 (6-12") 5/10/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	0.58 J	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	0.75 J	0.21 J	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.18 J	0.19 J	0.17 J	1.6	0.84 J	ND	ND	ND	ND	0.18 J
Benzo[a]pyrene	1.52	0.19 J	0.19 J	0.21 J	**1.6**	0.77 J	ND	ND	ND	ND	0.17 J
Benzo[b]fluoranthene	59.8	0.17 J	0.18 J	0.18 J	1.3	0.68 J	ND	ND	0.12 J	ND	0.15 J
Benzo[g,h,I]perylene	119	0.14 J	ND	0.16 J	0.93 J	0.45 J	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.18 J	0.15 J	0.18 J	1.3	0.63 J	ND	ND	ND	ND	0.15 J
bis(2-Ethylhexyl)phthalate	0.925	0.26 J	0.27 J	0.15 J	0.12 J	0.16 J	ND	0.14 J	0.22 J	0.17 J	0.15 J
Chrysene	4.73	0.41 J	0.37 J	0.33 J	2.8	1.4	ND	ND	0.29 J	ND	0.34 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	0.31 J	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	0.11 J	ND	0.17 J	ND	ND
Di-n-butylphthalate	200	0.67JB	0.61JB	0.19JB	0.81JB	0.48JB	0.16JB	0.55JB	0.45JB	0.88JB	0.93JB
Fluoranthene	122	0.35 J	0.3 J	0.26 J	4.2	1.9	ND	ND	0.23 J	ND	0.34 J
Fluorene	122	ND	ND	ND	0.5 J	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.13 J	ND	0.15 J	0.9 J	0.44 J	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	**0.4 J**	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.21 J	0.18 J	0.16 J	4.0	0.71 J	ND	ND	ND	ND	0.21 J
Pyrene	78.5	0.38 J	0.32 J	0.29 J	3.4	1.5	ND	ND	0.2 J	ND	0.29 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.025	0.059	0.019	ND	ND	ND	ND	0.044	0.08	0.033
4,4'-DDE	0.596	0.021	0.035	0.014	0.01	0.018	ND	ND	0.029	0.021	0.018
4,4'-DDT	0.0035	ND	**0.04**	ND	ND	ND	ND	ND	**0.032**	ND	ND
alpha-Chlordane	0.224	ND	0.013	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	**0.029**	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4472.02 B128 (6-12") 5/10/1999	4472.04 B129 (6-12") 5/10/1999	4472.06 B130 (6-12") 5/10/1999	4472.08 B131 (6-12") 5/10/1999	4472.10 B132 (6-12") 5/10/1999	4472.12 B133 (6-12") 5/10/1999	4472.14 B134 (6-12") 5/10/1999	4472.16 B135 (6-12") 5/10/1999	4472.18 B136 (6-12") 5/10/1999	4472.20 B137 (6-12") 5/10/1999
Metals (mg/kg)											
Aluminum	50	**11000**	**10500**	**12100**	**17300**	**12500**	**5940**	**8930**	**12500**	**7700**	**9250**
Antimony	0.27	**1.43**	**0.861**	**1.1**	**1.16**	**0.712**	ND	ND	**1.19**	**0.903**	**0.971**
Arsenic	9.9	**10.3**	8.7	**19.4**	**15.1**	**11**	4.56	4.2	**16.2**	**14.9**	6.79
Barium	283	33.8	35.3	42.5	54.3	32.4	24	16.8	29.6	83.4	27.2
Beryllium	10	0.907	0.816	1.15	1.82	1.28	0.331	0.359	1.06	1.12	0.697
Cadmium	0.36	**1.34**	**0.595**	**0.699**	**0.697**	**0.563**	0.246	0.217	**1.21**	**0.413**	**0.681**
Calcium	NAV	2530	1930	5190	800	2610	353	180	1910	2110	1710
Chromium	0.4	**170**	**81.4**	**175**	**235**	**104**	**37.3**	**37.6**	**115**	**113**	**63.8**
Cobalt	13	2.46	2.29	2.13	1.04	2.63	1.52	1.46	1.72	1.24	2.08
Copper	28	20.5	19.9	24.3	11.8	11	10.8	4.3	**28.8**	11	11.9
Iron	NAV	28500	25500	44500	56500	39300	14400	15100	33100	32000	23400
Lead	11	**41.9**	**72.7**	**29.8**	**11.2**	**28.4**	10.5	5.79	**36.9**	**13.4**	**40.4**
Magnesium	NAV	3590	2800	4380	7390	4170	899	993	3750	3950	2400
Manganese	220	164	66	**503**	31	87.8	65.2	38.6	66.2	50.5	62.6
Mercury	0.00051	**0.619**	**1.571**	**0.585**	**0.292**	**0.244**	**0.161**	**0.241**	**0.627**	**0.202**	**0.19**
Nickel	30	9.27	7.78	7.67	7.75	9.48	3.71	4.0	8.01	5.68	7.74
Potassium	NAV	6860	5660	8260	16900	9620	1930	2330	7480	9840	5040
Selenium	0.21	**1.27**	**1.36**	**2.7**	**3.06**	**1.02**	**0.808**	ND	**1.74**	**3.15**	**1.15**
Silver	2	ND	ND	ND	ND	ND	ND	ND	1.58	ND	ND
Sodium	NAV	141	158	928	869	367	419	78.6	888	159	162
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**48.3**	**50**	**52.6**	**71.9**	**53.6**	**32.9**	**32.7**	**59.5**	**31**	**52.1**
Zinc	8.5	**83.7**	**87.4**	**90.3**	**81**	**66.4**	**51.7**	**18.4**	**78.3**	**109**	**63.7**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4472.22 B138 (6-12") 5/10/1999	4472.24 B139 (6-12") 5/10/1999	4472.26 B140 (6-12") 5/10/1999	4472.28 B141 (6-12") 5/10/1999	4472.30 B142 (6-12") 5/10/1999	4475.02 B142A (6-12") 5/11/1999	4475.04 B143 (6-12") 5/11/1999	4475.06 B144 (6-12") 5/11/1999	4475.08 B145 (6-12") 5/11/1999	4475.10 B146 (6-12") 5/11/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.24 J	ND	0.13 J	ND	ND	ND	0.19 J	0.2 J	0.11 J
Benzo[a]pyrene	1.52	ND	0.27 J	ND	0.15 J	ND	ND	ND	0.21 J	0.21 J	0.11 J
Benzo[b]fluoranthene	59.8	ND	0.26 J	ND	0.13 J	ND	ND	ND	0.28 J	0.28 J	0.11 J
Benzo[g,h,I]perylene	119	ND	0.17 J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	0.23 J	ND	0.12 J	ND	ND	ND	0.27 J	0.2 J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.13 J	0.21 J	0.33 J	ND	ND	ND	ND	0.16 J	ND
Chrysene	4.73	ND	0.46 J	0.18 J	0.28 J	ND	ND	ND	1.1 J	0.53 J	0.21 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.18 J	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.23JB	0.41JB	0.23JB	0.81JB	0.15JB	0.24JB	0.41JB	0.25JB	0.96JB	0.22JB
Fluoranthene	122	ND	0.34 J	0.16 J	0.24 J	ND	ND	ND	0.3 J	0.26 J	0.18 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.18 J	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.11 J	0.11 J	ND	ND	ND	0.15 J	ND	ND
Pyrene	78.5	ND	0.33 J	0.15 J	0.25 J	ND	ND	ND	0.25 J	0.26 J	0.17 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.21	0.033	ND	0.101	ND	**1.75**	0.022	0.058	0.055	0.041
4,4'-DDE	0.596	0.056	0.019	0.01	0.061	ND	**3.705**	0.018	0.044	0.06	0.052
4,4'-DDT	0.0035	ND	**0.028**	ND	**0.083**	ND	**6.811**	ND	**0.881**	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.028
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.019	ND	ND	ND	ND	ND	ND	ND	ND	0.019
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4472.22 B138 (6-12") 5/10/1999	4472.24 B139 (6-12") 5/10/1999	4472.26 B140 (6-12") 5/10/1999	4472.28 B141 (6-12") 5/10/1999	4472.30 B142 (6-12") 5/10/1999	4475.02 B142A (6-12") 5/11/1999	4475.04 B143 (6-12") 5/11/1999	4475.06 B144 (6-12") 5/11/1999	4475.08 B145 (6-12") 5/11/1999	4475.10 B146 (6-12") 5/11/1999
Metals (mg/kg)											
Aluminum	50	**6700**	**12000**	**4170**	**7960**	**5100**	**6510**	**10700**	**6430**	**5810**	**12100**
Antimony	0.27	**3.4**	**0.868**	ND	**0.681**	ND	**0.939**	**1.3**	**0.881**	**1.51**	**0.818**
Arsenic	9.9	6.9	**13.7**	5.02	7.29	3.81	7.77	**11.5**	**15.1**	6.54	8.66
Barium	283	38.8	40.1	17.5	44.6	8.96	13.2	46.5	68.4	33.6	39.5
Beryllium	10	0.564	1.12	0.399	0.66	0.281	0.751	1.18	1.02	0.593	1.22
Cadmium	0.36	0.328	**0.573**	**0.382**	**0.406**	0.252	**0.369**	**0.616**	**0.723**	**1.03**	**0.675**
Calcium	NAV	1710	1820	6300	1410	117	384	1380	2580	3760	1590
Chromium	0.4	**41.9**	**99.7**	**41.7**	**62.3**	**32.1**	**54.7**	**107**	**81.8**	**49.8**	**113**
Cobalt	13	4.96	2.61	1.71	2.17	1.32	1.31	1.43	1.55	2.17	1.84
Copper	28	**51.8**	11.2	14.7	11.8	3.93	9.12	**43.2**	9.73	22.6	23.1
Iron	NAV	20300	35900	14600	18800	13600	18200	34700	25700	18000	35600
Lead	11	**37.4**	**18**	**30**	**29.2**	4.95	**38.6**	**39.1**	**21.2**	**48.8**	**22.6**
Magnesium	NAV	2160	4090	3700	2020	696	1060	3520	2760	1870	4190
Manganese	220	59.4	68.7	120	90.7	33.6	11.9	27.2	69.3	85	56.2
Mercury	0.00051	**0.522**	**0.282**	**0.207**	**0.213**	**0.161**	**0.605**	**5.836**	**0.731**	**0.461**	**0.366**
Nickel	30	8.55	8.1	5.56	6.06	3.28	6.5	6.33	6.8	8.21	6.74
Potassium	NAV	3070	9380	2790	4070	1480	2160	7830	6910	3720	9750
Selenium	0.21	ND	**1.57**	**0.708**	**1.01**	ND	**1.44**	**1.75**	**1.98**	**1.38**	**1.04**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	197	150	334	245	110	96	133	164	446	180
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**31.2**	**51.6**	**22.6**	**36.3**	**28.6**	**51.5**	**48.9**	**25.3**	**32**	**54.7**
Zinc	8.5	**122**	**94.6**	**56.5**	**54.9**	**15.6**	**52.4**	**55.2**	**67.6**	**117**	**107**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4475.12 B147 (6-12") 5/11/1999	4475.14 B148 (6-12") 5/11/1999	4475.16 B149 (6-12") 5/11/1999	4475.18 B150 (6-12") 5/11/1999	4475.20 B151 (6-12") 5/11/1999	4475.22 B152 (6-12") 5/11/1999	4475.24 B153 (6-12") 5/11/1999	4475.26 B154 (6-12") 5/11/1999	4475.28 B155 (6-12") 5/11/1999	4475.30 B156 (6-12") 5/11/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	0.26 J	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	0.17 J	0.99	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.13 J	0.36 J	2.4	ND	0.13 J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.13 J	0.33 J	**1.9**	ND	0.14 J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.14 J	0.32 J	1.9	ND	0.17 J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.11 J	0.31 J	1.3	ND	0.12 J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.18 J	ND	ND	0.35 J	ND	ND
Chrysene	4.73	0.17 J	ND	ND	0.26 J	0.62 J	3.7	ND	0.28 J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	0.28 J	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	0.14 J	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.67JB	0.58JB	0.52JB	0.82JB	0.83JB	0.65JB	0.9JB	0.76JB	0.64JB	ND
Fluoranthene	122	0.12 J	ND	ND	0.2 J	0.84 J	6.2	0.18 J	0.27 J	0.12 J	ND
Fluorene	122	ND	ND	ND	ND	ND	0.31 J	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.18 J	1.1	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	0.65 J	4.1	ND	0.17 J	ND	ND
Pyrene	78.5	0.13 J	ND	ND	0.18 J	0.61 J	4.4	0.16 J	0.29 J	0.13 J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.021	ND	ND	0.135	0.045	0.087	0.153	0.13	0.076	**1.163**
4,4'-DDE	0.596	0.018	ND	ND	0.074	0.039	0.049	0.112	0.047	ND	0.336
4,4'-DDT	0.0035	**0.264**	ND	ND	**0.141**	**0.033**	**0.029**	**0.044**	**0.033**	ND	**1.163**
alpha-Chlordane	0.224	ND	ND	ND	ND	0.013	0.018	0.017	0.016	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.068**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	0.016	0.025	0.027	0.017	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	**1.672**	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4475.12 B147 (6-12") 5/11/1999	4475.14 B148 (6-12") 5/11/1999	4475.16 B149 (6-12") 5/11/1999	4475.18 B150 (6-12") 5/11/1999	4475.20 B151 (6-12") 5/11/1999	4475.22 B152 (6-12") 5/11/1999	4475.24 B153 (6-12") 5/11/1999	4475.26 B154 (6-12") 5/11/1999	4475.28 B155 (6-12") 5/11/1999	4475.30 B156 (6-12") 5/11/1999
Metals (mg/kg)											
Aluminum	50	**9420**	**5030**	**7100**	**12400**	**9880**	**9750**	**14200**	**6460**	**10200**	**15000**
Antimony	0.27	**0.752**	**0.681**	**3.21**	**1.13**	**0.99**	**0.875**	**2.03**	**0.851**	**2.57**	**0.863**
Arsenic	9.9	6.38	4.28	**27.4**	9.48	7.41	6.16	**14.3**	6.04	**67.1**	**15.1**
Barium	283	30.4	19.2	**453**	51.7	78.4	35.7	81.2	26.5	**501**	20.8
Beryllium	10	0.90	0.291	0.769	1.23	0.641	0.671	1.48	0.587	1.34	2.00
Cadmium	0.36	**0.492**	**0.735**	**2.53**	**0.724**	**1.15**	**0.544**	**1.00**	**0.882**	**1.29**	**1.52**
Calcium	NAV	874	317	4200	769	1940	1920	3310	1980	3390	501
Chromium	0.4	**84.8**	**32.3**	**67.6**	**135**	**65.5**	**71.5**	**153**	**53.1**	**81.9**	**153**
Cobalt	13	1.42	1.1	3.28	1.58	1.94	2.85	3.1	1.83	4.46	2.88
Copper	28	5.32	6.29	**266**	13.1	14.8	**31.8**	**32.3**	14.8	**87.8**	5.62
Iron	NAV	25600	13400	20300	37500	19500	21700	42500	18800	32800	57100
Lead	11	**20.3**	7.38	**189**	**26.5**	**61**	**50.7**	**190**	**30.8**	**88.2**	**11.2**
Magnesium	NAV	3030	766	1900	3660	2450	2600	5730	2370	3760	6300
Manganese	220	31.9	50.1	**4680**	16.2	82.6	186	177	62.4	**1080**	44.2
Mercury	0.00051	**0.345**	**0.249**	**1.686**	**0.538**	**1.396**	**0.398**	**0.371**	**0.80**	**0.756**	**0.46**
Nickel	30	5.12	3.03	7.94	7.28	6.14	7.49	9.65	6.3	11.4	10.4
Potassium	NAV	7180	1660	2240	8250	3750	3700	12400	4200	5070	16900
Selenium	0.21	**1.06**	**1.05**	**1.82**	**1.5**	**0.928**	**1.32**	**1.67**	**0.698**	**1.9**	**2.06**
Silver	2	ND	ND	0.63	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	156	393	122	116	218	183	381	692	447	115
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**43.5**	**28.9**	**28.1**	**84.4**	**38**	**41.5**	**52.4**	**30.5**	**42.7**	**39.4**
Zinc	8.5	**38.1**	**25**	**4510**	**57.2**	**68.5**	**88**	**217**	**68.7**	**532**	**72.9**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4475.32 B157 (6-12") 5/11/1999	4485.02 B158 (6-12") 5/14/1999	4485.04 B159 (6-12") 5/14/1999	4485.06 B160 (6-12") 5/14/1999	4485.08 B161 (6-12") 5/14/1999	4485.10 B162 (6-12") 5/14/1999	4485.12 B163 (6-12") 5/14/1999	4485.14 B164 (6-12") 5/14/1999	4485.16 B165 (6-12") 5/14/1999	4485.18 B166 (6-12") 5/14/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.31 J	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.98	0.33 J	0.19 J	0.37 J	0.2 J	ND	0.19 J	ND	0.18 J
Benzo[a]pyrene	1.52	0.099 J	0.84	0.31 J	0.17 J	0.55 J	0.2 J	ND	0.19 J	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.85 J	0.31 J	0.16 J	0.49 J	0.2 J	ND	0.19 J	ND	0.2 J
Benzo[g,h,I]perylene	119	ND	0.46 J	ND	ND	0.29 J	ND	ND	0.15 J	ND	ND
Benzo[k]fluoranthene	148	ND	0.63 J	0.24 J	0.13 J	0.4 J	0.16 J	ND	0.16 J	ND	0.17 J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.2 J	0.13 J	0.12 J	0.12 J	0.15 J	0.15 J	0.12 J	ND	0.19 J
Chrysene	4.73	0.17 J	1.4	0.55 J	0.32 J	0.78 J	0.36 J	ND	0.39 J	ND	0.33 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.0 B	0.21 JB	0.15JB	0.45JB	0.56JB	0.59JB	0.81JB	0.6JB	0.58JB	0.68JB
Fluoranthene	122	0.15 J	2.6	0.67 J	0.39 J	0.62 J	0.4 J	ND	0.25 J	ND	0.34 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.5 J	ND	ND	0.29 J	ND	ND	0.13 J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	1.2 J	0.28 J	0.21 J	0.39 J	0.25 J	ND	ND	ND	0.13 J
Pyrene	78.5	0.13 J	1.8 J	0.51 J	0.34 J	0.58 J	0.42 J	ND	0.26 J	ND	0.3 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.675	0.027	0.029	0.028	0.047	0.043	0.015	0.048	0.105	0.037
4,4'-DDE	0.596	0.257	0.086	0.051	0.023	0.032	ND	ND	0.042	ND	0.079
4,4'-DDT	0.0035	**0.741**	**0.085**	ND	ND	ND	ND	ND	**0.037**	**0.056**	**0.036**
alpha-Chlordane	0.224	ND	0.017	0.015	0.011	0.013	ND	ND	ND	ND	0.017
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.028**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	0.015	0.013	0.015	0.015	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	**3.082**	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	**1.929**	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4475.32 B157 (6-12") 5/11/1999	4485.02 B158 (6-12") 5/14/1999	4485.04 B159 (6-12") 5/14/1999	4485.06 B160 (6-12") 5/14/1999	4485.08 B161 (6-12") 5/14/1999	4485.10 B162 (6-12") 5/14/1999	4485.12 B163 (6-12") 5/14/1999	4485.14 B164 (6-12") 5/14/1999	4485.16 B165 (6-12") 5/14/1999	4485.18 B166 (6-12") 5/14/1999
Metals (mg/kg)											
Aluminum	50	**12100**	**8310**	**6430**	**4760**	**5590**	**9010**	**12000**	**14000**	**9650**	**11800**
Antimony	0.27	**1.54**	ND	ND	ND	**0.612**	**1.06**	**0.553**	**1.17**	**8.45**	**1.57**
Arsenic	9.9	9.62	9.26	6.63	4.64	4.64	6.92	**10.6**	**11.2**	9.32	**13.9**
Barium	283	33.6	56.5	38.8	23.3	49.5	31.3	39.4	51.5	39.1	57
Beryllium	10	1.18	0.758	0.663	0.343	0.368	0.696	0.918	1.22	1.01	1.12
Cadmium	0.36	**0.472**	**0.831**	**0.477**	0.352	**0.465**	**0.666**	**0.478**	**0.922**	**1.24**	**1.11**
Calcium	NAV	1050	4000	3630	1120	1170	1650	1610	908	1440	3300
Chromium	0.4	**90.8**	**69.2**	**46.2**	**26.9**	**27.6**	**68**	**63.4**	**122**	**87.5**	**120**
Cobalt	13	2.86	2.87	3.61	1.65	1.54	2.4	3.31	2.12	5.22	3.41
Copper	28	**41.7**	26.6	**40.4**	16.6	17.2	**70.2**	6.94	**49.6**	**90**	26.3
Iron	NAV	31600	21700	16400	11800	11500	22700	28500	33500	27500	29200
Lead	11	**39**	**81.8**	**93.5**	**37.5**	**58.8**	**40.6**	**20.8**	**39.1**	**63.3**	**170**
Magnesium	NAV	3590	2350	1660	950	979	2260	2600	4090	2900	3420
Manganese	220	37	133	81.6	61	63.9	78.6	87.9	45.5	180	141
Mercury	0.00051	**1.214**	**0.059**	**0.147**	**0.16**	**0.193**	**0.255**	**0.285**	**4.75**	**3.85**	**1.2**
Nickel	30	9.45	11.4	14.8	4.98	5.23	7.37	9.39	8.24	9.52	13.7
Potassium	NAV	6990	4760	2670	1270	1350	4300	5840	9380	6530	7030
Selenium	0.21	**1.82**	**1.19**	**1.18**	**0.665**	**0.869**	**1.26**	**0.915**	**1.5**	**1.24**	**1.32**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	1.11	**2.65**
Sodium	NAV	130	206	139	94.5	125	571	191	183	126	187
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**52.7**	**30.8**	**22.9**	**19.6**	**20.7**	**50**	**45.4**	**63.8**	**48.2**	**48.7**
Zinc	8.5	**63.3**	**161**	**202**	**61.6**	**114**	**182**	**90.1**	**175**	**444**	**129**

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Soil Sampling Analytical Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4485.20 B167 (6-12") 5/14/1999	4485.22 B168 (6-12") 5/14/1999	4485.24 B169 (6-12") 5/14/1999	4485.26 B170 (6-12") 5/14/1999	4491.02 B171 (6-12") 5/17/1999	4491.04 B172 (6-12") 5/17/1999	4491.06 B173 (6-12") 5/17/1999	4491.08 B174 (6-12") 5/17/1999	4491.10 B175 (6-12") 5/17/1999	4491.12 B176 (6-12") 5/17/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND	0.14 J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.11 J	ND	ND	0.54 J	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	0.33 J	ND	ND	ND	0.26 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.35JB	0.3JB	0.7JB	ND	0.71JB	1.2 B	0.27JB	0.38JB	0.69JB	0.2JB
Fluoranthene	122	0.17 J	ND	ND	ND	ND	0.24 J	ND	ND	ND	0.27 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND	0.16 J
Pyrene	78.5	0.17 J	ND	ND	ND	ND	0.29 J	ND	ND	ND	0.24 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.031	0.037	0.017	ND	0.048	0.077	0.02	ND	0.017	0.017
4,4'-DDE	0.596	0.019	0.018	ND	ND	0.047	0.04	0.015	0.018	0.013	0.014
4,4'-DDT	0.0035	ND	**0.285**	ND	ND	**0.038**	**0.025**	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.013
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Soil Sampling Analytical Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4485.20 B167 (6-12") 5/14/1999	4485.22 B168 (6-12") 5/14/1999	4485.24 B169 (6-12") 5/14/1999	4485.26 B170 (6-12") 5/14/1999	4491.02 B171 (6-12") 5/17/1999	4491.04 B172 (6-12") 5/17/1999	4491.06 B173 (6-12") 5/17/1999	4491.08 B174 (6-12") 5/17/1999	4491.10 B175 (6-12") 5/17/1999	4491.12 B176 (6-12") 5/17/1999
Metals (mg/kg)											
Aluminum	50	**12000**	**12400**	**10100**	**7490**	**12200**	**12100**	**6100**	**8620**	**10600**	**8970**
Antimony	0.27	**0.82**	**0.579**	ND	ND	**2.04**	**1.61**	**0.884**	**1.02**	**0.51**	**1.05**
Arsenic	9.9	9.03	6.78	6.00	5.39	**31.4**	**11.8**	6.39	4.73	8.21	8.91
Barium	283	39.4	41.1	33.5	23.9	40	62.6	22.6	30.6	58.4	39.3
Beryllium	10	0.957	0.654	0.605	0.441	1.62	1.36	0.541	0.596	0.694	0.717
Cadmium	0.36	**0.568**	**0.411**	0.338	0.288	**2.17**	**2.71**	**1.35**	**0.866**	**0.995**	**1.12**
Calcium	NAV	1520	1390	1120	1190	743	2220	767	1090	1190	1790
Chromium	0.4	**64.5**	**44.8**	**38.9**	**34.5**	**121**	**121**	**42.9**	**50.6**	**37.6**	**59.9**
Cobalt	13	3.7	2.52	2.93	1.68	3.94	3.44	1.54	1.87	2.79	2.11
Copper	28	16.7	11.9	8.46	6.49	**114**	**53**	**93.1**	18.7	14.3	21
Iron	NAV	27100	19800	16800	13700	37900	33400	15700	16500	21000	22800
Lead	11	**28.2**	**51.5**	**26**	**13.3**	**116**	**52.5**	**24.9**	**46.5**	**126**	**68.8**
Magnesium	NAV	2560	1950	1560	1320	4090	4050	1410	1810	1550	2270
Manganese	220	87	114	68	39.1	57.1	98.2	66.1	49.2	163	81.3
Mercury	0.00051	**2.628**	**0.512**	**0.399**	**0.224**	**0.883**	**0.713**	**0.063**	ND	**0.144**	**0.089**
Nickel	30	8.92	6.55	5.92	4.33	8.64	14.3	4.1	5.42	8.02	10.4
Potassium	NAV	5720	3740	2950	2890	9360	9360	2560	3230	2080	4460
Selenium	0.21	**1.29**	ND	**0.984**	ND	**1.59**	**1.78**	**0.85**	**1.01**	**0.872**	**1.28**
Silver	2	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND
Sodium	NAV	128	205	172	139	109	249	89.7	126	121	151
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**44.7**	**38.5**	**29.6**	**23.3**	**61.6**	**60.1**	**29.8**	**35.4**	**42.2**	**40**
Zinc	8.5	**105**	**56.4**	**43.6**	**25.3**	**110**	**228**	**54.3**	**64**	**83.5**	**75.6**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4491.14 B177 (6-12") 5/17/1999	4491.16 B178 (6-12") 5/17/1999	4491.18 B179 (6-12") 5/17/1999	4491.20 B180 (6-12") 5/17/1999	4491.22 B181 (6-12") 5/17/1999	4491.24 B182 (6-12") 5/17/1999	4491.26 B183 (6-12") 5/17/1999	4491.28 B184 (6-12") 5/17/1999	4494.02 B185 (6-12") 5/18/1999	4494.04 B186 (6-12") 5/18/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.12 J	ND	ND	ND	ND	0.13 J	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	0.12JB	ND	ND	ND	ND
Di-n-butylphthalate	200	1.JB	1.2B	0.32JB	0.12JB	ND	0.23JB	0.15JB	0.12JB	0.2JB	0.14JB
Fluoranthene	122	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND	0.14 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	ND	0.11 J	ND	ND	ND	0.13 J	ND	ND	0.17 J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.02	0.023	0.036	0.067	ND	ND	0.015	ND	ND	0.017
4,4'-DDE	0.596	0.017	0.056	0.055	0.152	0.024	0.034	0.027	0.082	ND	0.016
4,4'-DDT	0.0035	ND	**0.055**	**0.035**	**0.42**	ND	**0.04**	ND	**0.102**	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	**5.983**	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4491.14 B177 (6-12") 5/17/1999	4491.16 B178 (6-12") 5/17/1999	4491.18 B179 (6-12") 5/17/1999	4491.20 B180 (6-12") 5/17/1999	4491.22 B181 (6-12") 5/17/1999	4491.24 B182 (6-12") 5/17/1999	4491.26 B183 (6-12") 5/17/1999	4491.28 B184 (6-12") 5/17/1999	4494.02 B185 (6-12") 5/18/1999	4494.04 B186 (6-12") 5/18/1999
Metals (mg/kg)											
Aluminum	50	**10500**	**2330**	**2030**	**1290**	**1470**	**2070**	**1430**	**1620**	**1620**	**914**
Antimony	0.27	**1.53**	**1.39**	**0.967**	**0.827**	**0.793**	**0.583**	**0.916**	**0.402**	ND	**0.605**
Arsenic	9.9	7.03	5.95	5.21	7.52	3.35	9.57	4.12	5.91	3.67	8.39
Barium	283	36.1	31.8	16.2	18.1	13.6	8.78	22.7	17.5	11.4	42.7
Beryllium	10	0.793	0.243	0.525	0.218	0.147	0.171	0.192	0.194	0.228	0.209
Cadmium	0.36	**1.06**	**1.42**	**0.666**	**0.797**	**0.536**	**0.565**	**1.1**	**0.626**	**0.669**	**0.459**
Calcium	NAV	2040	1050	611	1500	742	357	1800	969	434	1180
Chromium	0.4	**69.4**	**16.1**	**17.3**	**9.21**	**9.27**	**13.7**	**6.03**	**11.4**	**11.7**	**94.3**
Cobalt	13	2.38	0.557	0.757	0.752	0.38	0.41	0.733	0.578	0.481	6.51
Copper	28	24.1	16.8	**33.2**	26.8	13	11	18.9	11.5	7.61	17.8
Iron	NAV	22000	6590	7080	5970	3710	8760	5690	5470	6370	7410
Lead	11	**61.7**	**12.7**	**22.9**	**21.1**	**12.6**	9.58	**62**	**56.3**	**22.6**	**18.7**
Magnesium	NAV	2460	191	165	136	139	96.4	198	212	84.2	2010
Manganese	220	85.4	46.9	19.3	30.5	17.8	15.3	36.3	39.6	9.83	64.8
Mercury	0.00051	**0.125**	ND	**1.9**	**0.805**	**1.11**	**0.361**	**0.545**	**0.965**	**1.32**	**1.69**
Nickel	30	7.65	6.38	2.14	2.79	1.35	1.2	2.91	1.57	1.96	**1760**
Potassium	NAV	4760	224	210	278	134	140	283	189	71.4	623
Selenium	0.21	**0.908**	ND	**0.816**	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	**11.1**	ND
Sodium	NAV	142	82.2	78.9	101	73.6	58.8	83.8	356	221	144
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**47.6**	**13.3**	**17.9**	**9.45**	**10**	**14.2**	**10.6**	**10**	**7.99**	**9.93**
Zinc	8.5	**82.4**	**161**	**33.3**	**47.1**	**24.6**	**18**	**47.6**	**32.6**	**23.5**	**110**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4494.06 B187 (6-12") 5/18/1999	4494.08 B188 (6-12") 5/18/1999	4494.10 B189 (6-12") 5/18/1999	4494.12 B190 (6-12") 5/18/1999	4494.14 B191 (6-12") 5/18/1999	4494.16 B192 (6-12") 5/18/1999	4494.18 B193 (6-12") 5/18/1999	4494.20 B194 (6-12") 5/18/1999	4527.02 B195 (6-12") 6/1/1999	4527.04 B196 (6-12") 6/1/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.19 J	ND	ND	ND	ND	0.21 J	ND	ND	0.12 J	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.24 J	ND	ND	ND	ND	0.22 J	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.17 J	ND	ND	ND	ND	0.17 J	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.12JB	0.14JB	ND	ND	ND	ND
Chrysene	4.73	0.35 J	ND	ND	ND	ND	0.4 J	ND	0.2 J	0.21 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.32JB	0.33JB	0.15JB	0.51JB	0.41JB	0.42JB	0.16JB	0.19JB	0.73JB	0.12JB
Fluoranthene	122	0.3 J	ND	ND	ND	ND	0.34 J	0.14 J	0.17 J	0.21 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.14 J	ND	ND	ND	ND	0.17 J	0.12 J	ND	0.12 J	ND
Pyrene	78.5	0.31 J	ND	ND	0.12 J	0.14 J	0.32 J	0.18 J	0.18 J	0.2 J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.045	0.08	ND	ND	0.057	0.034	0.031	0.036	0.029	ND
4,4'-DDE	0.596	0.04	0.029	ND	0.071	0.052	0.043	0.027	0.078	0.022	ND
4,4'-DDT	0.0035	ND	ND	ND	ND	**0.096**	**0.158**	**0.035**	**0.26**	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	**0.019**	ND	ND	ND	**0.02**	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	**5.806**	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4494.06 B187 (6-12") 5/18/1999	4494.08 B188 (6-12") 5/18/1999	4494.10 B189 (6-12") 5/18/1999	4494.12 B190 (6-12") 5/18/1999	4494.14 B191 (6-12") 5/18/1999	4494.16 B192 (6-12") 5/18/1999	4494.18 B193 (6-12") 5/18/1999	4494.20 B194 (6-12") 5/18/1999	4527.02 B195 (6-12") 6/1/1999	4527.04 B196 (6-12") 6/1/1999
Metals (mg/kg)											
Aluminum	50	**11800**	**6550**	**9120**	**9390**	**11300**	**8010**	**9510**	**1080**	**1210**	**851**
Antimony	0.27	**5.58**	**0.62**	**0.835**	**0.882**	**1.02**	**0.848**	**0.937**	**0.874**	**0.579**	ND
Arsenic	9.9	**12.3**	5.95	9.82	8.3	**12**	**17.6**	**10.3**	**16**	6.35	0.664
Barium	283	122	34.7	56.9	142	95.2	52.9	57.4	73	14.6	3.67
Beryllium	10	1.26	0.606	1.19	1.26	1.5	1.33	1.33	0.119	0.44	ND
Cadmium	0.36	**1.83**	**1.35**	**1.2**	**1.94**	**3.72**	**1.28**	**1.09**	**0.52**	**0.959**	0.196
Calcium	NAV	3680	2300	1090	797	1150	1750	1500	892	580	155
Chromium	0.4	**129**	**60**	**135**	**124**	**169**	**93.4**	**113**	**12.2**	**16.2**	**3.61**
Cobalt	13	4.69	2.47	1.44	1.71	1.46	1.93	1.84	0.512	0.483	0.257
Copper	28	**46.1**	12.1	6.18	**59.9**	14.6	23	10.6	11.2	6.66	10.3
Iron	NAV	33800	17500	29900	28900	39200	24900	26200	9820	6940	507
Lead	11	**84.6**	**21.2**	**11.5**	**37.7**	**12.7**	**29.1**	**23.7**	**36.4**	**16.8**	5.81
Magnesium	NAV	4400	1770	3770	3770	5210	2980	3430	135	66.6	35.3
Manganese	220	122	39.5	18.1	48	28.9	142	24.1	8.35	5.05	2.44
Mercury	0.00051	**2.09**	**0.275**	**0.254**	**0.365**	**0.378**	**0.433**	**0.283**	**0.68**	**0.222**	**0.169**
Nickel	30	11.4	9.21	6.14	9.52	7.17	8.87	7.86	1.92	3.67	2.28
Potassium	NAV	9540	3740	8560	8500	12300	6250	7020	767	279	59
Selenium	0.21	**1.95**	**1.52**	**2.18**	**2.01**	**2.61**	**1.41**	**1.63**	**1.68**	**0.816**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	369	146	108	124	151	248	167	99.1	92.6	98
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**60.4**	**33.3**	**54.7**	**53.3**	**72.4**	**45.5**	**52.1**	**10.8**	**11.6**	**3.26**
Zinc	8.5	**305**	**59.8**	**55.6**	**178**	**114**	**282**	**57.5**	**42.5**	**69.7**	**27.8**

See Notes at End of Table

Table A-1
Soil Sampling Analytical Results
M-2 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4527.06 B197 (6-12") 6/1/1999	4527.08 B198 (6-12") 6/1/1999	4527.10 B199 (6-12") 6/1/1999	4527.12 B200 (6-12") 6/1/1999	4527.14 B201 (6-12") 6/1/1999	4527.16 B202 (6-12") 6/1/1999	4527.18 B203 (6-12") 6/1/1999	4530.02 B204 (6-12") 6/2/1999	4530.04 B205 (6-12") 6/2/1999	4530.06 B206 (6-12") 6/2/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.24 J	0.15 J	0.14 J	ND	0.18 J	0.38 J	ND	0.12 J	ND
Benzo[a]pyrene	1.52	ND	0.21 J	0.13 J	0.15 J	ND	0.16 J	0.36 J	ND	0.11 J	ND
Benzo[b]fluoranthene	59.8	ND	0.18 J	0.12 J	0.18 J	ND	0.14 J	0.35 J	ND	0.11 J	ND
Benzo[g,h,I]perylene	119	ND	0.15 J	ND	0.13 J	ND	0.12 J	0.27 J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	0.16 J	0.11 J	0.13 J	ND	0.15 J	0.3 J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.12JB	0.12JB	ND	0.11JB	ND	0.14JB	ND	0.14JB	ND
Chrysene	4.73	ND	0.52 J	0.29 J	0.31 J	ND	0.37 J	0.76 J	ND	0.23 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19 J
Di-n-butylphthalate	200	0.19JB	0.42JB	0.86JB	0.27JB	0.21JB	0.6JB	0.61JB	ND	0.2JB	0.19 JB
Fluoranthene	122	ND	0.38 J	0.28 J	0.26 J	ND	0.34 J	0.74 J	ND	0.23 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.13 J	ND	0.12 J	ND	ND	0.24 J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.41 J	0.24 J	0.13 J	ND	0.26 J	0.47 J	ND	0.13 J	ND
Pyrene	78.5	ND	0.52 J	0.3 J	0.26 J	ND	0.36 J	0.69 J	ND	0.2 J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.054	0.074	0.17	0.207	ND	0.091	0.348	0.101	0.077	0.03
4,4'-DDE	0.596	0.013	0.075	0.086	0.183	ND	0.08	0.234	0.023	0.094	0.117
4,4'-DDT	0.0035	ND	**0.102**	ND	**0.118**	ND	**0.067**	**0.233**	**0.027**	**0.055**	**0.214**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	**0.021**	ND	ND	ND	**0.02**	**0.013**	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Analytical Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4527.06 B197 (6-12") 6/1/1999	4527.08 B198 (6-12") 6/1/1999	4527.10 B199 (6-12") 6/1/1999	4527.12 B200 (6-12") 6/1/1999	4527.14 B201 (6-12") 6/1/1999	4527.16 B202 (6-12") 6/1/1999	4527.18 B203 (6-12") 6/1/1999	4530.02 B204 (6-12") 6/2/1999	4530.04 B205 (6-12") 6/2/1999	4530.06 B206 (6-12") 6/2/1999
Metals (mg/kg)											
Aluminum	50	**1050**	**1520**	**1510**	**1120**	**499**	**910**	**5860**	**10400**	**9730**	**9240**
Antimony	0.27	**0.464**	**1.46**	**0.915**	ND	ND	ND	**0.658**	**0.513**	**0.757**	**0.629**
Arsenic	9.9	4.58	5.2	8.96	6.85	ND	7.98	7.34	7.89	**10.3**	8.64
Barium	283	30	40.9	38.5	22.9	6.43	37.9	33.9	41.2	46.3	29.7
Beryllium	10	0.221	0.473	0.85	0.289	ND	0.302	0.929	0.99	0.873	0.739
Cadmium	0.36	**0.485**	**0.524**	**2.43**	**0.898**	0.181	**0.733**	**1.25**	**1.21**	**1.62**	**2.08**
Calcium	NAV	1400	1170	711	1290	482	706	653	1530	1050	711
Chromium	0.4	**7.2**	**21.7**	**18.6**	**10.7**	**5.96**	**49.1**	**65.4**	**83.1**	**67.9**	**41.9**
Cobalt	13	0.755	0.593	0.975	0.695	ND	1.29	1.38	3.77	3.61	2.81
Copper	28	25.1	10.2	11.4	20.4	3.05	7.64	13.1	25.1	9.47	10.5
Iron	NAV	3950	7270	7420	6170	791	6040	18000	30100	30100	19300
Lead	11	**16.7**	**25.3**	**24.5**	**36.7**	2.02	**18.5**	**49**	**22.8**	**23.1**	**23.9**
Magnesium	NAV	89	95.9	64.9	145	50.7	287	1690	3400	2430	1730
Manganese	220	15.6	5.6	6.00	22.9	3.66	6.73	25	58.7	77.6	115
Mercury	0.00051	**0.202**	**0.508**	**0.294**	**0.592**	**0.265**	**0.222**	**0.413**	**0.207**	**0.292**	**0.215**
Nickel	30	3.32	3.31	5.23	3.85	1.06	**410**	7.36	11.7	10.3	8.2
Potassium	NAV	165	110	141	168	139	419	3490	6680	5290	2440
Selenium	0.21	ND	**1.04**	**0.937**	ND	ND	ND	**1.58**	**1.33**	**1.09**	**1.12**
Silver	2	ND	1.84	0.786	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	70.4	71.1	70.8	94.3	158	126	113	231	99.8	334
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**11**	**15**	**14.9**	**11.9**	**3.52**	**9.31**	**34.7**	**60.8**	**49.2**	**35.2**
Zinc	8.5	**22.7**	**26.3**	**35.6**	**58.7**	**20.5**	**53.9**	**63.8**	**63.9**	**90.1**	**48.5**

See Notes at End of Table

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Soil Sampling Analytical Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4530.08 B207 (6-12") 6/2/1999	4530.10 B208 (6-12") 6/2/1999	4530.12 B209 (6-12") 6/2/1999	4530.14 B210 (6-12") 6/2/1999	4530.16 B211 (6-12") 6/2/1999
Semi-Volatiles (mg/kg)						
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	0.16 J	0.12 J
Anthracene	1,480	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.3 J	0.56 J	0.31 J
Benzo[a]pyrene	1.52	ND	ND	0.27 J	0.6 J	0.3 J
Benzo[b]fluoranthene	59.8	ND	ND	0.24 J	0.49 J	0.26 J
Benzo[g,h,I]perylene	119	ND	ND	0.2 J	0.38 J	0.2 J
Benzo[k]fluoranthene	148	ND	ND	0.23 J	0.49 J	0.23 J
bis(2-Ethylhexyl)phthalate	0.925	0.15JB	0.12JB	0.13JB	0.12JB	0.15JB
Chrysene	4.73	ND	ND	0.61 J	1.1 J	0.68 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	0.15 J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.22JB	0.65JB	0.51JB	0.49JB	0.72JB
Fluoranthene	122	0.11 J	ND	0.56 J	0.73 J	0.57 J
Fluorene	122	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.17 J	0.35 J	0.18 J
Naphthalene	0.0994	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.46 J	0.45 J	0.57 J
Pyrene	78.5	ND	ND	0.6 J	0.84 J	0.68 J
Pesticides/PCBs (mg/kg)						
4,4'-DDD	0.758	0.026	0.015	0.114	0.071	0.043
4,4'-DDE	0.596	0.077	0.012	0.07	0.057	0.058
4,4'-DDT	0.0035	**0.105**	ND	**0.037**	**0.037**	**0.086**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND
Aroclor 1248	0.371	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-1
Soil Sampling Analytical Results
M-2 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4530.08 B207 (6-12") 6/2/1999	4530.10 B208 (6-12") 6/2/1999	4530.12 B209 (6-12") 6/2/1999	4530.14 B210 (6-12") 6/2/1999	4530.16 B211 (6-12") 6/2/1999
Metals (mg/kg)						
Aluminum	50	**8230**	**6530**	**5390**	**7020**	**7810**
Antimony	0.27	**0.657**	**0.485**	**1.18**	**0.734**	**1.09**
Arsenic	9.9	7.18	5.16	8.4	6.11	8.35
Barium	283	27.9	17.8	44	42.3	38.7
Beryllium	10	0.659	0.607	1.01	1.35	1.23
Cadmium	0.36	**0.658**	**0.79**	**1.42**	**1.66**	**1.7**
Calcium	NAV	959	323	928	532	679
Chromium	0.4	**43.1**	**50.6**	**65.6**	**72**	**76.3**
Cobalt	13	2.54	3.04	2.03	1.88	2.19
Copper	28	6.89	**344**	**47.5**	12.8	15
Iron	NAV	18400	17800	18500	18800	28800
Lead	11	**20.5**	**15.7**	**23.6**	**25**	**31.8**
Magnesium	NAV	1450	1290	1610	1590	1680
Manganese	220	93.1	158	20.5	22.2	21.6
Mercury	0.00051	**0.242**	**1.017**	**0.346**	**0.287**	**0.288**
Nickel	30	7.3	6.82	6.98	11	8.69
Potassium	NAV	2340	2780	3360	2980	3220
Selenium	0.21	**0.914**	**0.867**	**1.26**	**1.35**	**2.00**
Silver	2	ND	ND	ND	ND	ND
Sodium	NAV	110	75.4	114	165	86.3
Thallium	1	ND	ND	ND	ND	**1.03**
Vanadium	2	**37.5**	**35.5**	**33.6**	**39.7**	**43**
Zinc	8.5	**40.3**	**112**	**71.3**	**57.9**	**45.5**

Notes:

Exceedances of Eco-SSL soil criteria are bold and shaded.
All concentrations in milligrams per kilogram (mg/kg).

B = Compound in related blank.

D = Value from dilution.

E = Value exceeded linear range.

J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte; however, the result is less than the method detection limit, but greater than zero.

N = Presumptive evidence of a compound.

ESC = Ecological Screening Criteria (see Section 3.3)

NAV = No Available Value

ND = Analyte not detected in sample.

NS = Not Sampled

PCB = Polychlorinated Biphenyl

*Resample for 4443.08 for Pest/PCB ref#4526.01 B100

Table A-2
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3923.02 B1 (6-12") 9/29/1998	3923.04 B2 (6-12") 9/29/1998	3923.06 B3 (6-12") 9/29/1998	3923.08 B4 (6-12") 9/29/1998	3923.10 B5 (6-12') 9/29/1998	3923.12 B6 (6-12') 9/29/1998	3923.14 B7 (6-12") 9/29/1998	3923.16 B8 (6-12") 9/29/1998	3923.18 B9 (6-12") 9/29/1998	3923.20 B10 (6-12") 9/29/1998	3923.22 B11 (6-12") 9/29/1998	3923.24 B12 (6-12") 9/29/1998	3923.26 B13 (6-12") 9/29/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	0.21J	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	0.15J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	0.21J	ND	ND	ND	ND	ND	ND	0.38J	ND	ND	0.36J	ND	ND
Anthracene	1480	0.15J	ND	ND	ND	ND	ND	ND	0.47J	ND	ND	0.43J	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.53J	0.21J	ND	ND	ND	ND	ND	1.8	ND	ND	1.7	ND	ND
Benzo(a)pyrene	1.52	0.51J	ND	ND	ND	ND	ND	ND	**2.0**	ND	ND	**2.0**	ND	ND
Benzo(b)fluoranthene	59.8	0.44J	ND	ND	ND	ND	ND	ND	1.9	ND	ND	2.1	ND	ND
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	1.1	ND	ND
Benzo(k)fluoranthene	148	0.56J	ND	ND	ND	ND	ND	ND	1.8	ND	ND	1.7	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	1.1J	0.37J	ND	ND	ND	ND	ND	2.8	ND	ND	2.8	ND	ND
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	0.41J	ND	ND	0.21J	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	ND	0.84J	0.16J	0.16J	0.17J	0.23J	0.62J	0.64J	0.65J	0.23J	0.62J	0.47J	0.52J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.90J	0.39J	0.13J	ND	ND	ND	ND	3.7	ND	0.17J	3.6	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	1.2	ND	ND
Naphthalene	0.0994	ND	ND	ND	**0.14J**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.1 J	0.52J	0.15J	ND	ND	0.15J	ND	1.7	ND	ND	1.7	ND	ND
Pyrene	78.5	1.4	0.55J	0.18J	ND	ND	ND	ND	3.1	ND	0.18J	3.1	ND	ND
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.202	0.016	0.015	0.015	0.002	ND	ND	0.059	0.018	**1.491**	0.029	0.15	0.014
4,4'-DDE	0.596	**0.728**	0.186	0.217	0.092	0.181	0.006	0.026	**1.403**	0.336	0.349	0.168	**0.897**	0.008
4,4'-DDT	0.0035	**0.5**	**0.661**	**0.354**	**0.040**	**0.042**	**0.004**	**0.016**	**1.376**	**0.413**	**5.066**	**0.077**	**1.551**	**0.011**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.018	0.004	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.024	0.004	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-2
Soil Sampling Results
September 1998 through November 1998
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3923.02 B1 (6-12") 9/29/1998	3923.04 B2 (6-12") 9/29/1998	3923.06 B3 (6-12") 9/29/1998	3923.08 B4 (6-12") 9/29/1998	3923.10 B5 (6-12') 9/29/1998	3923.12 B6 (6-12') 9/29/1998	3923.14 B7 (6-12") 9/29/1998	3923.16 B8 (6-12") 9/29/1998	3923.18 B9 (6-12") 9/29/1998	3923.20 B10 (6-12") 9/29/1998	3923.22 B11 (6-12") 9/29/1998	3923.24 B12 (6-12") 9/29/1998	3923.26 B13 (6-12") 9/29/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**7700**	**9100**	**10300**	**2700**	**5190**	**3590**	**1940**	**9660**	**2900**	**4560**	**4710**	**1140**	**8050**
Antimony	0.27	**1.25**	**1.27**	**1.23**	ND	ND	**0.82**	**1.13**	0.255	**0.618**	ND	ND	ND	ND
Arsenic	9.9	**10.5**	**16.0**	**16.3**	6.07	6.33	**20.3**	**18.4**	7.27	2.00	3.14	4.25	2.35	6.21
Barium	283	40.4	49.0	28.7	119	141	63.1	29.8	31.7	32.6	30.7	32.2	22.4	81.7
Beryllium	10	1.27	1.17	1.10	0.594	0.716	0.515	0.416	0.685	0.355	0.498	0.811	0.166	0.791
Cadmium	0.36	0.173	0.277	0.125	0.0827	**0.495**	0.265	0.128	0.127	ND	0.304	0.249	0.158	ND
Calcium	NAV	766	738	1050	1530	2020	1380	464	876	751	325	449	586	604
Chromium	0.4	**85**	**104**	**106**	**8.15**	**10.5**	**30.4**	**9.25**	**49.3**	**10.8**	**17.9**	**14.8**	**3.16**	**19.5**
Cobalt	13	3.15	1.99	1.07	1.62	2.7	2.76	2.90	2.09	3.32	2.98	4.73	1.68	5.15
Copper	28	24.2	**76.9**	**51.6**	16.7	12.2	**63.6**	**37.7**	19.3	26	**46.4**	**58.5**	10.6	**97.0**
Iron	NAV	27200	25100	25900	5850	8180	21800	12000	16400	4230	5470	3260	1330	6450
Lead	11	**35.6**	**89.5**	**106**	5.72	5.29	**49.0**	**37.1**	**36.9**	**355**	**42.9**	**35.2**	6.89	**31.9**
Magnesium	NAV	3130	3100	3400	253	273	945	165	1860	196	620	213	87.8	418
Manganese	220	17.8	136	63.6	14.6	14.2	31.1	31.3	73.5	11.6	22.4	8.06	8.88	19.3
Mercury	0.00051	**0.108**	**0.157**	**0.091**	**0.557**	**0.487**	**0.027**	**0.064**	**0.065**	**0.085**	**0.035**	**0.282**	**0.028**	**0.045**
Nickel	30	8.28	5.75	5.4	4.77	7.53	12.4	10.6	6.66	9.7	10.1	14.8	4.35	16.8
Potassium	NAV	6860	5880	6320	641	564	2500	412	5190	468	1560	731	129	1350
Selenium	0.21	ND	ND	ND	ND	ND	**4.72**	**10.7**	ND	**0.32**	ND	**1.29**	ND	**1.46**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	114	68.4	77.8	111	160	119	65.6	160	161	127	129	71.9	287
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**35.1**	**34.5**	**41.4**	**12.4**	**13.9**	**19.2**	**14.5**	**34.5**	**13.9**	**17.9**	**18.1**	**5.7**	**24.8**
Zinc	8.5	**115**	**172**	**82.8**	12.4	**14.2**	**48.7**	**26.0**	**58.2**	**417**	**31.8**	**21.7**	**12.2**	**15.6**

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3923.28 B14 (6-12") 9/29/1998	3923.30 B15 (6-12") 9/29/1998	3923.32 B16 (6-12") 9/29/1998	3929.02 B17 (6-12") 9/30/1998	3929.04 B18 (6-12") 9/30/1998	3929.06 B19 (6-12") 9/30/1998	3929.08 B20 (6-12") 9/30/1998	3929.10 B21 (6-12") 9/30/1998	3929.12 B22 (6-12") 9/30/1998	3929.14 B23 (6-12") 9/30/1998	3929.16 B24 (6-12") 9/30/1998	3929.18 B25 (6-12") 9/30/1998	3929.20 B26 (6-12") 9/30/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	0.65J	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23J	ND	ND
Anthracene	1480	ND	ND	ND	ND	8.2	ND	0.22J	ND	ND	ND	0.72J	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.17J	ND	ND	0.21J	**11**	ND	0.21J	ND	ND	ND	3.5	ND	ND
Benzo(a)pyrene	1.52	0.17J	ND	ND	0.21J	**9.6**	ND	0.20J	ND	ND	ND	**3.8**	ND	ND
Benzo(b)fluoranthene	59.8	0.19J	ND	ND	0.17J	11	ND	0.14J	ND	ND	ND	4.4	ND	ND
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	4.0	ND	ND	ND	ND	ND	1.7	ND	ND
Benzo(k)fluoranthene	148	0.20J	ND	ND	0.22J	5.5	ND	0.20J	ND	ND	ND	3.0	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.30J	ND	ND	0.30J	**25D**	ND	0.34J	ND	ND	ND	**6.5**	ND	ND
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	2.0	ND	ND	ND	ND	ND	0.8J	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.77J	0.66J	0.74J	0.46J	0.47J	0.24J	0.70J	0.46J	0.84J	0.49J	0.50J	0.69J	0.29J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.28J	ND	ND	0.36J	55D	ND	0.30J	ND	ND	ND	8.8	ND	0.19J
Fluorene	122	ND	ND	ND	ND	3.3	ND	ND	ND	ND	ND	0.17J	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	1.8	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	**0.32J**	ND	ND	ND	ND	ND	**0.18J**	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.22J	**58D**	ND	0.23J	ND	ND	ND	4.6	ND	ND
Pyrene	78.5	0.28J	ND	ND	0.33J	43D	ND	0.41J	ND	ND	ND	8.2	ND	0.17J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.14	0.014	ND	0.003	ND	0.003	0.006	0.003	ND	0.007	0.123	0.124	0.223
4,4'-DDE	0.596	**0.940**	0.068	0.001	0.003	ND	0.014	0.014	0.016	0.022	0.044	0.308	0.262	**1.439**
4,4'-DDT	0.0035	**4.312**	**0.069**	**0.004**	**0.007**	0.003	**0.007**	**0.016**	**0.008**	**0.018**	**0.038**	**0.450**	**0.188**	**4.879**
alpha-Chlordane	0.224	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	0.021	ND
Dieldrin	0.0049	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	**0.041**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004	ND	**0.181**
gamma-Chlordane	0.224	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.008	0.021	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3923.28 B14 (6-12") 9/29/1998	3923.30 B15 (6-12") 9/29/1998	3923.32 B16 (6-12") 9/29/1998	3929.02 B17 (6-12") 9/30/1998	3929.04 B18 (6-12") 9/30/1998	3929.06 B19 (6-12") 9/30/1998	3929.08 B20 (6-12") 9/30/1998	3929.10 B21 (6-12") 9/30/1998	3929.12 B22 (6-12") 9/30/1998	3929.14 B23 (6-12") 9/30/1998	3929.16 B24 (6-12") 9/30/1998	3929.18 B25 (6-12") 9/30/1998	3929.20 B26 (6-12") 9/30/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**8920**	**14500**	**12300**	**12700**	**9080**	**8020**	**8140**	**2480**	**4110**	**3010**	**4340**	**2340**	**5000**
Antimony	0.27	**1.11**	**0.749**	**0.577**	**1.40**	**0.838**	**1.24**	**1.23**	ND	ND	**0.645**	ND	**0.611**	**0.363**
Arsenic	9.9	**14.9**	**18.5**	**14.1**	**18.4**	**18.8**	**17.8**	**18.3**	2.80	3.23	3.73	4.70	7.96	7.26
Barium	283	25.3	18.0	24.7	60.0	54.9	44.5	28.7	27.5	41.5	65.4	56.8	85.5	40.2
Beryllium	10	1.05	0.828	0.731	1.06	0.834	0.748	0.900	0.424	0.509	0.487	0.711	0.315	0.698
Cadmium	0.36	ND	ND	0.146	**0.824**	**0.395**	**0.405**	0.253	0.114	0.205	0.166	**0.54**	**0.656**	0.209
Calcium	NAV	122	845	799	1360	1350	1710	1770	562	1320	1110	1110	657	1310
Chromium	0.4	**103**	**93.2**	**81.8**	**125**	**91.4**	**78.2**	**89.9**	**7.64**	**7.51**	**5.09**	**11.0**	**24.8**	**27.7**
Cobalt	13	1.27	1.04	1.07	1.46	1.20	0.767	1.20	4.85	3.27	2.12	3.93	1.86	3.59
Copper	28	**33.6**	16.2	22.8	**160**	**126**	**53.8**	**40.9**	24.4	24.6	17.2	**35.9**	**47.8**	**31.3**
Iron	NAV	28100	25000	24400	26500	21800	20300	21700	3090	2810	3720	4900	4790	11500
Lead	11	**40.0**	**13.5**	**28.6**	**471**	**206**	**114**	**78.8**	5.63	**23.7**	**122**	**41.1**	**70.8**	**66.8**
Magnesium	NAV	3580	3170	2870	3740	2660	2280	2750	189	301	155	265	396	1140
Manganese	220	30.0	45.4	41.5	**224**	140	50.7	79.8	25.6	17.5	12.3	34.5	11.3	25.7
Mercury	0.00051	**0.109**	**0.022**	ND	**0.159**	**0.070**	**0.089**	**0.048**	ND	**0.044**	**0.069**	**0.562**	**2.043**	**0.120**
Nickel	30	4.65	4.38	4.43	7.89	5.66	4.77	5.61	14.7	10.3	8.91	13.1	6.97	10.6
Potassium	NAV	7680	4880	4150	6700	4490	5720	4780	338	683	311	787	891	3080
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	**0.61**	**0.741**	**0.446**	**0.794**	**0.827**	**0.892**
Silver	2	ND	ND	ND	ND	ND	0.426	ND	ND	ND	ND	0.8	**2.75**	ND
Sodium	NAV	121	76.4	68.5	105	84.2	53.7	89.4	120	121	88.6	167	105	228
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**43.2**	**51.5**	**45.3**	**53.4**	**31.1**	**28.4**	**30.6**	**15.5**	**16.5**	**12.1**	**18.4**	**10.8**	**30.0**
Zinc	8.5	**40.8**	**63.3**	**79.9**	**481**	**311**	**280**	**130**	6.58	**46.2**	**24.8**	**67.4**	**26.2**	**56.0**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3929.22 B27 (6-12") 9/30/1998	3929.24 B28 (6-12') 9/30/1998	3929.26 B29 (6-12") 9/30/1998	3929.28 B30 (6-12") 9/30/1998	3929.30 B31 (6-12") 9/30/1998	3984.02 B32 (6-12") 10/19/1998	3984.04 B33 (6-12") 10/19/1998	3984.06 B34 (6-12") 10/19/1998	3984.08 B35 (6-12") 10/19/1998	3984.10 B36 (6-12") 10/19/1998	3984.12 B37 (6-12") 10/19/1998	3984.14 B38 (6-12") 10/19/1998	3984.16 B39 (6-12") 10/19/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	0.27J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.76J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1.52	0.54J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	59.8	0.52J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	119	0.21J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	148	0.56J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.97J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.47J	0.22J	0.24J	0.39J	0.23J	0.62J	0.83J	0.95J	0.91J	1.5	1.3	0.50J	0.87J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	1.7	ND	ND	ND	0.17J	0.14J	0.19J	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	0.24J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	1.3	ND	ND	ND	0.16J	0.14J	0.20J	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.066	0.217	0.017	ND	ND	ND	0.044	0.002	0.004	ND	ND	ND	ND
4,4'-DDE	0.596	0.141	0.566	0.022	0.007	0.007	0.024	0.511	0.071	0.033	0.013	0.016	0.004	0.017
4,4'-DDT	0.0035	**0.189**	**1.549**	**0.199**	**0.01**	**0.007**	**0.024**	**0.849**	**0.058**	**0.042**	**0.01**	**0.004**	0.002	**0.02**
alpha-Chlordane	0.224	0.029	0.022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	**0.035**	**0.009**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.016	0.021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3929.22 B27 (6-12") 9/30/1998	3929.24 B28 (6-12') 9/30/1998	3929.26 B29 (6-12") 9/30/1998	3929.28 B30 (6-12") 9/30/1998	3929.30 B31 (6-12") 9/30/1998	3984.02 B32 (6-12") 10/19/1998	3984.04 B33 (6-12") 10/19/1998	3984.06 B34 (6-12") 10/19/1998	3984.08 B35 (6-12") 10/19/1998	3984.10 B36 (6-12") 10/19/1998	3984.12 B37 (6-12") 10/19/1998	3984.14 B38 (6-12") 10/19/1998	3984.16 B39 (6-12") 10/19/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**6680**	**14600**	**14300**	**11400**	**15100**	**9790**	**8360**	**2220**	**4220**	**3440**	**2060**	**5980**	**12500**
Antimony	0.27	**0.866**	**1.15**	**1.26**	**1.52**	**3.29**	**1.36**	**1.09**	ND	ND	ND	ND	ND	**2.13**
Arsenic	9.9	7.52	**13.1**	**20.6**	**20.2**	**551**	**21.6**	**12.5**	4.19	2.67	3.73	5.76	4.43	9.43
Barium	283	62.8	114	40.7	202	35.3	50.2	53.3	21.2	30.3	71.3	53.8	42.1	39.1
Beryllium	10	1.12	1.07	1.21	0.899	1.67	1.03	1.19	0.410	0.550	0.415	0.456	0.873	2.17
Cadmium	0.36	0.0998	**0.931**	0.302	**1.71**	**0.728**	**0.366**	0.286	0.0583	ND	0.164	0.107	0.14	0.126
Calcium	NAV	2360	22300	1830	2070	1340	1500	1940	681	457	1340	1330	970	2390
Chromium	0.4	**62.5**	**73.2**	**125**	**99.8**	**198**	**108**	**84.4**	**8.96**	**18.4**	**4.40**	**4.53**	**19.8**	**152**
Cobalt	13	3.67	3.48	1.56	6.02	0.659	1.19	1.96	2.97	3.92	2.18	3.10	4.52	2.96
Copper	28	**52.5**	25.7	**50.4**	**235**	**436**	**56.2**	28.0	18.0	18.8	10.2	**37.3**	**31.2**	17.1
Iron	NAV	20700	26700	35500	45100	66400	23500	30500	3350	4440	3070	2140	5080	48900
Lead	11	**24.9**	**52.8**	**71.0**	**961**	**145**	**89.2**	**46.2**	**20.3**	**17.9**	8.91	**12.6**	**25.6**	**59.7**
Magnesium	NAV	2480	3840	4170	2850	4930	3090	3100	221	403	129	138	443	6130
Manganese	220	40.8	138	97.8	**489**	159	112	121	12.2	15.3	10.1	12.1	9.05	22.6
Mercury	0.00051	**0.033**	**0.27**	ND	ND	ND	**0.059**	**0.091**	**0.018**	**0.015**	**0.028**	**0.085**	**0.021**	**0.184**
Nickel	30	10.8	11.4	7.62	25.7	6.43	5.83	8.61	10.2	12.2	6.05	8.22	16.1	10.9
Potassium	NAV	6330	6420	7290	4600	9730	8340	6530	512	1250	301	264	1700	16200
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	**0.489**	**0.743**	**0.526**	**0.537**	**1.26**	ND
Silver	2	ND	ND	ND	0.785	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	174	388	116	151	87.1	93.6	97.2	107	183	161	98.1	227	122
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**20.8**	**42.8**	**58**	**39.8**	**69.7**	**33.7**	**33.0**	**17.6**	**20.2**	**12.8**	**10.1**	**27.2**	**19.9**
Zinc	8.5	**119**	**180**	**202**	**752**	**378**	**173**	**111**	**13.3**	**11.7**	**9.38**	**17.9**	**17.7**	**130**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3984.18 B40 (6-12") 10/19/1998	3984.20 B41 (6-12") 10/19/1998	3984.22 B42 (6-12") 10/19/1998	3984.24 B43 (6-12") 10/19/1998	3984.26 B44 (6-12") 10/19/1998	3989.02 B45 (6-12") 10/20/1998	3989.04 B46 (6-12") 10/20/1998	3989.06 B47 (6-12") 10/20/1998	3989.08 B48 (6-12") 10/20/1998	3989.10 B49 (6-12") 10/20/1998	3989.12 B50 (6-12") 10/20/1998	3989.14 B51 (6-12") 10/20/1998	3989.16 B52 (6-12") 10/20/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	0.53J	ND	ND	0.30J	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	5.6	ND	ND	0.31J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	**160D**	0.29J	ND	1.1	ND	ND	ND	ND	ND	0.20J	ND	0.48J	0.45J
Benzo(a)pyrene	1.52	**240D**	0.23J	ND	0.87J	ND	ND	ND	ND	ND	ND	ND	0.39J	0.37J
Benzo(b)fluoranthene	59.8	**260D**	0.24J	ND	0.70J	ND	ND	ND	ND	ND	ND	ND	0.35J	0.35J
Benzo(g,h,I)perylene	119	**150D**	ND	ND	0.49J	ND	ND	ND	ND	ND	ND	ND	0.23J	0.23J
Benzo(k)fluoranthene	148	130D	0.28J	ND	0.77J	ND	ND	ND	ND	ND	ND	ND	0.38J	0.39J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.19J	ND	ND	ND	ND	ND	ND	**13**	**13**	0.32J	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	**310D**	0.42J	ND	1.7	ND	ND	ND	ND	ND	0.32J	ND	0.73J	0.68J
Dibenz(a,h)anthracene	18.4	**55D**	ND	ND	0.25J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	0.61J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.8	0.13J	0.23J	0.32J	0.29J	2.1	2.4	0.76J	0.75J	0.39J	0.34J	0.96J	0.92J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	**210D**	0.59J	0.20J	1.9	ND	0.25J	0.29J	ND	ND	0.42J	0.18J	1.1J	1.0 J
Fluorene	122	1.7	ND	ND	0.28J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	**150D**	ND	ND	0.46J	ND	ND	ND	ND	ND	ND	ND	0.21J	0.21J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	28JD	0.27J	ND	1.8	ND	0.18J	0.21J	ND	ND	0.21J	ND	0.67J	0.64J
Pyrene	78.5	**220D**	0.52J	0.19J	2.4	0.18J	0.24J	0.28J	ND	ND	0.42J	ND	0.94J	0.90J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.02	0.051	0.021	0.1	0.308	0.023	ND	ND	0.004	0.024	0.022	0.023	0.090
4,4'-DDE	0.596	0.157	0.372	0.112	0.252	**1.474**	**0.916**	0.013	0.031	0.066	0.045	**0.68**	0.298	0.107
4,4'-DDT	0.0035	**0.493**	**0.552**	**0.132**	**0.153**	**1.261**	**0.687**	**0.017**	**0.026**	**0.076**	**0.084**	**0.554**	**0.44**	**0.094**
alpha-Chlordane	0.224	ND	ND	ND	ND	0.035	ND	ND	ND	ND	ND	ND	ND	0.004
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	0.032	ND	ND	ND	ND	ND	ND	ND	0.004
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3984.18 B40 (6-12") 10/19/1998	3984.20 B41 (6-12") 10/19/1998	3984.22 B42 (6-12") 10/19/1998	3984.24 B43 (6-12") 10/19/1998	3984.26 B44 (6-12") 10/19/1998	3989.02 B45 (6-12") 10/20/1998	3989.04 B46 (6-12") 10/20/1998	3989.06 B47 (6-12") 10/20/1998	3989.08 B48 (6-12") 10/20/1998	3989.10 B49 (6-12") 10/20/1998	3989.12 B50 (6-12") 10/20/1998	3989.14 B51 (6-12") 10/20/1998	3989.16 B52 (6-12") 10/20/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**7750**	**8800**	**12600**	**6790**	**9660**	**8540**	**13200**	**2640**	**2820**	**2310**	**12800**	**8490**	**15800**
Antimony	0.27	**1.08**	**1.00**	**1.59**	**0.634**	**1.14**	**1.28**	**2.04**	ND	ND	**1.14**	**1.42**	**0.569**	**1.84**
Arsenic	9.9	**18.0**	**14.6**	**19.4**	8.97	**13.0**	**13.7**	**23.3**	1.95	3.81	3.44	**26.8**	9.32	**18.7**
Barium	283	26.3	41.4	43.5	45.6	42.1	37.9	49.6	23.2	17.6	**311**	32.9	59.6	43.0
Beryllium	10	0.795	0.847	1.36	0.676	1.21	1.18	1.65	0.307	0.921	0.498	1.31	0.919	2.07
Cadmium	0.36	**0.990**	0.260	0.233	0.298	0.199	0.148	0.14	**0.588**	0.065	**9.73**	0.337	**0.597**	0.197
Calcium	NAV	125	1440	1430	1390	2250	1600	2930	1600	515	1080	13380	14000	1540
Chromium	0.4	**91.9**	**71.7**	**132**	**48.7**	**84.0**	**88.8**	**163**	**5.22**	**10.4**	**101**	**139**	**58**	**147**
Cobalt	13	0.789	1.64	1.58	1.94	1.9	1.76	2.26	3.56	3.08	3.72	1.26	2.98	2.69
Copper	28	13.5	**30.1**	**56.8**	**38.9**	20.2	20.1	6.46	11.9	16.2	**76.9**	24.0	**31.2**	14.7
Iron	NAV	25600	22900	32000	20100	29100	29300	43500	1580	2710	8290	29200	18200	57400
Lead	11	**53.2**	**80.2**	**76.0**	**44.0**	**42.0**	**44.7**	**13.8**	**17.5**	6.6	**560**	**38.0**	**113**	**32.3**
Magnesium	NAV	2390	2440	4530	1490	3400	3200	5760	197	248	722	4280	2870	6280
Manganese	220	28.3	61.3	85.6	42.1	63.7	46.0	31.2	22	9.21	61.9	35.5	59.6	55.9
Mercury	0.00051	**0.222**	**0.125**	**0.245**	**0.29**	**0.178**	**0.175**	**0.129**	**0.09**	**0.123**	**0.209**	**0.161**	**4.363**	**0.142**
Nickel	30	4.40	6.20	6.89	6.77	7.68	6.95	9.21	11	8.94	17.5	6.44	10.5	10.1
Potassium	NAV	4840	6450	8710	3910	6200	6790	12400	785	815	2290	8130	6690	15400
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	**0.332**	**0.934**	**0.362**	**0.676**	ND	ND
Silver	2	0.363	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	67.4	81.0	115	121	172	96.1	111	154	135	124	97.7	196	184
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.743	ND	ND
Vanadium	2	**30.6**	**31.4**	**54.3**	**27.6**	**36.2**	**32.4**	**32.4**	**6.22**	**13.9**	**14.7**	**59.9**	**32.4**	**65.9**
Zinc	8.5	**40.3**	**116**	**130**	**93**	**83.3**	**76.5**	**72.2**	**54.3**	**12.8**	**990**	**62.9**	**139**	**92.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3989.18 B53 (6-12") 10/20/1998	3989.20 B54 (6-12") 10/20/1998	3989.22 B55 (6-12") 10/20/1998	3989.24 B56 (6-12") 10/20/1998	3989.26 B57 (6-12") 10/20/1998	3989.28 B58 (6-12") 10/20/1998	3989.30 B59 (6-12") 10/20/1998	3989.32 B60 (6-12") 10/20/1998	3989.34 B61 (6-12") 10/20/1998	3989.36 B62 (6-12") 10/20/1998	3989.38 B63 (6-12") 10/20/1998	3989.40 B64 (6-12") 10/20/1998	3996.02 B64A (6-12") 10/21/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	0.29J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	2.0	ND	ND	ND	0.17J	ND	0.23J	ND	0.59J	0.32J	ND	ND	0.20J
Benzo(a)pyrene	1.52	**2.0**	ND	ND	ND	ND	ND	0.20J	ND	0.74J	0.35J	ND	ND	0.20J
Benzo(b)fluoranthene	59.8	1.8	ND	ND	ND	ND	ND	0.17J	ND	0.63J	0.32J	ND	ND	0.19J
Benzo(g,h,l)perylene	119	0.99J	ND	ND	ND	ND	ND	ND	ND	0.47J	0.18J	ND	ND	0.13J
Benzo(k)fluoranthene	148	1.8	ND	ND	ND	ND	ND	0.19J	ND	0.64J	0.33J	ND	ND	0.20J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	**1.4**	ND	ND	ND	ND	ND	ND	ND	0.32J	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	3.1	ND	ND	ND	0.25J	ND	0.34J	ND	1.1	0.53J	ND	ND	0.31J
Dibenz(a,h)anthracene	18.4	0.52J	ND	ND	ND	ND	ND	ND	ND	0.22J	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.20J	0.33J	0.30J	0.72J	2.7	15E	0.45J	1.1	0.95J	1.3	0.73J	0.41J	1.1
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	3.4	ND	0.17J	ND	0.21J	ND	0.56J	ND	0.78J	0.47J	ND	ND	0.32J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	1.0 J	ND	ND	ND	ND	ND	ND	ND	0.42J	0.18J	ND	ND	0.13J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.1	ND	ND	ND	ND	ND	0.38J	ND	0.22J	0.24J	ND	ND	ND
Pyrene	78.5	3.1	ND	ND	ND	0.22J	ND	0.48J	ND	0.85J	0.44J	ND	ND	0.31J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.488	0.006	ND	0.011	0.014	0.005	0.013	0.024	0.014	0.008	0.007	0.009	0.153
4,4'-DDE	0.596	0.214	0.064	0.006	0.184	0.113	0.075	0.045	0.31	0.049	0.022	0.059	0.042	0.465
4,4'-DDT	0.0035	**0.167**	**0.056**	**0.008**	**0.269**	**0.218**	**0.069**	**0.102**	**0.371**	**0.106**	**0.027**	**0.115**	**0.032**	**1.45**
alpha-Chlordane	0.224	0.092	ND	ND	ND	ND	ND	ND	0.002	ND	ND	0.003	0.003	0.022
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	0.003	ND	ND	0.004	ND	ND	ND	ND	0.002
gamma-Chlordane	0.224	0.091	ND	ND	ND	ND	ND	ND	0.001	ND	ND	0.001	0.001	0.016
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3989.18 B53 (6-12") 10/20/1998	3989.20 B54 (6-12") 10/20/1998	3989.22 B55 (6-12") 10/20/1998	3989.24 B56 (6-12") 10/20/1998	3989.26 B57 (6-12") 10/20/1998	3989.28 B58 (6-12") 10/20/1998	3989.30 B59 (6-12") 10/20/1998	3989.32 B60 (6-12") 10/20/1998	3989.34 B61 (6-12") 10/20/1998	3989.36 B62 (6-12") 10/20/1998	3989.38 B63 (6-12") 10/20/1998	3989.40 B64 (6-12") 10/20/1998	3996.02 B64A (6-12") 10/21/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**8020**	**13700**	**14300**	**7570**	**4010**	**7350**	**10600**	**8740**	**9600**	**15400**	**9050**	**8260**	**7610**
Antimony	0.27	**0.792**	**1.26**	**1.06**	**0.297**	**0.446**	**0.655**	**1.61**	**1.45**	**1.27**	**1.06**	**1.32**	**1.23**	**0.858**
Arsenic	9.9	**15.3**	**19.4**	**20.4**	7.35	**92.8**	8.46	**13.9**	**12.2**	**21.8**	**19.7**	9.14	8.92	**12.7**
Barium	283	45.4	45.3	48.9	19.1	50.0	27.6	23.6	108	128	24.2	18.5	17.9	48.5
Beryllium	10	1.00	0.907	0.955	0.481	0.584	0.683	1.31	1.36	0.914	0.895	1.54	1.49	1.01
Cadmium	0.36	0.253	0.346	0.148	0.115	0.165	0.265	0.132	**0.48**	0.291	0.289	**0.587**	**0.537**	0.317
Calcium	NAV	1080	1500	1090	863	1160	1930	1480	3010	1680	1140	800	747	1130
Chromium	0.4	**75.4**	**113**	**104**	**49.0**	**46.5**	**56.5**	**129**	**111**	**92.5**	**106**	**99.3**	**90.7**	**70.3**
Cobalt	13	1.35	1.33	0.781	0.938	1.01	2.08	1.23	2.87	1.16	0.825	1.59	1.50	1.58
Copper	28	**345**	**69.4**	11.4	6.59	11.4	11.3	3.93	**53.7**	**927**	18.8	8.61	3.38	**79.0**
Iron	NAV	25100	24100	25500	15000	17200	16500	34200	32500	25900	23900	39800	36900	22900
Lead	11	**237**	**535**	**17.4**	5.59	3.00	**12.0**	7.83	**106**	**276**	**17.8**	5.97	5.44	**109**
Magnesium	NAV	2860	3320	3060	1370	35.9	1550	4600	4200	2700	3730	4200	3680	2470
Manganese	220	118	115	31.5	12.3	17.4	25.5	40.9	54.8	64.7	25.9	22.9	22.0	113
Mercury	0.00051	**0.102**	**0.039**	**0.028**	**0.024**	**0.044**	**0.044**	**0.040**	**0.231**	**0.086**	**0.035**	**0.031**	**0.026**	**0.107**
Nickel	30	5.57	5.70	5.32	5.24	5.13	6.66	5.98	11.7	5.6	3.89	7.08	6.72	5.28
Potassium	NAV	5810	5550	7620	3470	4580	4870	10200	9790	4800	5550	9460	8370	4600
Selenium	0.21	ND	**0.342**	**0.623**	ND	**0.723**	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	114	131	144	68.1	160	94.2	60	91.8	140	176	71.4	63.1	120
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.488	ND	ND	ND
Vanadium	2	**31.7**	**54.1**	**48.2**	**21.5**	**19.1**	**18.7**	**38.1**	**21.1**	**30.2**	**54.5**	**39.2**	**33.0**	**29.4**
Zinc	8.5	**160**	**241**	**47.5**	**24.7**	**38.6**	**34**	**69.7**	**275**	**214**	**30.3**	**56.5**	**56.4**	**105**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3996.04 B65 (6-12") 10/21/1998	3996.06 B66 (6-12") 10/21/1998	3996.08 B67 (6-12") 10/21/1998	3996.10 B68 (6-12") 10/21/1998	3996.12 B69 (6-12") 10/21/1998	3996.14 B70 (6-12") 10/21/1998	3996.16 B71 (6-12") 10/21/1998	3996.18 B72 (6-12") 10/21/1998	3996.20 B73 (6-12") 10/21/1998	3996.22 B74 (6-12") 10/21/1998	4007.02 B75 (6-12") 10/26/1998	4007.04 B76 (6-12") 10/26/1998	4007.06 B77 (6-12") 10/26/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.19J	ND	ND	ND	ND	ND	0.99J	ND	ND	ND	ND	0.19J	ND
Benzo(a)pyrene	1.52	0.19J	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND	ND	0.20J	ND
Benzo(b)fluoranthene	59.8	0.17J	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	0.17J	ND
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	0.84J	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	148	0.19J	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	0.21J	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.30J	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	0.30J	ND
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	0.40J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.1	0.94J	0.89J	1.0 J	1.6	0.28J	1.0 J	0.34J	0.19J	0.21J	0.93J	0.58J	1.6
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.31J	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	0.29J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	0.77J	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	0.29J	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.29J	ND	ND	ND	0.18J	ND	1.4	ND	ND	ND	ND	0.29J	ND
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	ND	0.01	0.005	0.008	0.05	0.02	0.054	0.015	ND	0.003	ND	ND	ND
4,4'-DDE	0.596	0.013	0.139	0.045	0.071	**0.699**	0.011	0.414	0.027	0.008	0.037	0.007	0.003	0.002
4,4'-DDT	0.0035	**0.012**	**0.147**	**0.071**	**0.082**	**0.629**	**0.022**	**0.438**	**0.042**	**0.01**	**0.041**	0.003	**0.004**	0.003
alpha-Chlordane	0.224	ND	ND	ND	ND	0.003	ND	0.003	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	**0.006**	0.002	ND	0.004	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	0.002	ND	0.002	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3996.04 B65 (6-12") 10/21/1998	3996.06 B66 (6-12") 10/21/1998	3996.08 B67 (6-12") 10/21/1998	3996.10 B68 (6-12") 10/21/1998	3996.12 B69 (6-12") 10/21/1998	3996.14 B70 (6-12") 10/21/1998	3996.16 B71 (6-12") 10/21/1998	3996.18 B72 (6-12") 10/21/1998	3996.20 B73 (6-12") 10/21/1998	3996.22 B74 (6-12") 10/21/1998	4007.02 B75 (6-12") 10/26/1998	4007.04 B76 (6-12") 10/26/1998	4007.06 B77 (6-12") 10/26/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**6880**	**10500**	**8280**	**8730**	**7410**	**13900**	**9170**	**8830**	**7760**	**6040**	**5210**	**5510**	**11700**
Antimony	0.27	**0.982**	**1.55**	**5.96**	**1.19**	0.228	**0.761**	**1.04**	**1.51**	**1.33**	**0.823**	ND	**0.410**	ND
Arsenic	9.9	8.06	**13.6**	**15.8**	**10.7**	**10.2**	**22.5**	**14.1**	8.78	9.27	7.13	6.23	6.89	**12.3**
Barium	283	21.5	49.5	56.0	32.7	**463**	40.0	120	53.3	18.1	12.2	28.5	23.6	30.5
Beryllium	10	1.36	1.71	1.36	1.60	0.666	0.885	1.14	1.46	1.23	0.938	1.04	1.05	2.23
Cadmium	0.36	0.258	0.33	**0.465**	**0.628**	**0.526**	**0.531**	**1.18**	0.347	0.15	0.209	0.104	0.158	0.112
Calcium	NAV	1230	1910	1520	703	2660	1410	3650	527	674	347	913	1060	1410
Chromium	0.4	**75.5**	**128**	**398**	**103**	**41.4**	**103**	**84.5**	**111**	**93.2**	**74.1**	**61.5**	**65.5**	**129**
Cobalt	13	1.23	2.27	2.98	1.50	4.02	0.970	2.74	2.47	1.68	1.48	1.59	1.34	2.68
Copper	28	2.47	**30.1**	**66.2**	10.4	**50.7**	**47.4**	**64.9**	**67.2**	1.81	1.91	3.41	3.38	2.61
Iron	NAV	32800	39300	83400	35500	13200	25100	25400	34900	32500	24000	24400	26800	53000
Lead	11	5.44	**69.4**	**99.2**	**12.9**	**107**	**22.8**	**178**	**152**	5.37	5.26	5.54	5.67	5.85
Magnesium	NAV	3220	5130	3700	3710	1540	3330	3570	3710	3040	2120	2130	2250	5800
Manganese	220	25.3	32.0	172	20.4	90.9	33.5	114	37.3	32.4	38.2	42.1	33.3	41.1
Mercury	0.00051	**0.025**	**0.035**	**0.120**	**0.058**	**0.414**	**0.033**	**0.657**	**1.971**	**0.031**	**0.017**	**0.053**	**0.034**	**0.022**
Nickel	30	5.77	8.12	10.8	7.18	14.6	5.17	11.4	9.18	6.85	5.33	5.30	5.91	9.11
Potassium	NAV	6550	11600	9060	8650	3940	5410	6310	9410	6840	4570	5430	3730	12700
Selenium	0.21	ND	ND	ND	ND	**0.633**	ND	**0.541**	ND	ND	ND	**0.604**	**0.58**	**0.537**
Silver	2	ND	ND	ND	ND	ND	ND	**2.28**	ND	ND	ND	ND	ND	ND
Sodium	NAV	93.4	91.7	126	97.2	184	153	198	125	104	117	115	120	147
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**27.0**	**24.0**	**20.8**	**26.7**	**21.6**	**50.4**	**31.6**	**17.7**	**28.6**	**27.5**	**26.2**	**28.5**	**50.5**
Zinc	8.5	**54.7**	**141**	**274**	**77.2**	**250**	**174**	**251**	**145**	**48.5**	**36.3**	**45.3**	**48**	**75.2**

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Lab Sample ID	ESC	4007.08	4007.10	4007.12	4007.14	4007.16	4007.18	4007.20	4007.22	4007.24	4007.26	4007.28	4007.30	4009.02
Field Sample Location	(mg/kg)	B78 (6-12")	B79 (6-12")	B80 (6-12")	B81 (6-12")	B82 (6-12")	B83 (6-12")	B84 (6-12")	B85 (6-12")	B86 (6-12")	B87 (6-12")	B88 (6-12")	B89 (6-12")	B90 (6-12")
Sample Date		10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/27/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	0.54J	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	1.4	0.38J	0.13J	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	ND	ND	0.19J	ND	ND	0.49J	ND	**19E**	3.6	1.3	0.88J	0.82J
Benzo(a)pyrene	1.52	ND	ND	ND	ND	ND	ND	0.58J	ND	**26E**	**4.9**	**1.8**	1.2	1.0 J
Benzo(b)fluoranthene	59.8	ND	ND	ND	0.18J	ND	ND	0.54J	ND	40E	5.3	1.7	1.1	1.0 J
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	0.32J	ND	7.8	1.9	0.82J	0.82J	0.68J
Benzo(k)fluoranthene	148	ND	ND	ND	0.19J	ND	ND	0.56J	ND	9.1	3.2	1.4	1.1	0.85J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	0.31J	ND	ND	0.84J	ND	**32E**	**6.9**	2.3	1.6	1.5
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	8.6	0.63J	ND	ND	0.30J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.35J	0.37J	1.0J	0.57J	0.63J	0.63J	0.68J	0.17J	0.16J	0.27J	0.18J	0.18J	0.36J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	ND	ND	ND	0.29J	0.18J	ND	0.68J	ND	28E	5.8	1.8	1.2	1.1
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	0.23J	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	0.31J	ND	9.9	2.0	0.85J	0.75J	0.64J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	**0.17J**	**0.19J**	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	0.29J	ND	7.3	1.9	0.61J	0.35J	0.29J
Pyrene	78.5	ND	ND	ND	0.31J	0.18J	ND	0.65J	ND	22E	4.9	1.8	1.1	1.1
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	ND	ND	0.113	ND	0.023	ND	0.003	0.014	0.049	ND	ND	0.007	0.021
4,4'-DDE	0.596	0.004	0.003	0.217	0.371	0.317	0.002	0.022	0.493	0.507	0.29	0.005	0.049	0.357
4,4'-DDT	0.0035	**0.007**	**0.007**	**0.311**	**0.631**	**0.482**	ND	**0.017**	**0.359**	**0.626**	**0.474**	**0.006**	**0.039**	**0.364**
alpha-Chlordane	0.224	ND	ND	0.004	0.010	0.010	ND	ND	ND	0.002	0.013	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	**0.060**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	0.002	0.003	ND	ND	ND	ND	0.004	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	0.008	0.010	0.006	ND	ND	ND	0.001	0.01	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID	ESC	4007.08	4007.10	4007.12	4007.14	4007.16	4007.18	4007.20	4007.22	4007.24	4007.26	4007.28	4007.30	4009.02
Field Sample Location	(mg/kg)	B78 (6-12")	B79 (6-12")	B80 (6-12")	B81 (6-12")	B82 (6-12")	B83 (6-12")	B84 (6-12")	B85 (6-12")	B86 (6-12")	B87 (6-12")	B88 (6-12")	B89 (6-12")	B90 (6-12")
Sample Date		10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/26/1998	10/27/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	**1.479**	ND	ND	ND	ND	ND	**2.007**	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**7890**	**5860**	**11300**	**12900**	**6360**	**9910**	**12100**	**7880**	**7970**	**14900**	**5120**	**7770**	**9080**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	ND	**0.513**	**0.506**	ND	ND	ND
Arsenic	9.9	**22.2**	**21.7**	**19.6**	**25.6**	**19.2**	**11.1**	**12.1**	**9.95**	**25.6**	**20.4**	7.27	8.40	**10.1**
Barium	283	23.0	10.8	59.3	118	79.5	24.3	24.3	28.0	92.4	219	15.3	18.9	26.7
Beryllium	10	0.750	0.654	1.34	1.59	0.698	1.95	2.31	1.42	0.904	1.86	0.597	1.41	1.63
Cadmium	0.36	0.224	0.199	0.312	**1.2**	**0.437**	0.155	ND	0.129	**0.791**	**0.388**	0.114	ND	**1140**
Calcium	NAV	1100	916	2070	2860	2050	1000	1360	1900	1780	312	987	1130	0.161
Chromium	0.4	**128**	**86.6**	**162**	**185**	**74.7**	**109**	**131**	**92.7**	**98.0**	**168**	**49.6**	**90.8**	**104**
Cobalt	13	0.624	0.403	1.15	1.69	1.29	2.27	2.77	2.42	1.85	2.41	0.914	1.65	1.94
Copper	28	**41.9**	13.5	**61.2**	**109**	**76.0**	3.66	6.12	7.07	**204**	**92.8**	4.62	2.91	4.58
Iron	NAV	23600	12700	29500	42400	19500	47600	58800	36100	27100	49200	17800	35100	44800
Lead	11	**51.0**	**11.2**	**72.4**	**134**	**59.4**	**59.5**	**23.4**	**60.5**	**202**	**147**	**12.3**	10.6	**25.8**
Magnesium	NAV	2670	1900	4400	5400	1910	4960	6780	3750	2770	5670	1490	3480	4390
Manganese	220	36.8	16.1	27.6	84.0	83.5	38.7	34.5	34.8	121	25.8	26.6	27.4	28.7
Mercury	0.00051	**0.026**	**0.018**	**0.295**	**0.794**	**0.14**	**0.013**	**0.04**	**0.041**	**0.148**	**3.539**	**0.067**	**0.038**	**0.037**
Nickel	30	3.30	3.26	6.53	7.82	5.86	7.61	8.42	5.84	6.67	8.08	3.32	5.25	6.03
Potassium	NAV	4200	4670	7730	9790	4340	11100	15000	7650	4380	12900	3780	7350	9180
Selenium	0.21	**1.22**	ND	**0.878**	**2.01**	**0.987**	ND	**0.574**	**0.484**	**1.11**	**1.13**	**0.614**	**0.539**	**0.665**
Silver	2	ND	ND	ND	**4.25**	0.629	ND	ND	ND	ND	**16.0**	ND	ND	ND
Sodium	NAV	122	159	210	178	220	105	150	105	120	170	63.3	109	135
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**20.9**	**18.2**	**45.2**	**61.6**	**25.6**	**41.3**	**61.9**	**35.6**	**38.0**	**67.8**	**21.0**	**31.4**	**39.5**
Zinc	8.5	**106**	**25.1**	**174**	**237**	**191**	**66.2**	**81.4**	**74.3**	**410**	93.6	**33.0**	**53.2**	**61.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4009.04 B91 (6-12") 10/27/1998	4009.06 B92 (6-12") 10/27/1998	4009.08 B93 (6-12") 10/27/1998	4009.10 B94 (6-12") 10/27/1998	4009.12 B95 (6-12") 10/27/1998	4009.14 B96 (6-12") 10/27/1998	4009.16 B97 (6-12") 10/27/1998	4009.18 B98 (6-12") 10/27/1998	4009.20 B99 (6-12") 10/27/1998	4009.22 B100 (6-12") 10/27/1998	4009.24 B101 (6-12") 10/27/1998	4009.26 B102 (6-12") 10/27/1998
Semi-Volatiles (mg/kg)													
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.43J	0.50J	ND	0.22J	ND	ND	0.34 J	ND	0.17 J	ND	0.28 J	0.44 J
Benzo(a)pyrene	1.52	0.43J	**4.3**	ND	0.24J	ND	ND	0.29 J	ND	ND	ND	0.29 J	0.56 J
Benzo(b)fluoranthene	59.8	0.36J	1.9	ND	0.22J	ND	ND	0.58 J	ND	0.22 J	ND	0.32 J	0.51 J
Benzo(g,h,I)perylene	119	0.24J	0.66J	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J	0.37 J
Benzo(k)fluoranthene	148	0.41J	4.4	ND	0.21J	ND	ND	0.60 J	ND	0.20 J	ND	0.33 J	0.50 J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.64J	2.4	ND	0.36J	ND	ND	0.85 J	ND	0.31 J	ND	0.52 J	0.79 J
Dibenz(a,h)anthracene	18.4	0.13J	0.41J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.24J	0.74J	0.46J	0.41J	0.42 J	0.73 J	0.87 J	0.84 J	0.27 J	0.35 J	0.46 J	0.62 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.63J	2.1	ND	0.32J	ND	ND	0.17 J	ND	0.23 J	0.21 J	0.38 J	0.54 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	0.24J	0.71J	ND	ND	ND	ND	ND	ND	ND	ND	0.19 J	0.34 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.19J	0.56J	ND	0.18J	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.62J	0.99J	ND	0.35J	ND	ND	0.50 J	ND	0.23 J	0.19 J	0.40 J	0.52 J
Pesticides/PCBs (mg/kg)													
4,4'-DDD	0.758	0.031	**2.44**	0.448	0.093	0.070	0.032	0.666	ND	0.085	0.021	0.083	0.016
4,4'-DDE	0.596	0.114	**1.746**	0.463	0.302	0.320	0.095	0.414	0.006	0.337	0.076	0.090	0.130
4,4'-DDT	0.0035	**0.484**	**6.171**	**3.400**	**0.403**	**0.507**	**0.181**	**0.538**	0.003	**0.767**	**0.077**	**0.179**	**0.121**
alpha-Chlordane	0.224	ND	**0.390**	0.03	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	0.002	ND	**0.007**	ND	0.003	ND	**0.008**	ND	0.005	ND	0.002	ND
gamma-Chlordane	0.224	ND	**0.400**	0.042	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4009.04 B91 (6-12") 10/27/1998	4009.06 B92 (6-12") 10/27/1998	4009.08 B93 (6-12") 10/27/1998	4009.10 B94 (6-12") 10/27/1998	4009.12 B95 (6-12") 10/27/1998	4009.14 B96 (6-12") 10/27/1998	4009.16 B97 (6-12") 10/27/1998	4009.18 B98 (6-12") 10/27/1998	4009.20 B99 (6-12") 10/27/1998	4009.22 B100 (6-12") 10/27/1998	4009.24 B101 (6-12") 10/27/1998	4009.26 B102 (6-12") 10/27/1998
Pesticides/PCBs (mg/kg)													
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	**0.475**	**23.639**	**2.428**	ND	ND	ND	ND	ND	**0.468**	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**10100**	**10400**	**11300**	**12100**	**8130**	**12500**	**11500**	**7970**	**14100**	**5150**	**10500**	**15700**
Antimony	0.27	ND	ND	**0.490**	**0.770**	**0.302**	ND	ND	ND	**0.685**	**0.362**	ND	ND
Arsenic	9.9	**20.8**	**15.8**	**23.3**	**19.8**	**12.3**	**19.4**	**10.2**	4.60	**14.1**	7.22	**15.4**	**13.4**
Barium	283	73.7	120	214	45.8	103	69.8	61.6	24.0	182	96.0	97.0	29.4
Beryllium	10	1.3	1.92	1.17	1.60	1.06	2.01	1.37	1.24	2.17	1.06	1.07	2.52
Cadmium	0.36	**0.583**	**3.80**	**0.827**	0.128	**0.658**	**0.951**	0.310	0.178	**3.18**	**0.491**	ND	0.096
Calcium	NAV	1410	1100	431	4310	2650	2060	1110	3060	1850	1290	401	1500
Chromium	0.4	**129**	**142**	**122**	**156**	**95.9**	**160**	**117**	**109**	**184**	**65.7**	**108**	**200**
Cobalt	13	1.99	3.07	2.69	2.51	2.24	3.64	2.69	4.07	4.13	2.52	2.15	5.50
Copper	28	**125**	**195**	**98.6**	12.2	**104**	21.0	11.8	4.24	**134**	**28.5**	23.0	4.58
Iron	NAV	34400	47600	51000	44100	26500	48200	32200	27700	51000	21000	34800	55900
Lead	11	**226**	**293**	**187**	**127**	**119**	**30.2**	**21.7**	9.54	**162**	**214**	**399**	**11.9**
Magnesium	NAV	3880	4450	3920	5280	3100	6190	3970	3710	6800	2080	3100	8570
Manganese	220	105	34.2	34.0	32.7	190	43.3	62.2	11.8	48.1	34.7	21.9	24.3
Mercury	0.00051	**0.697**	**3.81**	**0.408**	**0.135**	**0.082**	**0.232**	**0.131**	**0.036**	**1.50**	**0.238**	**0.176**	**0.021**
Nickel	30	7.43	12.1	13.8	7.75	6.20	13.5	8.16	15.8	13.0	9.17	6.24	16.3
Potassium	NAV	7100	9940	8900	10100	5020	13500	8000	9930	15500	4660	6010	20900
Selenium	0.21	**1.00**	**1.59**	**1.11**	**0.994**	**0.773**	**0.845**	**0.747**	ND	**1.26**	**0.693**	**1.24**	ND
Silver	2	1.36	**12.2**	1.81	ND	ND	0.783	ND	ND	**15.2**	ND	ND	ND
Sodium	NAV	148	178	382	126	125	158	131	139	245	104	129	148
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**42.0**	**43.5**	**52.9**	**42.3**	**32.9**	**35.2**	**43.2**	**12.2**	**54.8**	**21.4**	**50.1**	**34.9**
Zinc	8.5	**167**	**178**	**132**	**84.1**	**350**	**190**	**105**	**104**	**204**	130	**88.9**	**133**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4009.28 B103 (6-12") 10/27/1998	4009.30 B104 (6-12") 10/27/1998	4024.02 B105 (6-12") 11/2/1998	4024.04 B106 (6-12") 11/2/1998	4024.06 B107 (6-12") 11/2/1998	4024.08 B108 (6-12") 11/2/1998	4024.10 B109 (6-12") 11/2/1998	4024.12 B110 (6-12") 11/2/1998	4024.14 B111 (6-12") 11/2/1998	4024.16 B112 (6-12") 11/2/1998	4024.18 B113 (6-12") 11/2/1998	4024.20 B114 (6-12") 11/2/1998
Semi-Volatiles (mg/kg)													
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	0.50 J	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	0.3 J	ND	ND	ND	0.12 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.19 J	ND	ND	ND	ND	0.2 J	ND	3.7	ND	ND	ND	2.1
Benzo(a)pyrene	1.52	0.22 J	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	**3.3**
Benzo(b)fluoranthene	59.8	0.20 J	0.16 J	ND	ND	ND	ND	ND	6.7	ND	ND	ND	3.6
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	2.0
Benzo(k)fluoranthene	148	0.20 J	0.16 J	ND	ND	ND	ND	ND	3.9	ND	ND	ND	2.2
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.36 J	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.33 J	ND	ND	ND	ND	0.28 J	ND	**7.5**	ND	ND	ND	4.1
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	0.95 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.72 J	0.78 J	0.20 J	0.62 J	0.52 J	0.21 J	0.44 J	0.69 J	0.39 J	0.52 J	0.14 J	1.1 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.24 J	0.20 J	ND	ND	ND	0.36 J	ND	5.0	ND	0.21 J	ND	2.2
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	1.9
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	0.86 J
Pyrene	78.5	0.25 J	0.19 J	ND	ND	ND	0.39 J	ND	5.1	ND	0.23 J	ND	2.3
Pesticides/PCBs (mg/kg)													
4,4'-DDD	0.758	0.004	0.049	0.618	0.022	0.029	0.012	0.061	0.048	0.022	0.047	ND	0.05
4,4'-DDE	0.596	0.046	0.272	**0.809**	0.115	0.044	0.069	0.028	0.369	0.055	0.182	0.011	0.194
4,4'-DDT	0.0035	**0.028**	**0.263**	**0.867**	**0.209**	**0.105**	**0.097**	**0.042**	**0.655**	**0.083**	**0.324**	**0.017**	**0.369**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	**0.389**	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	**0.063**	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	**0.007**	ND	ND	ND	ND	0.002	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	**0.386**	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	0.003	**0.058**	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	0.033	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4009.28 B103 (6-12") 10/27/1998	4009.30 B104 (6-12") 10/27/1998	4024.02 B105 (6-12") 11/2/1998	4024.04 B106 (6-12") 11/2/1998	4024.06 B107 (6-12") 11/2/1998	4024.08 B108 (6-12") 11/2/1998	4024.10 B109 (6-12") 11/2/1998	4024.12 B110 (6-12") 11/2/1998	4024.14 B111 (6-12") 11/2/1998	4024.16 B112 (6-12") 11/2/1998	4024.18 B113 (6-12") 11/2/1998	4024.20 B114 (6-12") 11/2/1998
Pesticides/PCBs (mg/kg)													
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**6380**	**7030**	**13600**	**7230**	**6840**	**6340**	**15500**	**7520**	**6420**	**15700**	**4830**	**18600**
Antimony	0.27	ND	ND	ND	**0.370**	**1.34**	**0.439**	ND	**0.318**	**0.622**	ND	ND	ND
Arsenic	9.9	**18.5**	4.96	**11.9**	**13.0**	**10.6**	**10.2**	**12.6**	**11.2**	**13.4**	**17.3**	4.59	**26.1**
Barium	283	45.6	43.0	68.9	41.1	88.3	34.1	**327**	73.0	34.6	45.7	54.7	232
Beryllium	10	0.998	1.10	1.56	1.18	1.47	1.07	1.85	1.46	1.10	2.44	0.712	3.18
Cadmium	0.36	0.128	0.177	ND	0.284	**0.487**	0.168	0.123	0.235	0.156	0.267	0.197	**0.817**
Calcium	NAV	1230	1760	333	2080	871	1800	578	2150	1880	2490	528	3190
Chromium	0.4	**89.9**	**105**	**140**	**87.3**	**74.9**	**91.6**	**163**	**95.0**	**90.0**	**194**	**33.6**	**202**
Cobalt	13	2.61	2.63	2.14	2.88	3.95	3.17	2.39	3.24	1.68	4.52	2.10	5.12
Copper	28	3.15	11.8	13.5	11.0	**357**	6.07	**30.8**	13.8	23.4	12.0	21.1	**38.9**
Iron	NAV	25400	27800	40500	27000	70100	26000	42300	32500	36300	58400	10300	73500
Lead	11	**26.7**	**11.1**	**23.5**	**79.0**	**515**	**12.4**	**119**	**96.9**	**454**	**25.4**	**17.8**	**779**
Magnesium	NAV	2660	3330	4760	2930	2340	3000	5300	2990	2830	8370	1120	8790
Manganese	220	19.7	13.2	22.1	43.7	140	17.6	16.7	**4650**	32.7	34.6	38.2	83.2
Mercury	0.00051	**0.024**	**0.056**	**0.061**	**0.032**	**16.1**	**0.083**	**0.068**	**0.065**	**0.159**	**0.128**	**0.062**	**0.286**
Nickel	30	6.05	12.6	6.31	8.52	20.5	8.93	7.16	8.42	5.62	11.7	10.2	16.6
Potassium	NAV	6300	8480	9490	5450	5690	6990	11900	6720	5890	19700	2630	21500
Selenium	0.21	ND	ND	**1.16**	**0.731**	**1.17**	ND	**1.07**	**0.415**	**1.04**	**1.02**	**1.08**	**0.877**
Silver	2	ND	ND	ND	ND	**43.2**	ND	**7.83**	ND	ND	ND	ND	ND
Sodium	NAV	85.1	116	164	198	144	103	204	97.3	204	210	209	198
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**11.5**	**12.9**	**61.2**	**23.0**	**26.8**	**14.4**	**56.4**	**24.4**	**26.6**	**43.8**	**20.8**	**70.7**
Zinc	8.5	**82.3**	**101**	**59.1**	**109**	**393**	**98.5**	**63.4**	**172**	**94.6**	**121**	**28.4**	**480**

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4024.22 B115 (6-12") 11/2/1998	4024.24 B116 (6-12") 11/2/1998	4024.26 B117 (6-12") 11/2/1998	4024.28 B118 (6-12") 11/2/1998	4024.30 B119 (6-12") 11/2/1998	4027.02 B120 (6-12") 11/3/1998	4027.04 B121 (6-12") 11/3/1998	4027.06 B122 (6-12") 11/3/1998	4027.08 B123 (6-12") 11/3/1998	4027.10 B124 (6-12") 11/3/1998	4027.12 B125 (6-12") 11/3/1998	4027.14 B126 (6-12") 11/3/1998	4027.16 B127 (6-12") 11/3/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	0.61 J	0.29 J	0.15 J	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	1.3	ND	ND	0.31 J	2.3	1.7	0.55 J	0.52 J	ND	ND	0.24 J	ND
Benzo(a)pyrene	1.52	ND	**2.1**	ND	ND	0.34 J	**2.0**	**2.2**	0.34 J	0.49 J	ND	ND	0.23 J	ND
Benzo(b)fluoranthene	59.8	ND	2.4	ND	ND	0.35 J	2.1	3	0.23 J	0.41 J	ND	ND	0.26 J	ND
Benzo(g,h,I)perylene	119	ND	1.2	ND	ND	ND	0.62 J	0.88 J	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	148	ND	1.7	ND	ND	0.32 J	1.9	2.3	0.34 J	0.58 J	ND	ND	0.27 J	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	**1.0 J**	ND	ND	ND	ND	ND	ND	**22**	ND	0.26 J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	3.0	ND	ND	0.55 J	3.6	3.5	1.0 J	0.77 J	ND	ND	0.50 J	ND
Dibenz(a,h)anthracene	18.4	ND	0.50 J	ND	ND	ND	0.36 J	0.42 J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.45 J	0.18 J	0.33 J	0.49 J	0.66 J	0.51 J	0.81 J	0.19 J	0.17 J	0.22 J	0.50 J	0.24 J	0.15 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	ND	1.8	0.20 J	ND	0.45 J	6.0	2.1	0.83 J	0.29 J	ND	ND	0.53 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	1.2	ND	ND	ND	0.73 J	0.95 J	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.44 J	0.19 J	ND	0.22 J	3.2	0.36 J	1.2	ND	ND	ND	0.28 J	ND
Pyrene	78.5	ND	1.9	0.21 J	ND	0.45 J	5.0	2.8	1.5	0.36 J	ND	ND	0.5 J	ND
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.022	0.138	0.243	0.009	0.324	0.067	0.073	0.077	0.052	0.046	0.032	0.301	0.187
4,4'-DDE	0.596	0.247	0.585	0.298	0.008	**1.648**	0.10	0.31	0.169	0.023	0.097	0.053	0.241	0.148
4,4'-DDT	0.0035	**0.292**	**0.759**	**0.236**	**0.008**	**1.29**	**0.467**	**0.469**	**0.217**	**0.084**	**0.262**	**0.078**	**0.269**	**0.042**
alpha-Chlordane	0.224	0.046	ND	ND	ND	0.004	0.003	ND	0.006	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	0.002	0.005	ND	ND	**0.014**	ND	**0.006**	ND	ND	ND	ND	**0.007**	0.004
gamma-Chlordane	0.224	0.042	ND	ND	ND	0.006	0.005	ND	0.006	ND	ND	ND	ND	ND
Heptachlor	0.00598	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID / Field Sample Location / Sample Date	ESC (mg/kg)	4024.22 B115 (6-12") 11/2/1998	4024.24 B116 (6-12") 11/2/1998	4024.26 B117 (6-12") 11/2/1998	4024.28 B118 (6-12") 11/2/1998	4024.30 B119 (6-12") 11/2/1998	4027.02 B120 (6-12") 11/3/1998	4027.04 B121 (6-12") 11/3/1998	4027.06 B122 (6-12") 11/3/1998	4027.08 B123 (6-12") 11/3/1998	4027.10 B124 (6-12") 11/3/1998	4027.12 B125 (6-12") 11/3/1998	4027.14 B126 (6-12") 11/3/1998	4027.16 B127 (6-12") 11/3/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**5710**	**7270**	**4250**	**2220**	**5020**	**4850**	**5740**	**7550**	**10500**	**4270**	**3620**	**6830**	**6730**
Antimony	0.27	**0.471**	ND	ND	**0.517**	ND	ND	**0.361**	ND	ND	ND	ND	**0.599**	ND
Arsenic	9.9	7.25	5.09	4.90	3.68	7.22	7.52	6.28	7.81	**11.1**	4.00	**21.3**	**11.5**	9.16
Barium	283	182	59.2	98.1	65.8	59.2	38.3	143	37.9	39.4	163	76.1	129	86.3
Beryllium	10	0.976	1.70	0.654	0.360	0.965	0.486	0.730	0.843	1.03	0.46	0.557	0.923	0.776
Cadmium	0.36	**0.520**	0.300	0.139	**0.505**	0.276	0.326	**0.411**	0.156	0.163	0.198	0.126	**0.375**	0.116
Calcium	NAV	1260	876	1020	247	2170	2290	2410	894	1090	3640	1780	1810	1810
Chromium	0.4	**48.0**	**48.9**	**20.8**	**12.2**	**38.3**	**35.7**	**37.8**	**71.1**	**97.3**	**6.11**	**58.5**	**39.6**	**67.9**
Cobalt	13	2.70	4.75	2.37	2.28	5.20	4.35	2.98	1.54	2.36	2.42	1.10	4.08	1.55
Copper	28	**50.7**	**35.4**	**44.4**	**36.5**	28.0	**56.9**	**53.3**	10.0	7.36	14.1	7.91	**56.2**	6.24
Iron	NAV	17200	13800	9560	10800	13100	14000	15300	23200	28400	3510	14800	13600	21500
Lead	11	**241**	**74.7**	**96.6**	**27.2**	**52.7**	**239**	**85.4**	**16.3**	10.1	**13.8**	10.8	**101**	**42.1**
Magnesium	NAV	1770	1740	656	137	1600	2010	1530	2340	2980	382	1510	1170	1950
Manganese	220	22.4	21.5	14.2	16.4	65.0	51.1	34.6	26.2	56.2	19.6	22.3	19.7	18.8
Mercury	0.00051	**0.097**	**0.300**	**0.772**	**0.219**	**16.199**	**0.187**	**0.450**	**0.089**	**0.031**	**0.552**	**0.031**	**0.331**	**0.104**
Nickel	30	10.1	18.2	8.73	7.87	13.2	11.3	11.8	5.74	6.17	7.94	4.32	15.3	4.11
Potassium	NAV	3570	5090	1650	371	3030	2550	3920	3920	5000	451	3000	2860	3460
Selenium	0.21	**1.34**	**0.799**	**1.53**	**1.64**	**1.23**	**0.656**	**0.799**	**0.524**	**0.735**	ND	**1.79**	**4.29**	**1.26**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	259	206	156	133	138	343	174	258	89	203	131	223	81.6
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**29.2**	**25.5**	**21.9**	**14.0**	**20.7**	**36.8**	**24.2**	**29.6**	**39.5**	**11.6**	**14.3**	**30.4**	**29.2**
Zinc	8.5	**150**	**105**	**27.4**	**19.7**	**81.4**	**105**	**80.2**	**49.3**	**50.2**	**62.9**	**47.1**	**78.3**	**36.6**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4027.18 B128 (6-12") 11/3/1998	4027.20 B129 (6-12") 11/3/1998	4027.22 B130 (6-12") 11/3/1998	4027.24 B131 (6-12") 11/3/1998	4027.26 B132 (6-12") 11/3/1998	4027.28 B133 (6-12") 11/3/1998	4027.30 B134 (6-12") 11/3/1998	4030.02 B135 (6-12") 11/4/1998	4030.04 B136 (6-12") 11/4/1998	4030.06 B137 (6-12") 11/4/1998	4030.08 B138 (6-12") 11/4/1998	4030.10 B139 (6-12") 11/4/1998	4030.12 B140 (6-12") 11/4/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.57 J	ND	ND	0.27 J
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND	0.99 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	0.38 J	ND	ND	ND	0.23 J	ND	ND	ND	ND	2.9	ND	ND	1.8
Benzo(a)pyrene	1.52	0.44 J	ND	ND	ND	ND	ND	ND	ND	ND	**2.5**	ND	ND	**1.6**
Benzo(b)fluoranthene	59.8	0.67 J	ND	ND	ND	0.30 J	ND	ND	ND	ND	2.4	ND	ND	1.5
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85 J	ND	ND	0.71 J
Benzo(k)fluoranthene	148	0.55 J	ND	ND	ND	0.30 J	ND	ND	ND	ND	2.1	ND	ND	1.4
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.77 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	1.1	ND	ND	ND	0.56 J	ND	ND	ND	ND	4.1	ND	ND	2.6
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	ND	ND	0.26 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.65 J	0.99 J	0.65 J	0.38 J	0.77 J	1.2	0.75 J	1.1 J	0.20 J	0.39 J	0.58 J	0.31 J	0.39 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.93 J	ND	ND	ND	0.65 J	ND	ND	ND	ND	7.4	0.21 J	ND	5.4
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.64 J	ND	ND	0.31 J
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.95 J	ND	ND	0.72 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.34 J	ND	ND	ND	0.31 J	ND	ND	ND	ND	7.8	ND	ND	4.1
Pyrene	78.5	0.88 J	ND	ND	ND	0.67 J	ND	ND	ND	ND	6.3	ND	ND	5.3
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.341	0.051	0.027	0.141	0.129	0.214	**2.612**	0.095	0.065	0.163	0.063	0.088	0.052
4,4'-DDE	0.596	0.63	0.193	0.026	0.009	0.26	0.531	**6.677**	0.244	0.025	0.099	0.340	0.278	0.032
4,4'-DDT	0.0035	**0.723**	**0.420**	**0.019**	**0.045**	**0.493**	**0.868**	**10.216**	**0.21**	**0.028**	**0.21**	**0.503**	**0.327**	**0.014**
alpha-Chlordane	0.224	0.006	ND	ND	ND	ND	0.003	0.178	0.003	ND	0.058	0.003	0.005	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	0.007	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	0.022	**0.007**	ND	ND	**0.013**	**0.01**	**0.02**	ND	ND	ND	**0.006**	0.005	ND
gamma-Chlordane	0.224	0.005	ND	ND	ND	ND	0.003	0.197	ND	ND	0.004	ND	0.003	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4027.18 B128 (6-12") 11/3/1998	4027.20 B129 (6-12") 11/3/1998	4027.22 B130 (6-12") 11/3/1998	4027.24 B131 (6-12") 11/3/1998	4027.26 B132 (6-12") 11/3/1998	4027.28 B133 (6-12") 11/3/1998	4027.30 B134 (6-12") 11/3/1998	4030.02 B135 (6-12") 11/4/1998	4030.04 B136 (6-12") 11/4/1998	4030.06 B137 (6-12") 11/4/1998	4030.08 B138 (6-12") 11/4/1998	4030.10 B139 (6-12") 11/4/1998	4030.12 B140 (6-12") 11/4/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**12700**	**16600**	**2850**	**9880**	**17300**	**3080**	**6380**	**5410**	**20300**	**15400**	**8420**	**4500**	**4720**
Antimony	0.27	ND	ND	**1.90**	ND	ND	**0.275**	ND	ND	ND	**0.581**	**0.378**	ND	ND
Arsenic	9.9	**15.5**	**37.6**	**75.0**	**14.8**	**21.5**	8.33	**11.8**	6.90	**13.8**	**17.7**	**15.4**	8.43	8.98
Barium	283	98.1	96.3	42.1	55.8	91.1	101	95.3	86.3	30.4	90.2	75.8	114	34.0
Beryllium	10	1.72	2.18	0.760	1.34	1.74	0.842	0.859	1.04	3.18	1.82	1.23	0.622	0.713
Cadmium	0.36	ND	0.074	0.158	0.238	ND	0.177	0.254	0.117	0.117	0.134	0.196	**0.422**	0.276
Calcium	NAV	283	210	924	2340	331	487	1530	1670	2270	789	548	2580	8030
Chromium	0.4	**149**	**200**	**28.5**	**145**	**134**	**26.2**	**81.7**	**39.8**	**39.8**	**138**	**83.4**	**24.8**	**23.1**
Cobalt	13	3.44	3.51	2.03	2.86	3.41	2.09	2.00	2.93	2.93	3.7	3.38	3.26	3.51
Copper	28	**44.6**	26.7	**35.5**	14.8	23.5	**56.7**	**211**	**29.3**	**29.3**	**29.7**	**28.3**	18.5	**170**
Iron	NAV	53400	75600	11000	28800	60500	13400	21000	16600	15900	49300	43100	10400	19000
Lead	11	**193**	**167**	**155**	**89.3**	**95.9**	**69.4**	**48.1**	**86.6**	**86.6**	**297**	**105**	**70.8**	**34.0**
Magnesium	NAV	5530	7320	684	4010	5140	496	2030	1500	1500	5050	2360	806	935
Manganese	220	24.8	22.3	18.2	25.9	26.6	17.7	25.1	34.2	34.2	56.7	24.4	26.5	45.5
Mercury	0.00051	**0.122**	**0.164**	**0.024**	**0.07**	**0.134**	**0.106**	**0.120**	**0.243**	**0.028**	**0.0150**	**0.090**	**0.745**	**0.333**
Nickel	30	10.1	9.88	7.76	9.66	9.88	6.29	7.38	8.36	8.36	10.5	10.4	9.28	10.3
Potassium	NAV	13100	19000	1931	7110	12300	1610	4010	3210	3210	10400	5190	2170	1580
Selenium	0.21	**1.01**	**1.26**	**19.3**	**1.33**	**1.16**	**1.63**	**1.39**	**0.931**	**0.931**	**1.03**	**1.18**	**1.94**	**0.668**
Silver	2	ND	ND	ND	ND	ND	ND	0.548	ND	ND	ND	ND	ND	ND
Sodium	NAV	182	222	135	119	333	137	145	147	147	228	300	290	131
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**65.7**	**101**	**32.0**	**45.4**	**89.4**	**21.8**	**28.0**	**24.9**	**24.9**	**75.9**	**55.7**	**13.3**	**15.5**
Zinc	8.5	**82.9**	**94.2**	**43.2**	**91.2**	**79.7**	**29.5**	**65.6**	**35.6**	**35.6**	**125**	**73.2**	**63.5**	**61.1**

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID	ESC	4030.14	4030.16	4030.18	4041.02	4041.04	4041.06	4041.08	4041.10	4041.12	4041.14	4041.16	4041.18	4041.20
Field Sample Location	(mg/kg)	B141 (6-12")	B142 (6-12")	B143 (6-12")	B144 (6-12")	B145 (6-12")	B146 (6-12")	B147 (6-12")	B148 (6-12")	B149 (6-12")	B150 (6-12")	B151 (6-12")	B152 (6-12")	B153 (6-12")
Sample Date		11/4/1998	11/4/1998	11/4/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998	11/9/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24 J	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28 J
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	ND	0.28 J	ND	ND	ND	ND	ND	ND	0.78 J	ND	ND	0.45 J
Benzo(a)pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.87 J	ND	ND	0.62 J
Benzo(b)fluoranthene	59.8	ND	ND	0.32 J	ND	ND	ND	ND	ND	ND	0.95 J	ND	ND	0.59 J
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J
Benzo(k)fluoranthene	148	ND	ND	0.31 J	ND	ND	ND	ND	ND	ND	0.77 J	ND	ND	0.52 J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	0.33 J	ND	ND	ND	**1.3 J**	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	0.47 J	ND	ND	ND	ND	ND	ND	1.6	ND	ND	0.81 J
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.2 J	0.51 J	0.66 J	0.47 J	1.4	1.4	0.54 J	0.90 J	0.19 J	0.23 J	0.21 J	0.67 J	0.23 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	ND	0.17 J	0.40 J	ND	ND	ND	ND	ND	ND	0.90 J	ND	ND	0.49 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.25 J**	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24 J	0.14 J	ND	0.18 J
Pyrene	78.5	ND	0.32 J	0.46 J	ND	ND	ND	ND	ND	ND	1.0 J	ND	ND	0.57 J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.140	0.066	0.072	0.174	ND	0.010	0.038	0.042	0.081	0.060	0.014	0.018	0.035
4,4'-DDE	0.596	0.020	0.059	0.108	0.063	0.013	0.034	0.034	0.104	0.228	0.415	0.003	0.007	0.03
4,4'-DDT	0.0035	**0.022**	**0.166**	**0.066**	**0.087**	**0.007**	**0.033**	**0.084**	**0.175**	**0.232**	**0.213**	ND	**0.013**	**0.122**
alpha-Chlordane	0.224	ND	0.003	0.004	0.009	ND	ND	ND	ND	ND	0.011	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	0.004	ND	ND	ND	ND	ND	**0.010**	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	**0.060**	ND	ND	ND	ND	ND	0.003	ND	ND	ND
gamma-Chlordane	0.224	ND	0.003	0.004	0.008	ND	ND	ND	ND	ND	0.008	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4030.14 B141 (6-12") 11/4/1998	4030.16 B142 (6-12") 11/4/1998	4030.18 B143 (6-12") 11/4/1998	4041.02 B144 (6-12") 11/9/1998	4041.04 B145 (6-12") 11/9/1998	4041.06 B146 (6-12") 11/9/1998	4041.08 B147 (6-12") 11/9/1998	4041.10 B148 (6-12") 11/9/1998	4041.12 B149 (6-12") 11/9/1998	4041.14 B150 (6-12") 11/9/1998	4041.16 B151 (6-12") 11/9/1998	4041.18 B152 (6-12") 11/9/1998	4041.20 B153 (6-12") 11/9/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**4790**	**6570**	**5440**	**13700**	**2940**	**12800**	**3390**	**15800**	**18200**	**5670**	**1760**	**5380**	**10500**
Antimony	0.27	ND	ND	ND	**0.383**	**0.565**	ND	**0.722**	ND	**0.538**	**0.388**	**0.551**	**0.689**	ND
Arsenic	9.9	5.73	**11.0**	**10.2**	**10.1**	5.54	**13.4**	**18.6**	**25.3**	**17.5**	8.15	5.08	4.45	**19.4**
Barium	283	189	58.0	72.2	29.3	74.2	133	172	153	37.0	68.3	54.4	63.2	83.4
Beryllium	10	0.488	0.797	0.375	2.23	0.846	1.58	0.61	1.47	2.95	0.395	0.25	0.476	1.03
Cadmium	0.36	0.119	**0.965**	0.083	**0.591**	0.189	**1.28**	0.264	**0.725**	**0.779**	**1.71**	0.259	**0.610**	**0.678**
Calcium	NAV	873	420	280	280	793	1770	372	359	1230	1650	443	1470	1480
Chromium	0.4	**23.4**	**50.8**	**52.0**	**140**	**6.66**	**71.3**	**11.3**	**152**	**186**	**41.3**	**4.10**	**25.3**	**105**
Cobalt	13	2.35	3.32	1.94	2.81	3.05	7.75	2.57	3.26	3.47	3.79	1.79	2.35	2.18
Copper	28	**57.7**	26.2	17.1	3.89	23.1	**36.3**	**126**	23.5	8.34	**28.6**	14.6	**28.6**	25.9
Iron	NAV	9080	23800	22300	53800	4260	20900	6730	68900	70900	10200	1780	8990	51800
Lead	11	**53.1**	**112**	**79.5**	**66.8**	**12.1**	**41.1**	**32.5**	**270**	**167**	**264**	7.52	5.48	**84.6**
Magnesium	NAV	685	1420	1140	7020	173	2000	257	5250	9650	1410	123	1300	3370
Manganese	220	18.1	17.8	18.4	16.5	12.9	44.1	18.2	31.2	58.9	37.3	7.78	17.3	33.6
Mercury	0.00051	**0.079**	**0.088**	**0.098**	**0.037**	**0.024**	**0.117**	**0.048**	**0.145**	**0.057**	**18.3**	**0.509**	**0.077**	**0.101**
Nickel	30	8.48	10.2	6.60	7.65	10.3	23.2	9.31	9.70	9.73	10.2	6.04	6.16	7.80
Potassium	NAV	1520	4130	2360	15300	419	5550	744	12300	22000	1480	213	2120	7190
Selenium	0.21	**1.88**	**1.02**	**1.88**	**0.705**	**0.924**	**1.99**	**1.08**	**1.53**	**1.28**	**0.838**	**2.22**	**0.438**	**1.44**
Silver	2	1.20	ND	ND	ND	ND	ND	0.750	ND	ND	**2.10**	ND	ND	ND
Sodium	NAV	518	249	342	133	106	544	253	733	419	213	114	189	567
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**14.6**	**31.5**	**25.0**	**41.3**	**15.5**	**47.6**	**19.9**	**92.2**	**67**	**21.9**	**9.96**	**14.4**	**61.9**
Zinc	8.5	**39.3**	**61.3**	**42.7**	**106**	**23.1**	**74.4**	**21.1**	**88.6**	**115**	**162**	**19.1**	**98.0**	**75.3**

See Notes at End of Table

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Lab Sample ID / Field Sample Location / Sample Date	ESC (mg/kg)	4041.22 B154 (6-12") 11/9/1998	4041.24 B155 (6-12") 11/9/1998	4041.26 B156 (6-12") 11/9/1998	4041.28 B157 (6-12") 11/9/1998	4041.30 B158 (6-12") 11/9/1998	4046.02 B159 (6-12") 11/10/1998	4046.04 B160 (6-12") 11/10/1998	4046.06 B161 (6-12") 11/10/1998	4046.08 B162 (6-12") 11/10/1998	4046.10 B163 (6-12") 11/10/1998	4046.12 B164 (6-12") 11/10/1998	4046.14 B165 (6-12") 11/10/1998	4046.16 B166 (6-12") 11/10/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.19 J	0.19 J	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	0.41 J	0.72 J	ND	0.15 J	0.14 J	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	0.87 J	2.4	ND	0.9 J	0.68 J	ND	ND	ND	ND	ND	ND	0.44 J
Benzo(a)pyrene	1.52	ND	0.63 J	**1.8**	ND	1.2	0.69 J	ND	ND	ND	ND	ND	ND	0.37 J
Benzo(b)fluoranthene	59.8	ND	0.57 J	1.7	ND	1.1	0.58 J	ND	ND	ND	ND	ND	ND	0.41 J
Benzo(g,h,I)perylene	119	ND	ND	0.66 J	ND	ND	0.57 J	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	148	ND	0.59 J	1.5	ND	1.3	0.67 J	ND	ND	ND	ND	ND	ND	0.41 J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.3	3.8	ND	1.7	1.1	ND	ND	ND	ND	ND	ND	0.76 J
Dibenz(a,h)anthracene	18.4	ND	ND	0.35 J	ND	ND	0.2 J	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	2	0.67 J	0.2 J	0.53 J	0.87 J	0.26 J	0.61 J	0.33 J	0.47 J	ND	ND	0.16 J	0.6 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.15 J	2.2	6.0	ND	1.4	1.1	ND	ND	ND	ND	ND	ND	0.7 J
Fluorene	122	ND	0.17 J	0.24 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	0.34 J	0.74 J	ND	ND	0.49 J	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	2.1	3.7	ND	0.5 J	0.51 J	ND	ND	ND	ND	ND	ND	0.27 J
Pyrene	78.5	0.16 J	1.5	4.2	ND	2.1	1.0 J	ND	ND	ND	ND	ND	ND	0.66 J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.058	0.056	0.116	0.024	0.052	0.369	0.042	0.456	0.044	0.076	0.019	0.039	0.071
4,4'-DDE	0.596	0.051	0.152	0.098	0.014	0.023	0.145	ND	0.178	0.093	0.348	0.017	0.021	0.02
4,4'-DDT	0.0035	**0.127**	**0.083**	**0.059**	**0.012**	**0.063**	**0.204**	**0.106**	**0.423**	**0.053**	**0.487**	**0.014**	**0.018**	**0.053**
alpha-Chlordane	0.224	0.003	ND	ND	ND	ND	ND	ND	0.037	0.010	0.037	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	**0.36**	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.012**	ND	ND	ND
gamma-Chlordane	0.224	0.003	ND	ND	ND	0.003	ND	ND	0.019	ND	0.030	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4041.22 B154 (6-12") 11/9/1998	4041.24 B155 (6-12") 11/9/1998	4041.26 B156 (6-12") 11/9/1998	4041.28 B157 (6-12") 11/9/1998	4041.30 B158 (6-12") 11/9/1998	4046.02 B159 (6-12") 11/10/1998	4046.04 B160 (6-12") 11/10/1998	4046.06 B161 (6-12") 11/10/1998	4046.08 B162 (6-12") 11/10/1998	4046.10 B163 (6-12") 11/10/1998	4046.12 B164 (6-12") 11/10/1998	4046.14 B165 (6-12") 11/10/1998	4046.16 B166 (6-12") 11/10/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**11300**	**17200**	**5270**	**2740**	**6910**	**16800**	**7770**	**18200**	**7790**	**6620**	**10800**	**9470**	**12700**
Antimony	0.27	**1.01**	**0.559**	ND	**0.473**	ND	ND	**4.37**	**0.381**	**1.59**	ND	ND	ND	ND
Arsenic	9.9	**34.2**	**19.6**	5.90	5.39	8.85	**24.3**	**26.0**	**16.3**	**63.3**	9.71	**27.9**	**13.8**	**16**
Barium	283	176	57.9	35.2	46.9	43.0	70.2	**849**	111	124	42.3	44.6	59.1	48.8
Beryllium	10	1.55	2.56	0.383	0.456	0.583	1.55	0.619	1.28	0.73	0.721	0.72	0.732	1.39
Cadmium	0.36	**1.32**	**0.828**	**0.450**	0.198	**1.01**	**0.481**	**31.5**	**0.693**	**0.41**	**0.411**	**0.402**	**0.461**	0.274
Calcium	NAV	3150	5180	21200	752	4070	540	7000	8230	590	1260	1670	2100	1040
Chromium	0.4	**69.8**	**193**	**30.3**	**8.43**	**42.5**	**144**	**367**	**159**	**47.7**	**56.4**	**85.3**	**78.5**	**122**
Cobalt	13	**14.8**	4.85	1.39	1.70	5.98	2.8	**18.1**	3.27	2.14	2.01	1.42	1.45	2.15
Copper	28	**193**	24.3	19.7	**37.3**	**38.2**	**55.6**	**495**	**31.8**	**88.1**	20.6	14.0	**120**	26.0
Iron	NAV	35900	63400	10500	5310	22700	60500	34100	31600	13800	20400	28400	17200	39100
Lead	11	**162**	**133**	**31.5**	**87.6**	**261**	**93.2**	**2580**	**480**	**238**	**47.4**	**24.1**	**61.4**	**62.9**
Magnesium	NAV	1980	8180	1990	187	3230	5700	2880	4390	1260	1820	2610	2250	4400
Manganese	220	173	80.9	55.8	6.73	122	27.6	ND	69.1	20.9	40.9	43.2	41.3	31.8
Mercury	0.00051	**0.61**	**0.213**	**0.070**	**0.086**	**0.062**	**0.073**	**0.115**	**0.605**	**0.114**	**0.063**	**0.033**	**0.369**	**0.062**
Nickel	30	25.2	12.0	4.93	6.93	12.0	11.9	**44.2**	14.0	7.52	5.88	3.99	5.02	6.26
Potassium	NAV	5070	18700	2230	390	34.7	13300	1360	7320	2950	4450	5150	3150	8840
Selenium	0.21	**2.23**	**1.23**	**0.59**	**0.833**	**0.552**	**1.25**	**13.4**	**1.03**	**8.52**	**0.903**	**0.924**	**0.775**	**1.02**
Silver	2	1.93	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND
Sodium	NAV	265	175	106	109	278	413	473	354	222	111	217	91.2	314
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**49.7**	**55.1**	**22.5**	**14.6**	**55.1**	**90.7**	**45.6**	**102**	**32.1**	**34.2**	**43.0**	**33.2**	**68.1**
Zinc	8.5	**557**	**141**	**45.4**	**38.4**	**112**	**81.6**	**31900**	**269**	**67.4**	**100**	**83.7**	**231**	**74.7**

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4046.18 B167 (6-12") 11/10/1998	4046.20 B168 (6-12") 11/10/1998	4046.22 B169 (6-12") 11/10/1998	4046.24 B170 (6-12") 11/10/1998	4046.26 B171 (6-12") 11/10/1998	4046.28 B172 (6-12") 11/10/1998	4046.30 B173 (6-12") 11/10/1998	4058.02 B175 (6-12") 11/16/1998	4058.04 B176 (6-12") 11/16/1998	4058.06 B177 (6-12") 11/16/1998	4058.08 B178 (6-12") 11/16/1998	4058.10 B179 (6-12") 11/16/1998	4058.12 B180 (6-12") 11/16/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	ND	ND	ND	0.58 J	ND	0.31 J	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1.52	ND	ND	ND	ND	0.74 J	ND	0.31 J	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	59.8	ND	ND	ND	ND	0.81 J	ND	0.29 J	ND	ND	ND	ND	ND	ND
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	0.35 J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	148	ND	ND	ND	ND	0.58 J	ND	0.26 J	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	**2.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	0.96 J	ND	0.53 J	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.8	0.55 J	ND	ND	0.45 J	0.39	ND	0.56 J	0.28 J	ND	ND	12	0.23 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.36 J	ND	ND	ND	0.93 J	ND	0.41 J	ND	ND	ND	ND	0.39 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.37 J	ND	ND	ND	1.0	ND	0.42 J	ND	ND	ND	ND	0.41 J	ND
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.191	ND	ND	0.029	0.092	0.063	0.092	0.183	ND	0.102	0.069	0.103	0.072
4,4'-DDE	0.596	0.026	0.005	0.01	0.083	0.04	0.136	0.039	0.132	0.006	0.012	0.009	0.082	0.134
4,4'-DDT	0.0035	**0.044**	ND	ND	**0.061**	**0.048**	**0.123**	**0.024**	**0.471**	ND	ND	**0.014**	**0.156**	**0.158**
alpha-Chlordane	0.224	0.014	ND	ND	ND	ND	ND	ND	0.012	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	**0.144**	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.010	ND	ND	ND	ND	ND	ND	0.007	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4046.18 B167 (6-12") 11/10/1998	4046.20 B168 (6-12") 11/10/1998	4046.22 B169 (6-12") 11/10/1998	4046.24 B170 (6-12") 11/10/1998	4046.26 B171 (6-12") 11/10/1998	4046.28 B172 (6-12") 11/10/1998	4046.30 B173 (6-12") 11/10/1998	4058.02 B175 (6-12") 11/16/1998	4058.04 B176 (6-12") 11/16/1998	4058.06 B177 (6-12") 11/16/1998	4058.08 B178 (6-12") 11/16/1998	4058.10 B179 (6-12") 11/16/1998	4058.12 B180 (6-12") 11/16/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**33200**	**17700**	**11600**	**11000**	**6310**	**11100**	**15800**	**8880**	**10100**	**2240**	**5820**	**7980**	**9090**
Antimony	0.27	**11.4**	ND	ND	ND	**0.448**	ND	**1.11**	**0.540**	ND	**0.357**	**0.450**	ND	ND
Arsenic	9.9	**81.6**	**13.1**	**10.5**	**15.9**	7.35	**15.3**	**25.2**	8.45	9.40	7.22	8.76	**12.4**	**11.5**
Barium	283	164	38.5	41.8	34.5	55.8	59.9	83.5	73.1	41.5	44.5	68.7	33.4	33.2
Beryllium	10	2.12	3.04	1.29	1.03	0.631	1.20	1.59	1.32	1.13	0.403	0.437	0.886	1.21
Cadmium	0.36	**0.449**	0.28	0.215	0.286	**0.447**	**0.370**	**0.653**	0.329	0.326	**0.402**	0.171	**0.604**	0.27
Calcium	NAV	435	247	930	1630	2080	1590	445	405	1000	840	672	947	693
Chromium	0.4	**231**	**197**	**98.7**	**105**	**64.6**	**113**	**145**	**109**	**83.1**	**5.51**	**9.02**	**90.4**	**90.1**
Cobalt	13	5.25	3.25	2.40	1.53	2.35	1.97	2.53	1.27	1.72	2.32	2.33	2.32	1.99
Copper	28	**32.6**	3.00	**51.9**	**32.7**	**40.3**	11.6	25.1	2.92	4.95	12.4	18.3	22.4	7.85
Iron	NAV	77200	64900	32400	26100	17900	43400	67000	32000	28100	4040	6170	24400	34000
Lead	11	**2550**	4.78	**11.2**	**29.6**	**109**	**32.5**	**191**	**54.5**	**13.1**	7.34	**14.5**	**73**	**21.2**
Magnesium	NAV	8330	8920	3660	3290	2110	4400	5800	3760	3000	138	263	2860	3180
Manganese	220	41.5	30.8	68.6	45.7	34.2	47.3	23.2	17.6	53.4	6.5	9.75	83.0	38.8
Mercury	0.00051	**0.421**	**0.025**	**0.035**	**0.083**	**0.087**	**0.060**	**0.075**	**0.026**	**0.030**	**0.026**	**0.025**	**0.033**	**0.076**
Nickel	30	14.9	7.92	7.46	4.60	6.74	6.46	8.62	3.87	6.63	7.16	7.05	5.36	8.19
Potassium	NAV	16500	20300	5850	5260	3110	8580	14400	6720	4560	333	786	46.5	5950
Selenium	0.21	**3.26**	**0.941**	**1.08**	**1.00**	**0.708**	**1.12**	**1.92**	**0.613**	**0.789**	**1.00**	**0.868**	**1.05**	**0.775**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15.0**	ND	ND
Sodium	NAV	351	163	85.5	348	338	315	492	265	203	146	248	264	200
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**162**	**59.7**	**41.1**	**48.6**	**42.5**	**56.7**	**94.9**	**29.4**	**34.5**	**10.1**	**14.6**	**45.7**	**46.0**
Zinc	8.5	**134**	**97.9**	**57.7**	**75.6**	**143**	**71.8**	**80.9**	**66.7**	**68.6**	**77.0**	**23.3**	**90.9**	**68.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4058.14 B181 (6-12") 11/16/1998	4058.16 B182 (6-12") 11/16/1998	4058.18 B183 (6-12") 11/16/1998	4058.20 B184 (6-12") 11/16/1998	4058.22 B185 (6-12") 11/16/1998	4058.24 B186 (6-12") 11/16/1998	4058.26 B187 (6-12") 11/16/1998	4058.28 B188 (6-12") 11/16/1998	4058.30 B189 (6-12") 11/16/1998	4067.02 B190 (6-12") 11/17/1998	4067.04 B191 (6-12") 11/17/1998	4067.06 B192 (6-12") 11/17/1998	4067.08 B193 (6-12") 11/17/1998
Semi-Volatiles (mg/kg)														
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	0.35 J	ND	ND	0.30 J	ND	ND	ND	ND	ND	ND	ND	0.27 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	ND	0.75 J	ND	ND	ND	0.46 J	0.19 J	ND	0.17 J	ND	ND	0.22 J	0.42 J
Benzo(a)pyrene	1.52	ND	0.34 J	ND	ND	ND	0.57 J	0.15 J	ND	0.20 J	ND	ND	0.26 J	0.4 J
Benzo(b)fluoranthene	59.8	ND	0.34 J	ND	ND	ND	0.46 J	0.17 J	ND	0.15 J	ND	ND	0.25 J	0.69 J
Benzo(g,h,I)perylene	119	ND	ND	ND	ND	ND	0.35 J	ND	ND	ND	ND	ND	0.12 J	0.18 J
Benzo(k)fluoranthene	148	ND	0.36 J	ND	ND	ND	0.54 J	0.20 J	ND	0.20 J	ND	ND	0.24 J	0.57 J
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	0.17 J	ND	ND	ND	0.14 J	0.13 J	0.21 J	0.14 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.2	ND	ND	ND	0.74 J	0.38 J	ND	0.28 J	ND	ND	0.37 J	1.1 J
Dibenz(a,h)anthracene	18.4	ND	ND	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.65 J	0.7 J	1.1 J	1.3	0.23 J	1.5	0.69 J	1.5	0.34 J	0.63 J	0.63 J	1.2	0.83 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	0.19 J	3.2	ND	ND	0.30 J	0.62 J	0.51 J	ND	0.27 J	ND	ND	ND	0.79 J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	ND	ND	ND	ND	ND	0.40 J	ND	ND	ND	ND	ND	0.15 J	0.23 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	1.7	ND	0.21 J	0.30 J	0.22 J	0.47 J	ND	ND	ND	ND	0.20 J	0.49 J
Pyrene	78.5	0.22 J	1.6	ND	ND	0.34 J	0.65 J	0.48 J	ND	0.30 J	ND	ND	0.42 J	0.82 J
Pesticides/PCBs (mg/kg)														
4,4'-DDD	0.758	0.108	0.506	0.010	0.104	0.085	0.033	0.070	0.040	0.042	0.007	0.074	0.088	0.116
4,4'-DDE	0.596	0.078	0.554	0.009	0.034	0.094	0.027	0.321	0.073	0.031	0.024	0.273	0.121	0.347
4,4'-DDT	0.0035	**0.112**	**0.677**	ND	**0.03**	**0.052**	**0.049**	**0.172**	**0.092**	**0.121**	**0.013**	**0.054**	**0.155**	**0.056**
alpha-Chlordane	0.224	ND	0.043	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	**0.016**	ND	**0.042**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	0.044	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	0.007	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4058.14 B181 (6-12") 11/16/1998	4058.16 B182 (6-12") 11/16/1998	4058.18 B183 (6-12") 11/16/1998	4058.20 B184 (6-12") 11/16/1998	4058.22 B185 (6-12") 11/16/1998	4058.24 B186 (6-12") 11/16/1998	4058.26 B187 (6-12") 11/16/1998	4058.28 B188 (6-12") 11/16/1998	4058.30 B189 (6-12") 11/16/1998	4067.02 B190 (6-12") 11/17/1998	4067.04 B191 (6-12") 11/17/1998	4067.06 B192 (6-12") 11/17/1998	4067.08 B193 (6-12") 11/17/1998
Pesticides/PCBs (mg/kg)														
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)														
Aluminum	50	**9020**	**4960**	**15700**	**3090**	**14900**	**11900**	**16900**	**9290**	**10400**	**14000**	**10700**	**11100**	**10100**
Antimony	0.27	ND	**0.353**	ND	**0.622**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	**11.9**	4.35	**13.0**	5.88	**12.7**	**12.8**	**13.7**	6.44	**10.7**	**13.4**	9.76	**12.0**	**13.0**
Barium	283	44.2	88.5	42.5	78.0	49.5	34.2	51.0	42.2	46.4	27.1	37.9	37.2	25.9
Beryllium	10	0.933	0.277	1.81	0.504	1.65	1.25	1.84	1.32	1.06	1.59	1.21	1.22	1.35
Cadmium	0.36	0.266	**0.779**	0.248	0.281	0.221	0.145	0.327	0.204	0.221	0.117	0.202	**0.651**	0.343
Calcium	NAV	300	3400	1440	973	1500	726	1640	263	1200	896	1500	1810	1000
Chromium	0.4	**99.1**	**24.7**	**148**	**16.1**	**131**	**129**	**140**	**107**	**114**	**145**	**92.2**	**117**	**114**
Cobalt	13	1.51	2.61	2.46	3.28	2.22	1.44	2.80	0.858	1.18	1.85	1.90	3.22	1.8
Copper	28	16.4	**155**	3.95	**44.7**	9.74	4.78	8.74	1.94	6.94	4.92	7.83	25.9	10.7
Iron	NAV	36100	12100	45900	4320	40700	33800	49500	29600	27100	41600	29400	34600	40100
Lead	11	**52.6**	**97.5**	8.27	**59.9**	**21.2**	5.6	**23.1**	3.01	**16.2**	9.83	**24.5**	**50.0**	**34.3**
Magnesium	NAV	3260	1340	6040	388	5420	4070	5700	3710	3610	5310	3490	4040	3510
Manganese	220	20.4	53.2	65.9	16.0	57.5	32.7	100	21.1	24.2	39.2	60	130	37.1
Mercury	0.00051	**0.155**	**0.103**	**0.026**	**0.750**	**0.066**	**0.058**	**0.027**	ND	**0.034**	ND	**0.049**	**0.050**	**0.059**
Nickel	30	5.48	6.75	6.99	9.84	7.61	4.84	9.96	3.02	5.47	5.30	7.16	7.36	6.58
Potassium	NAV	6280	1490	13600	823	11300	7460	11500	6290	6100	11400	5880	7350	6420
Selenium	0.21	**1.05**	**0.584**	**1.25**	**1.33**	**0.978**	**0.933**	**0.965**	**0.570**	**1.14**	**0.913**	**0.825**	**0.799**	**1.09**
Silver	2	ND	0.715	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	190	198	240	135	185	104	203	110	103	134	133	177	162
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**48.3**	**19.1**	**62.3**	**17.0**	**67.2**	**39.3**	**72.3**	**28.4**	**40.9**	**51.2**	**43.1**	**60.1**	**55.1**
Zinc	8.5	**56.6**	**183**	**61.5**	**21.7**	**73.2**	**48.2**	**77.4**	**71.5**	**47.9**	**52.3**	**60.3**	**85.9**	**66.8**

See Notes at End of Table

Table A-2
Soil Sampling Results
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M-3 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4067.10 B194 (6-12") 11/17/1998	4067.12 B195 (6-12") 11/17/1998	4067.14 B196 (6-12") 11/17/1998	4067.16 B197 (6-12") 11/17/1998	4067.18 B198 (6-12") 11/17/1998	4067.20 B199 (6-12") 11/17/1998	4067.22 B200 (6-12") 11/17/1998	4067.24 B201 (6-12") 11/17/1998	4067.26 B202 (6-12") 11/17/1998	4067.28 B203 (6-12") 11/17/1998	4067.30 B204 (6-12") 11/17/1998	4068.02 B205 (6-12") 11/18/1998
Semi-Volatiles (mg/kg)													
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	0.14 J	0.40 J	0.52 J	ND	ND	ND	1.6	ND	ND	ND	ND
2-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	0.14 J	0.6 J	2.0	ND	ND	ND	4.1	ND	ND	ND	ND
Acenaphthylene	682	0.34 J	0.24 J	0.26 J	0.30 J	ND	ND	ND	0.66 J	ND	ND	ND	ND
Anthracene	1480	0.39 J	0.7 J	1.3	4.3	0.28 J	ND	0.16 J	7.5	ND	ND	ND	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	5.21	1.5	2.6	2.6	**10**	0.18 J	0.17 J	0.20 J	**20 JD**	0.39 J	ND	ND	ND
Benzo(a)pyrene	1.52	**1.8**	**2.6**	**2.5**	**8.6**	0.14 J	0.11 J	0.16 J	**12.8**	0.41 J	ND	ND	ND
Benzo(b)fluoranthene	59.8	1.3	2.5	2.3	10	ND	ND	ND	14 JD	ND	ND	ND	ND
Benzo(g,h,I)perylene	119	0.66 J	0.86 J	0.87 J	3.0	ND	ND	ND	4.2	ND	ND	ND	ND
Benzo(k)fluoranthene	148	1.6	1.9	1.6	3.1	0.19 J	0.15 J	0.16 J	3.7	0.39 J	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	**1.1**	0.18 J	ND	ND	ND	0.16 J	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	2.3	3.2	2.9	**12**	0.32 J	0.37 J	0.29 J	**28 D**	0.62 J	ND	ND	ND
Dibenz(a,h)anthracene	18.4	0.43 J	0.54 J	0.55 J	3.0	ND	ND	ND	3.1	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	0.52 J	1.3	ND	ND	ND	3.5	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.4 J	0.24 J	0.16 J	ND	0.43 J	5.6	0.81 J	ND	0.42 J	1.0 J	1.2	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	122	2.5	3.9	4.0	12	0.46 J	0.37 J	0.54 J	0.41 J	0.83 J	ND	ND	ND
Fluorene	122	ND	0.18 J	0.91 J	2.7	ND	ND	ND	5.1	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	109	0.82 J	1.2	1.1	4.5	ND	ND	ND	6.2	0.14 J	ND	ND	ND
Naphthalene	0.0994	**0.22 J**	**0.21 J**	**0.57 J**	**0.53 J**	ND	ND	ND	**1.8**	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.3	2.0	3.3	9.6	0.29 J	0.46 J	0.61 J	43 D	0.37 J	ND	ND	ND
Pyrene	78.5	2.6	3.8	4.1	ND	0.40 J	0.52 J	0.43 J	40 D	0.76 J	ND	ND	ND
Pesticides/PCBs (mg/kg)													
4,4'-DDD	0.758	0.095	0.103	0.542	0.183	0.067	0.077	ND	0.474	0.084	0.073	0.012	0.026
4,4'-DDE	0.596	0.041	0.026	0.071	0.024	0.066	0.141	ND	0.039	0.045	0.316	0.045	0.103
4,4'-DDT	0.0035	**0.119**	**0.030**	**0.125**	**0.052**	**0.044**	**0.155**	ND	**0.132**	**0.096**	**0.578**	**0.052**	**0.041**
alpha-Chlordane	0.224	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	0.028	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-2
Soil Sampling Results
September 1998 through November 1998
M-3 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4067.10 B194 (6-12") 11/17/1998	4067.12 B195 (6-12") 11/17/1998	4067.14 B196 (6-12") 11/17/1998	4067.16 B197 (6-12") 11/17/1998	4067.18 B198 (6-12") 11/17/1998	4067.20 B199 (6-12") 11/17/1998	4067.22 B200 (6-12") 11/17/1998	4067.24 B201 (6-12") 11/17/1998	4067.26 B202 (6-12") 11/17/1998	4067.28 B203 (6-12") 11/17/1998	4067.30 B204 (6-12") 11/17/1998	4068.02 B205 (6-12") 11/18/1998
Pesticides/PCBs (mg/kg)													
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**10300**	**3700**	**8200**	**11200**	**14600**	**9150**	**8050**	**10400**	**11800**	**10500**	**8240**	**13100**
Antimony	0.27	ND	**0.617**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	8.59	**15.8**	**10.3**	9.31	**16.3**	**10.6**	5.61	7.15	**11.3**	9.51	**21.2**	**17.9**
Barium	283	59.1	131	44.6	71.5	50.0	31.7	53.5	69.2	36.5	28.0	27.0	31.7
Beryllium	10	1.40	0.706	1.14	1.53	1.60	1.09	1.10	1.36	1.29	1.11	0.874	1.48
Cadmium	0.36	**0.706**	**0.416**	**0.450**	0.327	**0.441**	0.354	0.333	0.306	0.241	0.175	**0.467**	**0.589**
Calcium	NAV	3220	1870	3310	16400	1850	434	781	19300	990	516	1380	1290
Chromium	0.4	**126**	**14.8**	**88.5**	**68.3**	**140**	**89.5**	**99.3**	**49.4**	**102**	**112**	**77.4**	**128**
Cobalt	13	1.1	3.29	3.22	3.06	2.38	1.54	0.822	2.3	2.08	1.23	1.58	2.21
Copper	28	2.94	**34.4**	**29.9**	26.2	10.7	8.63	1.84	14.3	4.00	4.90	5.73	6.40
Iron	NAV	35200	8750	24900	19900	41600	29300	25900	16000	33600	28800	23200	39200
Lead	11	7.50	**16.8**	**34.8**	**35.5**	**25.6**	**20.1**	3.07	**27.2**	10.4	6.44	**20.2**	**17.8**
Magnesium	NAV	5310	644	3500	5790	5450	2960	3280	7830	4000	3660	3090	5030
Manganese	220	42.0	23.6	48.2	155	58.6	36.1	29.3	**234**	53.4	33.9	40.6	35.5
Mercury	0.00051	**0.022**	**0.362**	**0.065**	**0.04**	**0.065**	**0.055**	ND	**0.054**	**0.044**	**0.042**	**0.026**	**0.077**
Nickel	30	4.12	8.62	7.93	7.83	7.62	5.31	2.77	4.58	6.06	4.41	4.65	6.26
Potassium	NAV	8110	1090	6150	5260	11700	5460	5290	4480	7110	7060	4670	9700
Selenium	0.21	**0.616**	**1.19**	**1.14**	**0.797**	**1.24**	**0.959**	**0.505**	**0.704**	**0.802**	**1.27**	**0.819**	**0.753**
Silver	2	ND	ND	1.20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	113	181	142	392	198	173	116	409	119	128	164	111
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**37.3**	**18.9**	**30.8**	**30.1**	**61.5**	**39.1**	**29.5**	**25.2**	**43.9**	**39.1**	**42.3**	**64.2**
Zinc	8.5	**74.1**	**49.5**	**98.5**	**81.2**	**75.5**	**54.9**	**38.5**	**70.5**	**48.6**	**41.2**	**43.6**	**57.8**

Notes:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No Available Value
E = Value exceeded linear range.
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

Table A-3
Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3396.01 B01 (6-12") 3/9/1998	3396.03 B02 (6-12") 3/9/1998	3396.05 B03 (6-12") 3/9/1998	3398.01 B04 (6-12") 3/10/1998	3398.03 B05 (6-12") 3/10/1998	3398.05 B06 (6-12") 3/10/1998	3398.07 B07 (6-12") 3/10/1998	3398.09 B08 (6-12") 3/10/1998	3398.11 B09 (6-12") 3/10/1998	3398.13 B10 (6-12") 3/10/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	0.18J	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J
Anthracene	1,480	0.081J	ND	ND	ND	ND	ND	ND	ND	1.8	ND
Benzo[a]anthracene	5.21	0.86	0.055J	ND	ND	ND	ND	ND	ND	3.7	0.23J
Benzo[a]pyrene	1.52	1.0	0.14J	0.076J	ND	ND	ND	ND	ND	**3.5**	0.32J
Benzo[b]fluoranthene	59.8	0.74	0.075J	0.058J	ND	ND	ND	ND	ND	4.0	0.17J
Benzo[g,h,i]perylene	119	0.52J	0.096J	ND	ND	ND	ND	ND	ND	1.6	ND
Benzo[k]fluoranthene	148	0.82	0.094J	0.070J	ND	ND	0.059J	ND	ND	2.1	0.21J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.064J	0.060J	0.061J	0.23J	0.056J	0.062J	0.062J	0.073J	0.074J
Chrysene	4.73	1.4	0.092J	0.065J	ND	0.058J	0.085J	ND	ND	4.6	0.46J
Dibenz[a,h]anthracene	18.4	0.20J	ND	ND	ND	ND	ND	ND	ND	0.69	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	0.54J	ND
Diethylphthalate	100	ND	0.059J	ND	ND	0.054J	ND	ND	ND	0.077J	0.11J
Di-n-butylphthalate	200	0.24J	0.9	0.56	0.38J	0.50J	0.22J	0.53J	0.64	0.47J	0.69
Fluoranthene	122	1.1	ND	ND	ND	ND	0.086J	ND	ND	6.6	0.30J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	1.0	ND
Indeno[1,2,3-cd]pyrene	109	0.52J	0.11J	ND	ND	ND	ND	ND	ND	1.9	0.22J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	**0.77**	0.056J
Phenanthrene	45.7	0.36J	ND	ND	ND	ND	ND	ND	ND	6.3	0.20J
Pyrene	78.5	1.1	ND	ND	ND	ND	0.090J	ND	ND	6.2	0.49J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	0.040	0.040	0.043	ND	0.038	ND	ND	ND	0.051
4,4'-DDE	0.596	0.093	0.213	0.162	0.105	0.042	0.190	0.008	0.007	0.024	0.199
4,4'-DDT	0.0035	**0.168**	**0.035**	**0.034**	**0.034**	**0.041**	**0.059**	ND	**0.005**	**0.061**	**0.059**
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3396.01 B01 (6-12") 3/9/1998	3396.03 B02 (6-12") 3/9/1998	3396.05 B03 (6-12") 3/9/1998	3398.01 B04 (6-12") 3/10/1998	3398.03 B05 (6-12") 3/10/1998	3398.05 B06 (6-12") 3/10/1998	3398.07 B07 (6-12") 3/10/1998	3398.09 B08 (6-12") 3/10/1998	3398.11 B09 (6-12") 3/10/1998	3398.13 B10 (6-12") 3/10/1998
Metals (mg/kg)											
Aluminum	50	**9445**	**10130**	**14020**	**12760**	**15930**	**13620**	**8828**	**6435**	**11800**	**13140**
Antimony	0.27	**1.284**	**1.466**	**2.225**	**1.300**	**1.356**	**1.956**	**1.481**	**0.756**	**1.886**	**2.156**
Arsenic	9.9	**12.96**	**12.27**	**22.31**	7.751	9.701	**12.05**	8.095	4.872	**15.67**	**16.23**
Barium	283	25.37	45.01	49.94	31.31	39.96	46.71	26.00	16.94	42.69	45.05
Beryllium	10	0.8537	1.014	1.678	0.8095	1.061	1.202	1.007	0.4497	1.473	1.485
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	1214	1870	2000	1030	1347	1590	1174	684.7	1695	1761
Chromium	0.4	**75.85**	**83.52**	**129**	**68.88**	**85.85**	**98.45**	**75.95**	**36.55**	**113.7**	**112.6**
Cobalt	13	1.315	1.765	2.714	1.734	2.150	2.312	1.325	1.100	2.041	2.579
Copper	28	6.873	6.473	10.75	4.954	5.973	7.537	4.121	4.341	6.824	19.79
Iron	NAV	23260	27010	41270	24520	29380	30740	24800	12860	36160	35790
Lead	11	**35.59**	**20.29**	**22.22**	9.185	**11.77**	**17.06**	8.044	**16.24**	**22.24**	**35.74**
Magnesium	NAV	2528	2808	5079	2548	3319	3804	2717	1223	4547	4495
Manganese	220	35.52	36.78	56.29	27.33	33.97	51.08	36.11	23.54	47.22	59.79
Mercury	0.00051	**0.063**	**0.042**	**0.05**	**0.0335**	**0.0329**	**0.0489**	**0.0282**	**0.0195**	**0.0716**	**0.0362**
Nickel	30	4.741	5.959	8.751	5.768	7.245	7.622	5.251	3.712	7.444	8.450
Potassium	NAV	7070	5790	11410	5828	7789	8158	7498	3267	9890	10310
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	46.39	37.39	66.26	114.1	81.27	84.97	39.76	39.17	205.3	188.0
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**34.02**	**31.28**	**50.05**	**40.86**	**49.68**	**49.62**	**35.85**	**23.22**	**46.84**	**46.94**
Zinc	8.5	**31.28**	**47.69**	**67.57**	**29.65**	**37.72**	**50.75**	**34.03**	**25.78**	**56.89**	**78.94**

See Notes at End of Table

Table A-3
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3398.15 B11 (6-12") 3/10/1998	3398.17 B12 (6-12") 3/10/1998	3399.01 B13 (6-12") 3/11/1998	3399.03 B14 (6-12") 3/11/1998	3399.05 B15 (6-12") 3/11/1998	3399.07 B16 (6-12") 3/11/1998	3399.09 B17 (6-12") 3/11/1998	3399.11 B18 (6-12") 3/11/1998	3399.13 B19 (6-12") 3/11/1998	3399.15 B20 (6-12") 3/11/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	0.088J	ND	ND	ND	ND	0.17J	0.42J	ND
4-Methylphenol	NAV	ND	ND	0.13J	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	0.12J	ND
Benzo[a]anthracene	5.21	0.11J	0.25J	0.23J	0.13J	ND	0.076J	ND	ND	0.36J	ND
Benzo[a]pyrene	1.52	0.15J	ND	0.21J	0.12J	ND	ND	ND	ND	0.66	ND
Benzo[b]fluoranthene	59.8	0.10J	0.069J	0.25J	0.14J	ND	ND	ND	ND	0.42J	ND
Benzo[g,h,i]perylene	119	0.080J	ND	0.19J	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.087J	0.23J	0.21J	0.099J	ND	0.066J	0.11J	ND	0.67	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.11J	0.13J	0.098J	0.096J	0.12J	**1.0**	0.35J	0.12J	**10.54**
Chrysene	4.73	0.18J	0.35J	0.49J	0.2J	0.069J	0.13J	0.18J	ND	1.2	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	0.13J	ND
Diethylphthalate	100	0.060J	0.16J	ND	ND	0.080J	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.28J	0.63	0.55J	0.46J	0.56J	0.22J	0.2J	0.66J	0.2J	ND
Fluoranthene	122	0.17J	0.20J	0.46J	0.21J	0.064J	0.11J	0.081J	0.22J	0.87	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.10J	ND	0.21J	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	**0.12J**	ND	ND	ND	ND	**0.2J**	**0.47J**	ND
Phenanthrene	45.7	0.10J	0.14J	0.25J	0.13J	ND	0.080J	0.063J	0.18J	0.8	ND
Pyrene	78.5	0.18J	0.32J	0.48J	0.22J	0.075J	0.18J	0.14J	0.42J	1.2	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.036	0.086	0.066	ND	0.001	0.003	0.017	0.015	ND	ND
4,4'-DDE	0.596	0.061	0.081	0.155	0.031	0.017	0.033	0.037	0.037	ND	ND
4,4'-DDT	0.0035	**0.042**	**0.119**	**0.026**	**0.026**	**0.013**	**0.033**	**0.052**	**0.026**	ND	ND
Endosulfan II	NAV	ND	ND	ND	0.008	ND	0.010	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3398.15 B11 (6-12") 3/10/1998	3398.17 B12 (6-12") 3/10/1998	3399.01 B13 (6-12") 3/11/1998	3399.03 B14 (6-12") 3/11/1998	3399.05 B15 (6-12") 3/11/1998	3399.07 B16 (6-12") 3/11/1998	3399.09 B17 (6-12") 3/11/1998	3399.11 B18 (6-12") 3/11/1998	3399.13 B19 (6-12") 3/11/1998	3399.15 B20 (6-12") 3/11/1998
Metals (mg/kg)											
Aluminum	50	**10280**	**14860**	**17930**	**12960**	**7229**	**8273**	**13460**	**13460**	**8262**	**7344**
Antimony	0.27	**1.487**	**2.553**	**2.457**	**1.765**	**1.491**	**1.377**	**0.776**	**0.776**	**0.847**	**0.67**
Arsenic	9.9	9.697	**25.22**	**20.03**	**18.43**	**11.68**	**12.41**	**12.59**	**12.59**	**10.61**	6.726
Barium	283	34.90	63.22	55.32	47.54	19.55	24.96	41.70	41.70	40.88	45.11
Beryllium	10	1.044	1.920	1.821	1.605	0.7984	0.9890	0.9412	0.9412	0.8540	0.6179
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	1504	1687	2946	2186	1330	1452	5545	5545	1839	1676
Chromium	0.4	**81.99**	**150.9**	**150.0**	**121.9**	**81.31**	**85.01**	**130.8**	**74.84**	**55.22**	**38.05**
Cobalt	13	1.681	2.807	3.356	3.055	1.300	1.480	3.081	9.285	3.730	3.196
Copper	28	10.83	14.31	18.94	7.179	7.592	9.626	10.83	**52.39**	**51.16**	**62.67**
Iron	NAV	26750	46460	46470	38660	23250	26930	43610	31470	20450	16430
Lead	11	**21.95**	**33.22**	**39.36**	**18.69**	**14.15**	**17.01**	**19.65**	**22.60**	**34.72**	**39.07**
Magnesium	NAV	2983	5838	6329	4893	2557	3033	5496	6310	2152	1674
Manganese	220	42.69	73.85	74.08	156.8	27.25	28.77	67.37	152.6	63.23	75.38
Mercury	0.00051	**0.0352**	**0.0441**	**0.055**	**0.040**	**0.039**	**0.05**	**0.08**	**0.024**	**0.041**	**0.048**
Nickel	30	6.448	10.20	11.07	9.405	4.537	5.372	9.741	28.74	9.756	8.264
Potassium	NAV	6338	14310	13970	10620	5417	6613	12940	8285	5453	3717
Selenium	0.21	ND	ND	ND	ND	ND	ND	**0.726**	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	90.27	202.3	218.9	79.45	47.50	87.05	140.7	634.1	28.88	151.5
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**42.37**	**52.96**	**74.26**	**48.97**	**56.55**	**49.97**	**50.45**	**133.4**	**32.32**	**31.83**
Zinc	8.5	**47.55**	**90.04**	**91.33**	**67.23**	**44.11**	**43.34**	**70.58**	**63.70**	**134.5**	**50.75**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3399.17 B21 (6-12") 3/11/1998	3399.19 B22 (6-12") 3/11/1998	3399.21 B23 (6-12") 3/11/1998	3399.23 B24 (6-12") 3/11/1998	3399.25 B25 (6-12") 3/11/1998	3399.27 B26 (6-12") 3/11/1998	3399.31 B27 (6-12") 3/11/1998	3399.33 B28 (6-12") 3/11/1998	3399.35 B29 (6-12") 3/11/1998
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	0.064J	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.16J	0.3J	0.11J	0.2J	ND	0.093J	ND	ND	ND
Benzo[a]pyrene	1.52	0.25J	0.39J	ND	0.23J	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.16J	0.3J	0.091J	0.13J	ND	0.067J	ND	ND	ND
Benzo[g,h,i]perylene	119	0.15J	ND	ND	0.16J	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.16J	0.23J	0.16J	0.29J	ND	0.1J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.11J	0.15J	0.18J	0.17J	0.04	0.1J	**1900**	**8000**	**9000**
Chrysene	4.73	0.36J	0.58	0.21J	0.46J	0.74J	0.16J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	0.21J	ND	0.061J	0.33J	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.81	0.28J	0.61	0.48J	1.2J	0.24J	1.3J	ND	ND
Fluoranthene	122	0.26J	0.5J	0.15J	0.36J	0.66J	0.16J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.17J	ND	ND	0.16J	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.18J	0.2J	0.11J	0.42J	ND	0.097J	ND	ND	ND
Pyrene	78.5	0.34J	0.57	0.26J	0.63	1.0J	0.19J	ND	ND	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	ND	ND	0.112	0.102	0.111	0.033	0.573	0.054	0.055
4,4'-DDE	0.596	0.025	0.075	0.134	0.277	0.283	0.080	**1.035**	0.130	0.086
4,4'-DDT	0.0035	**0.022**	**0.036**	**0.052**	**0.123**	**0.103**	**0.045**	**0.547**	**0.086**	**0.088**
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Table A-3
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3399.17 B21 (6-12") 3/11/1998	3399.19 B22 (6-12") 3/11/1998	3399.21 B23 (6-12") 3/11/1998	3399.23 B24 (6-12") 3/11/1998	3399.25 B25 (6-12") 3/11/1998	3399.27 B26 (6-12") 3/11/1998	3399.31 B27 (6-12") 3/11/1998	3399.33 B28 (6-12") 3/11/1998	3399.35 B29 (6-12") 3/11/1998
Metals (mg/kg)										
Aluminum	50	**75543**	**9030**	**9257**	**7754**	**4361**	**6896**	**10810**	**7635**	**13440**
Antimony	0.27	**0.698**	**1.354**	**1.174**	**0.921**	**0.390**	**0.966**	**1.420**	**1.050**	**2.608**
Arsenic	9.9	**11.04**	**14.00**	9.005	9.278	7.189	7.951	**17.79**	**16.85**	**21.71**
Barium	283	44.59	50.84	38.00	31.85	25.04	30.98	42.18	39.21	54.77
Beryllium	10	0.7675	0.9173	0.9090	0.7427	0.4093	0.7361	1.280	0.8306	1.723
Cadmium	0.36	ND	ND	ND	ND	0.1351	ND	ND	ND	ND
Calcium	NAV	1537	2283	1903	2489	9215	1605	2457	2145	2145
Chromium	0.4	**55.85**	**60.23**	**69.83**	**51.79**	**26.49**	**56.79**	**86.69**	**1897**	**122.0**
Cobalt	13	2.363	4.181	1.860	2.002	1.213	1.151	2.435	2.653	2.948
Copper	28	26.96	**31.60**	12.13	20.36	14.38	5.834	8.497	14.05	11.58
Iron	NAV	20310	25640	22440	19070	11760	18300	30440	20890	40280
Lead	11	**51.26**	**47.79**	**43.17**	**63.28**	**51.80**	**19.55**	**22.79**	**31.10**	**20.23**
Magnesium	NAV	2046	2142	2827	2555	5489	1858	3446	2238	5081
Manganese	220	37.95	63.45	38.96	54.66	48.92	38.55	66.40	55.25	55.22
Mercury	0.00051	**0.086**	**0.074**	**0.096**	**0.042**	**0.067**	**0.090**	**0.053**	**0.034**	**0.025**
Nickel	30	7.841	9.726	6.028	7.847	4.677	4.796	8.798	7.342	9.403
Potassium	NAV	6382	5928	6039	5748	51.80	4429	7038	6111	10820
Selenium	0.21	**0.663**	ND	**0.286**	ND	**0.685**	ND	ND	**0.508**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	118.4	85.07	94.95	87.82	49.99	119.1	57.86	92.32	89.84
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**26.24**	**41.16**	**36.50**	**28.90**	**16.66**	**21.57**	**30.35**	**24.73**	**33.62**
Zinc	8.5	**44.38**	**96.52**	**87.61**	**89.06**	**52.40**	**40.01**	**70.01**	**56.38**	**67.11**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3403.01 B30 (6-12") 3/12/1998	3403.03 B31 (6-12") 3/12/1998	3403.05 B32 (6-12") 3/12/1998	3403.07 B33 (6-12") 3/12/1998	3403.09 B34 (6-12") 3/12/1998	3403.11 B35 (6-12") 3/12/1998	3403.13 B36 (6-12") 3/12/1998	3403.15 B37 (6-12") 3/12/1998	3403.17 B38 (6-12") 3/12/1998
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.18J	0.073J	0.059J	ND	ND	0.18J	ND
Benzo[a]pyrene	1.52	ND	ND	0.16J	0.090J	0.064J	ND	ND	0.21J	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.11J	ND	ND	ND	ND	0.16J	ND
Benzo[g,h,i]perylene	119	ND	ND	0.12J	0.084J	0.063J	ND	ND	0.18J	ND
Benzo[k]fluoranthene	148	ND	ND	0.13J	0.056J	ND	ND	ND	0.17J	ND
bis(2-Ethylhexyl)phthalate	0.925	**3300**	**1500**	0.12J	0.081J	0.077J	0.16J	ND	0.51J	ND
Chrysene	4.73	ND	ND	0.22J	0.11J	0.094J	0.048J	0.75J	0.29J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	0.095J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	ND	ND	0.057J	ND	0.35J	0.57J	ND	0.47J	0.89J
Fluoranthene	122	ND	ND	0.37J	0.1J	0.11J	ND	0.9J	0.28J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.13J	0.086J	0.062J	ND	ND	0.17J	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.12J	0.088J	ND	ND	0.61J	0.17J	ND
Pyrene	78.5	ND	ND	0.26J	0.11J	0.079J	0.061J	0.84J	0.32J	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.024	0.102	0.018	0.004	0.007	ND	0.156	0.029	0.039
4,4'-DDE	0.596	0.022	0.174	0.069	0.008	0.03	0.012	0.192	0.063	0.030
4,4'-DDT	0.0035	**0.017**	**0.128**	**0.049**	**0.029**	**0.013**	**0.011**	**0.283**	**0.023**	**0.048**
Endosulfan II	NAV	ND	ND	ND	ND	ND	0.003	0.008	ND	0.005

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3403.01 B30 (6-12") 3/12/1998	3403.03 B31 (6-12") 3/12/1998	3403.05 B32 (6-12") 3/12/1998	3403.07 B33 (6-12") 3/12/1998	3403.09 B34 (6-12") 3/12/1998	3403.11 B35 (6-12") 3/12/1998	3403.13 B36 (6-12") 3/12/1998	3403.15 B37 (6-12") 3/12/1998	3403.17 B38 (6-12") 3/12/1998
Metals (mg/kg)										
Aluminum	50	**7129**	**5509**	**4760**	**5664**	**12240**	**2508**	**7563**	**6754**	**8838**
Antimony	0.27	**2.353**	**0.551**	**0.646**	**0.743**	**25.19**	**0.664**	**1.208**	**0.833**	**1.929**
Arsenic	9.9	**20.51**	**10.38**	6.695	5.212	**266.0**	4.936	9.209	**10.74**	**12.98**
Barium	283	54.33	29.39	29.77	17.11	**301.5**	7.602	26.61	27.70	31.15
Beryllium	10	0.6548	0.6454	0.4611	0.3167	7.534	0.2595	0.7587	0.5435	1.130
Cadmium	0.36	ND	ND	ND	ND	**6.102**	ND	ND	ND	ND
Calcium	NAV	7643	1709	1515	783.2	1745	670.8	1964	2653	2564
Chromium	0.4	**142.4**	**41.66**	**29.77**	**35.60**	**108.7**	**35.96**	**58.00**	**48.97**	**91.27**
Cobalt	13	4.567	1.380	2.401	1.835	**64.74**	0.1813	1.903	3.722	2.600
Copper	28	**257.4**	10.04	18.72	10.46	**60.35**	2.149	20.72	20.27	9.050
Iron	NAV	25140	15760	13530	11490	30970	7532	20600	16810	25710
Lead	11	**57.22**	**21.27**	**43.74**	**12.38**	**104.5**	1.518	**47.86**	**17.31**	**14.93**
Magnesium	NAV	1924	1526	1215	929.2	3453	956.9	2638	3319	3530
Manganese	220	70.63	36.64	48.32	19.63	110.3	4.277	39.28	67.89	83.96
Mercury	0.00051	**0.016**	**0.028**	**0.043**	**0.014**	**0.028**	**0.063**	**0.052**	**0.027**	**0.018**
Nickel	30	13.31	4.738	6.569	3.612	**72.26**	0.9898	6.880	8.189	8.007
Potassium	NAV	3285	3867	2169	1823	6216	2266	6895	4836	6366
Selenium	0.21	**0.423**	ND	ND	ND	**244.4**	ND	ND	**0.311**	ND
Silver	2	ND	ND	ND	ND	**4.833**	ND	ND	ND	ND
Sodium	NAV	165.7	33.10	59.76	138.5	103.4	62.79	59.07	255.5	101.6
Thallium	1	ND	ND	ND	ND	**242.0**	ND	ND	ND	ND
Vanadium	2	**27.55**	**16.43**	**22.35**	**31.98**	**115.6**	**8.127**	**37.76**	**22.69**	**23.09**
Zinc	8.5	**54.09**	**38.48**	**46.20**	**27.11**	**162.8**	**10.73**	**63.19**	**35.78**	**56.88**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3403.19 B39 (6-12") 3/12/1998	3403.21 B40 (6-12") 3/12/1998	3403.23 B41 (6-12") 3/12/1998	3403.25 B42 (6-12") 3/12/1998	3403.27 B43 (6-12") 3/12/1998	3403.29 B44 (6-12") 3/12/1998	3403.31 B45 (6-12") 3/12/1998	3403.33 B46 (6-12") 3/12/1998	3444.01 B47 (6-12") 3/30/1998
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	0.1J	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	0.097J	ND
Anthracene	1,480	0.2J	ND	ND	ND	ND	ND	0.12J	0.099J	0.24J
Benzo[a]anthracene	5.21	0.6	0.067J	0.14J	0.082J	0.12J	ND	0.093J	0.61	1.3
Benzo[a]pyrene	1.52	0.57	0.087J	0.19J	0.1J	0.17J	ND	0.11J	0.75	**1.6**
Benzo[b]fluoranthene	59.8	0.46J	ND	0.13J	0.072J	0.11J	ND	0.071J	0.51J	1.3
Benzo[g,h,i]perylene	119	0.38J	ND	0.13J	ND	0.1J	ND	0.058J	0.35J	1.1
Benzo[k]fluoranthene	148	0.37J	0.1J	0.19J	0.099J	0.17J	ND	0.13J	0.56	1.4
bis(2-Ethylhexyl)phthalate	0.925	0.11J	0.13J	0.089J	0.12J	0.1J	0.072J	0.21J	0.11J	0.17J
Chrysene	4.73	0.77	0.13J	0.27J	0.18J	0.23J	0.063J	0.16J	0.93	1.6
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	0.41J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.55J	0.49J	0.53J	0.23J	0.62	0.47J	0.26J	0.63	3.7
Fluoranthene	122	1.4	0.12J	0.31J	0.18J	0.29J	0.080J	0.2J	1.2	2.4
Fluorene	122	0.070J	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.41J	ND	0.14J	ND	0.11J	ND	ND	0.38J	1.2
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.74	0.066J	0.13J	0.11J	0.12J	0.057J	0.12J	0.4J	0.66J
Pyrene	78.5	1.0	0.11J	0.21J	0.15J	0.2J	0.058J	0.14J	0.81	2.1
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.032	0.019	0.048	0.033	0.021	0.013	0.017	ND	0.014
4,4'-DDE	0.596	0.070	0.055	0.073	0.101	0.057	0.042	0.043	0.021	0.042
4,4'-DDT	0.0035	**0.011**	**0.023**	**0.044**	**0.046**	**0.023**	**0.020**	**0.023**	**0.019**	**0.035**
Endosulfan II	NAV	ND	ND	0.008	ND	ND	ND	ND	0.011	ND

See Notes at End of Table

Table A-3
Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3403.19 B39 (6-12") 3/12/1998	3403.21 B40 (6-12") 3/12/1998	3403.23 B41 (6-12") 3/12/1998	3403.25 B42 (6-12") 3/12/1998	3403.27 B43 (6-12") 3/12/1998	3403.29 B44 (6-12") 3/12/1998	3403.31 B45 (6-12") 3/12/1998	3403.33 B46 (6-12") 3/12/1998	3444.01 B47 (6-12") 3/30/1998
Metals (mg/kg)										
Aluminum	50	**13160**	**9460**	**10070**	**8391**	**12010**	**10240**	**7337**	**7212**	**5794**
Antimony	0.27	**2.093**	**1.873**	**2.145**	**1.314**	**1.621**	**1.587**	**1.320**	**1.344**	**0.649**
Arsenic	9.9	**20.66**	**17.72**	**19.16**	**15.72**	**15.77**	8.882	**10.24**	**11.43**	5.398
Barium	283	58.44	44.43	50.51	35.26	43.89	30.53	30.44	38.98	34.47
Beryllium	10	1.716	1.171	1.279	0.9981	1.275	1.181	0.8449	0.9026	0.4261
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	2650	1751	2574	2255	1432	1129	1521	1892	2181
Chromium	0.4	**131.9**	**93.44**	**97.05**	**76.75**	**93.79**	**94.14**	**67.21**	**68.94**	**31.59**
Cobalt	13	3.777	2.215	2.193	1.776	3.053	1.407	1.300	3.325	1.340
Copper	28	7.270	8.687	9.789	8.903	11.99	3.861	6.834	21.19	6.902
Iron	NAV	40650	28820	30410	24800	33680	28840	20350	21770	11890
Lead	11	**15.18**	**23.70**	**29.28**	**30.30**	**22.50**	9.522	**32.34**	**37.68**	**69.47**
Magnesium	NAV	4651	3125	3693	3008	3542	3539	2369	2131	1266
Manganese	220	100.5	63.60	52.10	49.55	91.67	40.10	43.74	38.60	41.10
Mercury	0.00051	**0.040**	**0.062**	**0.075**	**0.052**	**0.065**	**0.031**	**0.054**	**0.042**	**0.036**
Nickel	30	9.086	7.517	8.082	6.739	9.795	6.188	5.052	6.810	4.669
Potassium	NAV	10160	5995	6669	4758	6771	6444	5968	4027	2394
Selenium	0.21	**0.446**	ND	ND	ND	ND	ND	**0.574**	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	76.50	54.90	84.44	52.01	95.94	83.79	53.97	60.76	75.82
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**38.86**	**32.44**	**35.12**	**34.16**	**55.03**	**44.63**	**29.25**	**25.28**	**21.11**
Zinc	8.5	**73.32**	**60.25**	**65.96**	**60.64**	**57.34**	**37.47**	**43.91**	**125.8**	**73.25**

See Notes at End of Table

Table A-3
Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3444.02 B48 (6-12") 3/30/1998	3444.03 B49 (6-12") 3/30/1998	3408.01 B50 (6-12") 3/13/1998	3408.03 B51 (6-12") 3/13/1998	3408.05 B52 (6-12") 3/13/1998	3408.07 B53 (6-12") 3/13/1998	3408.09 B54 (6-12") 3/13/1998	3408.11 B55 (6-12") 3/13/1998	3408.13 B56 (6-12") 3/13/1998
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	0.075J	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.099J	0.28J	0.3J	ND	ND	0.14J	0.075J
Benzo[a]pyrene	1.52	ND	ND	0.13J	0.34J	0.38J	ND	ND	0.17J	0.095J
Benzo[b]fluoranthene	59.8	ND	ND	0.12J	0.24J	0.26J	ND	ND	0.11J	0.064J
Benzo[g,h,i]perylene	119	0.13J	ND	ND	0.18J	0.23J	ND	ND	0.096J	ND
Benzo[k]fluoranthene	148	0.15J	ND	0.095J	0.38J	0.37J	ND	0.065J	0.16J	0.086J
bis(2-Ethylhexyl)phthalate	0.925	0.15J	0.15J	0.13J	0.17J	0.2J	0.096J	0.1J	0.12J	0.061J
Chrysene	4.73	0.18J	ND	0.18J	0.52J	0.54J	0.091J	0.11J	0.28J	0.14J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	3.4	3.4	0.56	0.98	0.67	0.42J	0.27J	0.48J	0.14J
Fluoranthene	122	0.17J	ND	0.16J	0.65	0.61	0.086J	0.11J	0.3J	0.12J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.19J	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.081J	0.27J	0.27J	0.086J	0.071J	0.23J	0.080J
Pyrene	78.5	0.17J	ND	0.16J	0.54J	0.55J	0.092J	0.1J	0.32J	0.12J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.043	ND	0.058	0.047	0.188	0.175	0.205	**3.056**	0.073
4,4'-DDE	0.596	0.074	ND	0.047	0.054	0.256	0.376	**0.600**	**3.263**	0.163
4,4'-DDT	0.0035	**0.035**	ND	**0.016**	**0.044**	**0.236**	**0.124**	**0.247**	**1.539**	**0.086**
Endosulfan II	NAV	ND	ND	ND	0.008	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-3
Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3444.02 B48 (6-12") 3/30/1998	3444.03 B49 (6-12") 3/30/1998	3408.01 B50 (6-12") 3/13/1998	3408.03 B51 (6-12") 3/13/1998	3408.05 B52 (6-12") 3/13/1998	3408.07 B53 (6-12") 3/13/1998	3408.09 B54 (6-12") 3/13/1998	3408.11 B55 (6-12") 3/13/1998	3408.13 B56 (6-12") 3/13/1998
Metals (mg/kg)										
Aluminum	50	**15230**	**14850**	**8151**	**12730**	**13290**	**7741**	**10610**	**11110**	**10680**
Antimony	0.27	**2.731**	**2.930**	**0.976**	**1.247**		**1.490**	**1.565**	**2.369**	**2.186**
Arsenic	9.9	**11.49**	**10.09**	7.422	8.636	**24.96**	7.025	**13.65**	**11.22**	**10.14**
Barium	283	64.95	66.47	26.20	31.10	59.14	15.77	32.12	89.73	24.35
Beryllium	10	1.417	1.385	0.7182	0.9375	1.590	0.8519	1.280	1.207	1.065
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	1105	1291	1269	1299	1792	1141	1138	1321	1568
Chromium	0.4	**174.4**	**179.7**	**63.39**	**79.45**	**109.3**	**79.46**	**104.0**	**135.9**	**135.3**
Cobalt	13	1.312	1.341	1.388	3.064	3.275	0.9690	1.842	1.986	1.161
Copper	28	7.642	6.070	5.644	6.688	14.79	4.382	6.471	9.848	5.694
Iron	NAV	34910	34310	20640	27360	43790	23620	31990	31160	30220
Lead	11	**13.33**	8.121	**20.93**	**25.74**	**28.11**	**13.03**	**18.31**	**182.1**	9.413
Magnesium	NAV	5235	5362	2397	2918	4727	2921	4046	3842	3643
Manganese	220	23.87	22.80	17.92	22.82	59.07	20.37	41.93	40.93	23.45
Mercury	0.00051	**0.042**	**0.034**	**0.031**	**0.039**	**0.063**	**0.055**	**0.063**	**0.118**	**0.033**
Nickel	30	5.982	5.757	4.984	7.351	9.428	3.802	6.245	6.915	5.351
Potassium	NAV	12030	11700	5086	6320	10210	5180	7947	7598	6615
Selenium	0.21	**0.416**	**0.585**	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	145.7	168.1	64.93	92.26	137.3	72.03	89.30	73.73	50.53
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**63.65**	**62.41**	**35.80**	**44.50**	**54.72**	**41.10**	**46.21**	**50.22**	**45.64**
Zinc	8.5	**53.73**	**55.37**	**32.89**	**49.06**	**67.68**	**31.73**	**48.47**	**75.25**	**41.51**

See Notes at End of Table

Table A-3
Soil Sampling Results
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Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3408.15 B57 (6-12") 3/13/1998	3408.17 B58 (6-12") 3/13/1998	3408.19 B59 (6-12") 3/13/1998	3408.21 B60 (6-12") 3/13/1998	3408.23 B61 (6-12") 3/13/1998	3408.25 B62 (6-12") 3/13/1998	3408.27 B63 (6-12") 3/13/1998
Semi-Volatiles (mg/kg)								
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.28J	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.15J	0.92	0.067J	0.14J	0.19J	ND	ND
Benzo[a]pyrene	1.52	0.15J	0.94	0.085J	0.18J	0.26J	ND	ND
Benzo[b]fluoranthene	59.8	0.093J	0.76	ND	0.12J	0.18J	ND	ND
Benzo[g,h,i]perylene	119	0.078J	0.47J	ND	0.13J	ND	ND	ND
Benzo[k]fluoranthene	148	0.12J	0.71	0.11J	0.12J	0.22J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.091J	0.097J	0.082J	0.14J	0.083J	0.11J	0.12J
Chrysene	4.73	0.2J	1.3	0.11J	0.27J	0.36J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	0.42J	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.45J	0.2J	0.26J	0.24J	0.26J	0.5J	0.49J
Fluoranthene	122	0.29J	1.9	0.1J	0.28J	0.51J	ND	ND
Fluorene	122	ND	0.089J	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.097J	0.54J	ND	ND	0.17J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.18J	0.98	ND	0.14J	0.23J	ND	ND
Pyrene	78.5	0.22J	1.6	0.090J	0.26J	0.35J	ND	ND
Pesticides/PCBs (mg/kg)								
4,4'-DDD	0.758	0.290	0.043	0.057	0.164	0.259	ND	0.032
4,4'-DDE	0.596	0.207	0.057	0.067	0.187	0.283	0.003	0.183
4,4'-DDT	0.0035	**0.329**	**0.039**	**0.054**	**0.046**	**0.355**	**0.007**	**0.113**
Endosulfan II	NAV	ND	0.005	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-3
Soil Sampling Results
M-4 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3408.15 B57 (6-12") 3/13/1998	3408.17 B58 (6-12") 3/13/1998	3408.19 B59 (6-12") 3/13/1998	3408.21 B60 (6-12") 3/13/1998	3408.23 B61 (6-12") 3/13/1998	3408.25 B62 (6-12") 3/13/1998	3408.27 B63 (6-12") 3/13/1998
Metals (mg/kg)								
Aluminum	50	**9156**	**6126**	**14580**	**8288**	**11360**	**7809**	**3825**
Antimony	0.27	**1.634**	**0.751**	**1.701**	**1.648**	**2.181**	**1.501**	**0.735**
Arsenic	9.9	**39.46**	7.415	**16.70**	**12.48**	**18.40**	8.055	3.938
Barium	283	32.87	41.94	41.40	45.90	40.30	12.76	9.505
Beryllium	10	0.9149	0.4819	1.190	0.8244	1.344	0.8714	0.5270
Cadmium	0.36	**0.6475**	ND	ND	ND	ND	ND	0.0616
Calcium	NAV	2900	7771	1216	1255	711.0	932.3	569.2
Chromium	0.4	**90.87**	**27.81**	**107.7**	**81.01**	**106.2**	**79.73**	**40.66**
Cobalt	13	2.401	1.632	2.191	1.406	2.266	1.079	0.6481
Copper	28	**42.95**	19.98	23.01	8.988	5.772	3.570	1.627
Iron	NAV	26570	12200	33100	21840	33630	25180	12750
Lead	11	**38.42**	**28.48**	**39.60**	**21.00**	**16.36**	5.622	4.535
Magnesium	NAV	3133	1678	4010	2461	3761	2755	1352
Manganese	220	48.42	97.82	63.55	22.21	52.54	22.08	12.34
Mercury	0.00051	**0.078**	**0.052**	**0.061**	**0.063**	**0.057**	**0.026**	**0.020**
Nickel	30	9.223	5.185	6.428	5.831	7.260	4.255	2.492
Potassium	NAV	5112	2472	7785	4846	7869	6284	3483
Selenium	0.21	ND	ND	ND	ND	**0.388**	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	63.01	93.04	75.37	61.85	50.28	44.23	26.58
Thallium	1	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**36.99**	**20.13**	**56.36**	**27.69**	**36.35**	**37.93**	**19.58**
Zinc	8.5	**61.17**	**58.84**	**71.37**	**50.69**	**59.44**	**29.2**	**18.08**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No Available Value
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

Table A-4
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3465.03 B01 (6-12") 4/8/1998	3465.07 B02 (6-12") 4/8/1998	3465.11 B03 (6-12") 4/8/1998	3470.03 B04 (6-12") 4/9/1998	3470.07 B05 (6-12") 4/9/1998	3470.11 B06 (6-12") 4/9/1998	3470.15 B07 (6-12") 4/9/1998	3472.03 B08 (6-12") 4/10/1998	3472.07 B09 (6-12") 4/10/1998	3472.11 B10 (6-12") 4/10/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	0.14J	0.15J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND
Benzo[a]anthracene	5.21	0.12J	ND	ND	ND	0.18J	ND	0.99	0.36	0.2J	0.18J
Benzo[a]pyrene	1.52	0.11J	ND	ND	ND	0.17J	ND	0.82	0.14J	0.57	0.14J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	0.17J	ND	0.89	0.16J	0.6	0.15J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	0.48	ND	0.31	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	0.15J	ND	0.86	ND	0.69	0.15J
bis(2-Ethylhexyl)phthalate	0.925	0.1J	0.73J	0.11J	0.11J	ND	0.17J	ND	0.15J	ND	0.18J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.23J	ND	ND	ND	0.37	ND	1.5	0.49	0.28J	0.41
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	0.24J	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	3.9	0.03	1.5	2.1	0.01	0.01	0.02	2.0	0.01	0.64J
Fluoranthene	122	0.17J	ND	ND	ND	0.31	ND	2.1	ND	1.1	0.3
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	0.58	ND	0.39	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.13J**
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.16J	ND	ND	ND	0.28	ND	1.7	0.15J	0.68	0.41
Pyrene	78.5	0.28	ND	ND	ND	0.41	ND	1.6	0.15J	0.88	0.44
Pyridine	NAV	ND	ND	ND	ND	ND	0.5J	0.68J	ND	ND	0.77
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	ND	0.006	ND	0.003
4,4'-DDE	0.596	ND	0.001	0.001	0.001	ND	ND	ND	0.006	0.021	ND
4,4'-DDT	0.0035	ND	ND	ND	ND	ND	ND	ND	**0.01**	ND	**0.006**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	0.008	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-4
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3465.03 B01 (6-12") 4/8/1998	3465.07 B02 (6-12") 4/8/1998	3465.11 B03 (6-12") 4/8/1998	3470.03 B04 (6-12") 4/9/1998	3470.07 B05 (6-12") 4/9/1998	3470.11 B06 (6-12") 4/9/1998	3470.15 B07 (6-12") 4/9/1998	3472.03 B08 (6-12") 4/10/1998	3472.07 B09 (6-12") 4/10/1998	3472.11 B10 (6-12") 4/10/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**4632**	**13450**	**10970**	**10250**	**6368**	**8343**	**13830**	**3691**	**4474**	**9667**
Antimony	0.27	**0.891**	**2.881**	**1.599**	**1.421**	**1.159**	**0.71**	**2.079**	**0.486**	**1.098**	**1.569**
Arsenic	9.9	4.12	**20.13**	**32.33**	**10.22**	9.054	8.85	**11.54**	**19.98**	**15.98**	**11.87**
Barium	283	13.03	32.88	30.43	21.25	40.37	18.58	116.04	31.68	58.82	23.16
Beryllium	10	0.4862	1.611	1.102	1.015	0.737	0.7328	1.32	0.7184	0.4577	1.055
Cadmium	0.36	ND	0.201	0.1798	0.2656	0.1551	0.0579	**0.541**	0.2736	**0.5314**	0.1708
Calcium	NAV	276	748.3	928.7	707.8	459.9	561.5	3956	1373	1105	453
Chromium	0.4	**46.4**	**152.8**	**83.07**	**84.62**	**42.42**	**53.53**	**75.63**	**13.02**	**14.93**	**82.74**
Cobalt	13	1.692	5.048	3.708	4.383	1.834	3.863	6.127	4.926	4.535	4.224
Copper	28	2.887	5.284	6.87	2.717	**30.09**	2.421	**254.1**	**43.77**	**2837**	14.52
Iron	NAV	18680	59460	41330	44130	22150	30210	29220	10980	9325	40700
Lead	11	**14.35**	**24.96**	**59.27**	8.682	**135.1**	**16.31**	**370.1**	**57.95**	**383.9**	**17.36**
Magnesium	NAV	623.7	1468	1548	1250	1222	1051	1571	373.7	423.7	1019
Manganese	220	47.18	69.84	76.15	83.14	50.43	104.4	146	30.67	**484.3**	97.99
Mercury	0.00051	**0.018**	**0.084**	**0.949**	ND	**0.228**	ND	**0.687**	**1.257**	**0.236**	**0.091**
Nickel	30	5.762	18.8	11.78	12.74	6.33	10.08	16.79	12.94	10.39	12.34
Potassium	NAV	1412	3255	4106	2577	3614	2171	4423	690	1241	2288
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	**0.785**	**1.534**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	39.52	37.37	66.18	95.95	124.8	109	969.8	259.8	227.5	68.42
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**53.06**	**200.1**	**103.1**	**115.4**	**37.5**	**76.97**	**76.13**	**24**	**19.41**	**118.7**
Zinc	8.5	**36.18**	**90.91**	**71.52**	**62.01**	**58.64**	**44.99**	**178**	**22.14**	**942.9**	**64.9**

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3473.03 B11 (6-12") 4/11/1998	3473.07 B12 (6-12") 4/11/1998	3473.11 B13 (6-12") 4/11/1998	3473.15 B14 (6-12") 4/11/1998	3473.19 B15 (6-12") 4/11/1998	3477.03 B16 (6-12") 4/13/1998	3477.07 B17 (6-12") 4/13/1998	3477.11 B18 (6-12") 4/13/1998	3477.15 B19 (6-12") 4/13/1998	3479.03 B20 (6-12") 4/14/1998	3479.07 B21 (6-12") 4/14/1998
Semi-Volatiles (mg/kg)												
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	0.52	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	0.29	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.18J	ND	ND	0.27	ND	0.25	0.24	ND	ND
Benzo[a]pyrene	1.52	ND	ND	0.15J	ND	ND	0.27	ND	0.35	0.17J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.12J	ND	ND	0.27	ND	0.41	0.14J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	0.18J	ND	0.22J	0.12J	ND	ND
Benzo[k]fluoranthene	148	ND	ND	0.14J	ND	ND	0.26	ND	0.31	0.15J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.18J	0.18J	0.16J	0.17J	ND	0.18J	0.25J	0.19J	0.18J	0.4	0.19J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	0.35	ND	ND	0.46	0.25J	0.41	0.44	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	0.16J	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.9J	0.78J	0.3J	0.33J	0.03	0.82J	1.0	0.59J	0.66J	0.74J	0.75J
Fluoranthene	122	ND	ND	0.26	ND	ND	0.43	ND	0.18J	0.34	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	0.2J	ND	0.27	0.11J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	**0.3**	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.3	ND	ND	0.2J	0.31	ND	0.56	ND	ND
Pyrene	78.5	ND	ND	0.45	ND	ND	0.42	ND	0.22J	0.68	ND	ND
Pyridine	NAV	ND	ND	ND	ND	0.78J	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)												
4,4'-DDD	0.758	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	0.001
4,4'-DDE	0.596	ND	0.008	ND	ND	ND	ND	ND	ND	ND	ND	0.001
4,4'-DDT	0.0035	ND	**0.01**	ND	ND	ND	0.003	ND	ND	ND	ND	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	0.009	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3473.03 B11 (6-12") 4/11/1998	3473.07 B12 (6-12") 4/11/1998	3473.11 B13 (6-12") 4/11/1998	3473.15 B14 (6-12") 4/11/1998	3473.19 B15 (6-12") 4/11/1998	3477.03 B16 (6-12") 4/13/1998	3477.07 B17 (6-12") 4/13/1998	3477.11 B18 (6-12") 4/13/1998	3477.15 B19 (6-12") 4/13/1998	3479.03 B20 (6-12") 4/14/1998	3479.07 B21 (6-12") 4/14/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**10420**	**10180**	**10770**	**10610**	**12770**	**12110**	**2705**	**5034**	**10530**	**12710**	**12310**
Antimony	0.27	**2.011**	**1.568**	**1.548**	**2.184**	**2.339**	**1.504**	**2.11**	**0.716**	**1.411**	**1.18**	**1.586**
Arsenic	9.9	**11.44**	**11.02**	**13.28**	**12.94**	**14.03**	**12.91**	7.747	**10.67**	**1030**	**14.23**	**12.38**
Barium	283	23.76	22.06	28.75	21.51	29.59	77.62	19.8	57.41	28.22	26.01	34.1
Beryllium	10	1.1	0.9966	1.09	1.376	1.187	1.463	0.3558	0.5955	0.9895	1.228	1.182
Cadmium	0.36	0.1037	0.0837	0.0925	**0.3648**	0.2357	0.3385	**0.482**	**1.934**	**1.258**	**1.41**	ND
Calcium	NAV	555.8	1110	1749	1224	600.2	1370	746.9	1947	533.2	750.3	4851
Chromium	0.4	**104.3**	**86.63**	**83.47**	**117.3**	**98.72**	**70.59**	**5.603**	**13.86**	**83.08**	**106.7**	**109.2**
Cobalt	13	5.456	5.389	3.82	5.631	5.412	5.138	3.41	5.639	2.785	3.228	5.048
Copper	28	6.138	4.719	7.043	4.11	2.605	**132.3**	**191.4**	**504.4**	6.488	4.663	5.5
Iron	NAV	44300	39710	39530	56290	47940	33680	4204	8125	33280	38800	44760
Lead	11	8.172	9.266	**32.8**	8.331	8.012	**288.8**	**1793**	**305.2**	10.63	**16.25**	9.176
Magnesium	NAV	1049	1442	2317	1445	1278	1392	184.9	348.8	2199	3160	3428
Manganese	220	86.4	105.6	85.88	115.4	87.25	110.8	24.55	50.34	59.32	76.21	81.37
Mercury	0.00051	**0.017**	**0.055**	**0.467**	**0.024**	**0.012**	**0.437**	**0.062**	**0.133**	ND	**0.019**	ND
Nickel	30	17.5	14.2	12.04	19.62	15.27	15.51	8.915	15.97	8.234	10.4	15.46
Potassium	NAV	2328	2392	4990	2466	3631	3944	375.3	907.7	4763	5588	3221
Selenium	0.21	ND	ND	ND	ND	ND	ND	**0.438**	**0.78**	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	1.519	ND	ND	ND
Sodium	NAV	142.9	66.2	67.71	79.89	83.87	248	152.2	246.7	37.78	48.64	235.5
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**141**	**120.3**	**104.6**	**166.2**	**146.2**	**90.73**	**10.9**	**17.17**	**66.69**	**67.64**	**135.8**
Zinc	8.5	**65.8**	**59.62**	**66.81**	**108.8**	**79.64**	**120.7**	**46.07**	**627.4**	**42.6**	**56.35**	**74.92**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3479.11 B22 (6-12") 4/14/1998	3485.03 B23 (6-12") 4/15/1998	3485.07 B24 (6-12") 4/15/1998	3485.11 B25 (6-12") 4/15/1998	3485.15 B26 (6-12") 4/15/1998	3498.03 B27 (6-12") 4/20/1998	3498.07 B28 (6-12") 4/20/1998	3498.11 B29 (6-12") 4/20/1998	3498.15 B30 (6-12") 4/20/1998	3500.02 B31 (6-12") 4/21/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	0.21J	0.16J	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	0.14J	ND	ND	ND	ND	0.21J	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.25	0.54	1.5	0.23	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.25	0.67	**1600**	0.22	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.29	0.69	1.6	0.19J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.17J	0.51	0.95	0.16J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.26	0.56	1.4	0.19J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.64	0.13J	0.51	0.23J	**1.3**	0.29J	0.14J	0.18J	0.17J	0.13J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	0.12J	ND	ND	ND	ND	ND
Chrysene	4.73	0.19J	ND	ND	0.41	0.83	2.3	0.53	0.19J	ND	0.15J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	0.42	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	0.2J	ND	0.12J	0.12J	0.15J
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.52J	0.01	1.1	0.01	4.6	0.01	0.89J	1.6	1.0	0.03
Fluoranthene	122	0.15J	ND	ND	0.33	0.91	2.8	0.38	0.14J	ND	0.12J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.19J	0.58	1.2	0.15J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	**0.17J**	**0.13J**	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.14J	ND	ND	0.19J	0.39	1.3	0.48	0.15J	ND	0.13J
Pyrene	78.5	0.22J	ND	ND	0.31	0.77	2.5	0.6	0.24J	ND	0.19J
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	0.002	0.002	0.008	0.001	ND	ND	ND
4,4'-DDE	0.596	ND	ND	ND	0.007	0.001	0.092	0.016	0.009	0.004	ND
4,4'-DDT	0.0035	ND	ND	ND	**0.015**	0.001	**0.03**	**0.004**	0.001	ND	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	0.002	ND	ND	0.005	ND	ND	ND	0.004	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3479.11 B22 (6-12") 4/14/1998	3485.03 B23 (6-12") 4/15/1998	3485.07 B24 (6-12") 4/15/1998	3485.11 B25 (6-12") 4/15/1998	3485.15 B26 (6-12") 4/15/1998	3498.03 B27 (6-12") 4/20/1998	3498.07 B28 (6-12") 4/20/1998	3498.11 B29 (6-12") 4/20/1998	3498.15 B30 (6-12") 4/20/1998	3500.02 B31 (6-12") 4/21/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**6500**	**10230**	**8798**	**5973**	**3987**	**4737**	**10510**	**3825**	**11450**	**9478**
Antimony	0.27	**0.811**	**1.933**	**2.019**	**0.535**	**1.402**	**0.609**	**2.536**	**0.562**	**1.41**	**1.835**
Arsenic	9.9	6.743	**11.27**	**11.08**	9.377	**12.45**	**14.28**	**11.12**	5.409	**10.21**	**12.89**
Barium	283	18.78	18.63	22.06	54.85	93.31	102.3	27.13	21.8	27.58	26
Beryllium	10	0.72	1.132	1.003	0.5943	0.5401	0.5059	1.382	0.4842	0.9559	1.034
Cadmium	0.36	ND	0.2331	**0.4323**	**0.5041**	**1.011**	**1.863**	0.2193	0.0786	0.1311	0.1635
Calcium	NAV	1079	672.4	645.4	2380	1670	2181	775.9	715.5	1593	705.5
Chromium	0.4	**53.19**	**106.8**	**92.13**	**43.8**	**24.87**	**25.25**	**141.4**	**28.13**	**78.5**	**102.1**
Cobalt	13	2.142	3.946	4.48	3.881	3.974	3.495	3.636	0.8424	4.455	1.878
Copper	28	4.971	**37.2**	11.34	**102.8**	**484.1**	**566.7**	7.552	7.933	4.673	8.222
Iron	NAV	19270	50900	41650	23110	17000	14330	51640	11250	36530	39390
Lead	11	**11.83**	**17.2**	10.74	**207.2**	**921.5**	**708.5**	**21.74**	**39.12**	10.71	**34.73**
Magnesium	NAV	2083	1176	958.6	1409	378.7	1019	1088	844.5	1847	1751
Manganese	220	67.71	74.58	86.61	104.8	97.11	73.72	52.63	39.55	87.83	38.07
Mercury	0.00051	**0.011**	ND	ND	**0.201**	**0.485**	**0.512**	**0.064**	**0.056**	**0.012**	**0.184**
Nickel	30	5.72	13.06	12.94	10.85	13.33	10.33	11.45	3.095	12.99	8.486
Potassium	NAV	4347	2592	1592	1725	684	1454	2371	1592	2876	4834
Selenium	0.21	ND	ND	ND	ND	**0.888**	**0.881**	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	1.574	0.419	ND	ND	ND	ND
Sodium	NAV	33.37	35.27	58.67	95.4	333.1	159.7	49.69	35.99	77.41	39.97
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**34.59**	**138.4**	**126.7**	**51.98**	**34.2**	**28.86**	**191.7**	**19.39**	**109.7**	**79.23**
Zinc	8.5	**32.86**	**86.32**	**67.07**	**163.9**	**303.7**	**179.4**	**70.69**	**55.47**	**56.71**	**62.43**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3500.06 B32 (6-12") 4/21/1998	3500.10 B33 (6-12") 4/21/1998	3500.14 B34 (6-12") 4/21/1998	3500.18 B35 (6-12") 4/21/1998	3501.02 B36 (6-12") 4/22/1998	3501.06 B37 (6-12") 4/22/1998	3501.10 B38 (6-12") 4/22/1998	3501.14 B39 (6-12") 4/22/1998	3501.18 B40 (6-12") 4/22/1998	3539.02 B41 (6-12") 5/1/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	0.11J	ND	0.12J	ND	ND	ND	ND	ND	0.26J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.17J	0.32	0.35	0.69	0.14J	ND	ND	ND	ND	0.15J
Benzo[a]pyrene	1.52	0.17J	0.37	0.39	0.72	0.12J	ND	ND	ND	ND	0.16J
Benzo[b]fluoranthene	59.8	0.16J	0.35	0.42	0.84	0.11J	ND	ND	ND	ND	0.25J
Benzo[g,h,I]perylene	119	ND	0.23J	0.25J	0.4	ND	ND	ND	ND	ND	0.12J
Benzo[k]fluoranthene	148	0.15J	0.36	0.34	0.7	0.12J	ND	ND	ND	ND	0.18J
bis(2-Ethylhexyl)phthalate	0.925	0.16J	0.15J	0.36	0.13J	0.13J	0.13J	0.15J	ND	ND	0.15J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.3	0.6	0.57	1.2	0.28	ND	ND	ND	ND	0.41
Dibenz[a,h]anthracene	18.4	ND	ND	ND	0.2J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	0.14J	0.3	0.18J	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	2.5	1.0	1.4	0.01	3.3	4.7	0.01	0.04	4.2	1.1
Fluoranthene	122	0.25	0.55	0.57	1.3	0.22	ND	ND	ND	ND	0.34
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.12J	0.26	0.3	0.49	ND	ND	ND	ND	ND	0.13J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.18J**
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.17J	0.35	0.28	0.67	0.21	ND	ND	ND	ND	0.35
Pyrene	78.5	0.27	0.52	0.46	1.1	0.33	ND	ND	ND	ND	0.31
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	0.003	ND	0.02	0.001	ND	ND	ND	0.001	0.003
4,4'-DDE	0.596	ND	0.037	0.009	0.153	0.003	ND	ND	ND	0.001	0.028
4,4'-DDT	0.0035	ND	**0.02**	0.003	**0.051**	**0.006**	ND	ND	ND	0.003	**0.044**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	0.01	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3500.06 B32 (6-12") 4/21/1998	3500.10 B33 (6-12") 4/21/1998	3500.14 B34 (6-12") 4/21/1998	3500.18 B35 (6-12") 4/21/1998	3501.02 B36 (6-12") 4/22/1998	3501.06 B37 (6-12") 4/22/1998	3501.10 B38 (6-12") 4/22/1998	3501.14 B39 (6-12") 4/22/1998	3501.18 B40 (6-12") 4/22/1998	3539.02 B41 (6-12") 5/1/1998
Endrin	0.0101	ND	ND	ND	**0.023**	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**9374**	**5404**	**6652**	**12810**	**8275**	**10070**	**9616**	**9833**	**7769**	**6479**
Antimony	0.27	**1.035**	**1.754**	**2.403**	**5.962**	**0.964**	**1.965**	**1.819**	**1.916**	**1.55**	**1.413**
Arsenic	9.9	**11.15**	**32.71**	**13.11**	**62.27**	9.445	**10.42**	9.688	**13.1**	**10.04**	**12.52**
Barium	283	36.46	150	203.9	**354.6**	22.98	24.73	26.09	30.29	20	107.8
Beryllium	10	0.8538	0.6234	0.689	**10.89**	0.8057	1.032	1.058	1.159	0.8691	0.759
Cadmium	0.36	0.2132	**2.087**	**1.975**	**7.431**	**0.5996**	0.1855	0.2547	0.1541	0.1502	**0.959**
Calcium	NAV	1054	4974	3063	2477	635.6	1015	839	612.5	577.6	2137
Chromium	0.4	**70.22**	**38.59**	**44.4**	**72.25**	**61.12**	**96.84**	**99.42**	**106.1**	**83.34**	**56.36**
Cobalt	13	3.774	5.207	5.537	**55.97**	3.707	4.522	4.232	4.975	4.022	4.604
Copper	28	**32.05**	**409.3**	**428**	**442.8**	8.111	3.796	3.185	3.559	1.854	**412.9**
Iron	NAV	31220	32440	23380	13500	29820	43400	42240	49440	36490	27420
Lead	11	**70.19**	**810.3**	**1090**	**2851**	**16.68**	8.622	8.58	10.66	5.945	**629.1**
Magnesium	NAV	1360	2213	878.7	1112	1019	1311	1022	899.6	789.1	1009
Manganese	220	123.3	179.6	153.2	174.9	76.98	103.8	85.25	110.2	86.79	193.3
Mercury	0.00051	**0.025**	**0.979**	**0.662**	**1.562**	**0.059**	**0.025**	**0.014**	**0.037**	**0.013**	**0.891**
Nickel	30	12.04	18.98	22.35	**69.97**	10.12	14.97	15.78	15.84	10.83	19.73
Potassium	NAV	3626	1348	1615	3185	2115	2342	1607	1726	1611	1890
Selenium	0.21	ND	**0.602**	**1.104**	**50.7**	**0.584**	ND	ND	ND	ND	**0.627**
Silver	2	ND	**2.78**	**3.345**	**9.425**	ND	ND	ND	ND	ND	0.945
Sodium	NAV	81.26	245.1	186.7	343.3	38.72	40.28	45.41	62.79	32.38	154.9
Thallium	1	ND	ND	ND	**47.42**	ND	ND	ND	ND	ND	ND
Vanadium	2	**76.03**	**44.85**	**52.39**	**84.39**	**84.38**	**131.4**	**139**	**159.7**	**103.5**	**59.51**
Zinc	8.5	**82.33**	**743**	**828**	**658.1**	**45.25**	**64.17**	**70.04**	**71.88**	**58.82**	**433.1**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3539.06 B42 (6-12") 5/1/1998	3543.02 B43 (6-12") 5/1/1998	3543.06 B44 (6-12") 5/1/1998	3543.10 B45 (6-12") 5/1/1998	3543.14 B46 (6-12") 5/1/1998	3547.02 B47 (6-12") 5/5/1998	3547.06 B48 (6-12") 5/5/1998	3547.10 B49 (6-12") 5/5/1998	3547.14 B50 (6-12") 5/5/1998	3547.18 B51 (6-12") 5/5/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	0.26J	ND	0.16J	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	0.16J	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	0.19J	ND	ND	ND	ND	ND	ND	0.13J
Benzo[a]anthracene	5.21	0.65	ND	1.5	0.44	0.31	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	0.67	ND	**1600**	0.5	0.36	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.72	ND	1.6	0.48	0.33	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.5	ND	1.2	0.42	0.28	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.59	ND	1.5	0.47	0.35	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	2.9	ND	ND	0.14J	0.12J	0.14J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.98	0.13J	2.4	0.69	0.51	ND	ND	ND	0.13J	0.18J
Dibenz[a,h]anthracene	18.4	0.2J	ND	0.47	0.16J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	0.11J	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.8J	0.4J	0.37J	0.29J	1.	0.96	0.63J	0.49J	0.26J	0.91
Fluoranthene	122	1.3	ND	2.8	0.71	0.56	ND	0.12J	ND	0.17J	0.16J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.58	ND	1.3	0.47	0.31	ND	ND	ND	ND	ND
Naphthalene	0.0994	**0.31**	ND	**0.19J**	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.64	ND	1.3	0.3	0.32	ND	ND	ND	ND	0.14J
Pyrene	78.5	0.96	ND	2.5	0.7	0.53	ND	ND	ND	0.13J	0.23J
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	0.58	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.003	ND	ND	0.007	0.008	ND	ND	0.001	0.001	ND
4,4'-DDE	0.596	0.007	ND	ND	0.084	0.052	0.004	ND	ND	0.004	ND
4,4'-DDT	0.0035	**0.033**	ND	ND	**0.105**	**0.075**	**0.004**	ND	ND	**0.01**	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3539.06 B42 (6-12") 5/1/1998	3543.02 B43 (6-12") 5/1/1998	3543.06 B44 (6-12") 5/1/1998	3543.10 B45 (6-12") 5/1/1998	3543.14 B46 (6-12") 5/1/1998	3547.02 B47 (6-12") 5/5/1998	3547.06 B48 (6-12") 5/5/1998	3547.10 B49 (6-12") 5/5/1998	3547.14 B50 (6-12") 5/5/1998	3547.18 B51 (6-12") 5/5/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**3951**	**6390**	**8077**	**1961**	**4464**	**1986**	**3363**	**4876**	**3699**	**8596**
Antimony	0.27	**1.104**	ND	**1.203**	**0.382**	**0.639**	**0.388**	**0.95**	**0.791**	**0.497**	**1.713**
Arsenic	9.9	8.959	4.218	**11.66**	2.255	8.122	1.719	8.626	**12.79**	3.172	**27.93**
Barium	283	181.9	258.9	**513.9**	16.6	69.01	10.23	113.8	76.99	16.51	27.23
Beryllium	10	0.4586	0.764	0.8622	0.166	0.4403	0.3672	0.4112	0.6963	0.7032	1.108
Cadmium	0.36	**0.489**	ND	**0.6777**	**0.4876**	**0.9829**	ND	0.2786	0.1114	ND	0.1293
Calcium	NAV	962.9	1200	2670	10360	2705	277	933.3	1111	476.2	943.5
Chromium	0.4	**36.34**	**21.06**	**70.59**	**17.96**	**36.61**	**21.36**	**23.73**	**52.57**	**30.82**	**108.5**
Cobalt	13	4.035	5.369	2.42	1.223	2.495	0.3853	2.388	1.731	0.3871	3.129
Copper	28	**207.3**	**38.4**	**346.7**	**28.23**	**262.8**	2.913	**532.4**	**60.76**	4.304	7.103
Iron	NAV	21350	8584	21940	6391	18840	7617	20580	22280	10500	47660
Lead	11	**502.5**	**39.9**	**275.5**	**228.1**	**273.5**	8.632	**845.1**	**226.7**	6.099	**40.53**
Magnesium	NAV	485	331.2	2943	5665	928.1	534.1	574.5	1066	602.6	963.9
Manganese	220	102.6	68.44	84.22	52.05	**725.6**	10.21	107.1	71.47	20.24	65.67
Mercury	0.00051	**0.754**	**0.085**	**0.164**	**10.194**	**5.04**	**0.039**	**0.51**	**5.141**	**0.074**	**0.225**
Nickel	30	10.93	13.84	13.28	4.67	7.3	2.299	7.715	6.521	3.713	12.48
Potassium	NAV	864.1	525.2	3791	722.3	1955	1048	1422	2485	918.9	2085
Selenium	0.21	**0.859**	**1.417**	**0.473**	ND	ND	**0.372**	**0.4**	ND	ND	ND
Silver	2	ND	**2.362**	0.993	ND	0.512	ND	1.123	ND	ND	ND
Sodium	NAV	103.4	216.8	221.4	174.2	312.4	144.3	96.56	71.52	266.9	393.3
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**43.68**	**20.79**	**30.96**	**14.38**	**33.38**	**16.22**	**17.18**	**39.23**	**26.17**	**126.4**
Zinc	8.5	**250.3**	**48.22**	**1598**	**62.64**	**1809**	**46.14**	**209.5**	**100.6**	**49.56**	**68.26**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3550.03 B52 (6-12") 5/6/1998	3550.07 B53 (6-12") 5/6/1998	3550.11 B54 (6-12") 5/6/1998	3550.15 B55 (6-12") 5/6/1998	3561.02 B56 (6-12") 5/11/1998	3561.06 B57 (6-12") 5/11/1998	3561.10 B58 (6-12") 5/11/1998	3561.14 B59 (6-12") 5/11/1998	3567.02 B60 (6-12") 5/14/1998	3567.06 B61 (6-12") 5/14/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.24	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.19J	0.17J	ND	ND	0.21J	ND	ND	0.28	ND
Benzo[a]pyrene	1.52	ND	0.17J	0.11J	ND	ND	0.15J	ND	ND	0.26	ND
Benzo[b]fluoranthene	59.8	ND	0.11J	ND	ND	ND	ND	ND	ND	0.22J	ND
Benzo[g,h,I]perylene	119	ND	0.11J	ND	ND	ND	ND	ND	ND	0.17J	ND
Benzo[k]fluoranthene	148	ND	0.14J	0.11J	ND	ND	0.13J	ND	ND	0.24	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.22J	0.13J	ND	0.14J	0.2J	ND	0.2J	0.22J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.14J	0.37	0.23J	ND	ND	0.29	ND	ND	0.3	0.13J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	ND	0.35J	1.6	0.9J	0.36J	0.57J	0.97	0.43J	0.61J	0.88J
Fluoranthene	122	ND	0.26	0.16J	ND	ND	0.3	ND	0.14J	0.71	0.14J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.11J	ND	ND	ND	ND	ND	ND	0.18J	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.11J	0.24	0.11J	ND	ND	0.25	ND	ND	0.44	ND
Pyrene	78.5	0.17J	0.41	0.24	ND	ND	0.45	ND	0.12J	0.53	0.15J
Pyridine	NAV	ND	ND	ND	0.42	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	0.019	0.002	ND	ND	ND	**2.68**	ND	ND
4,4'-DDE	0.596	ND	0.027	0.009	0.006	0.227	0.039	0.004	**2.058**	0.003	0.005
4,4'-DDT	0.0035	ND	ND	**0.092**	**0.012**	**0.17**	**0.06**	**0.007**	**11.182**	0.002	**0.007**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	**0.409**	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	0.013	0.019	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3550.03 B52 (6-12") 5/6/1998	3550.07 B53 (6-12") 5/6/1998	3550.11 B54 (6-12") 5/6/1998	3550.15 B55 (6-12") 5/6/1998	3561.02 B56 (6-12") 5/11/1998	3561.06 B57 (6-12") 5/11/1998	3561.10 B58 (6-12") 5/11/1998	3561.14 B59 (6-12") 5/11/1998	3567.02 B60 (6-12") 5/14/1998	3567.06 B61 (6-12") 5/14/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	**0.577**	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	**0.014**	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	**0.261**	ND	ND
Metals (mg/kg)											
Aluminum	50	**8267**	**4460**	**6246**	**7988**	**11380**	**10290**	**1884**	**2975**	**13190**	**9246**
Antimony	0.27	**1.263**	**0.547**	**1.532**	**1.149**	**1.246**	**1.868**	**0.326**	**0.48**	**1.266**	**0.86**
Arsenic	9.9	**14.36**	4.293	**147.5**	**10.36**	**16.81**	**14.94**	1.201	7.456	**10.76**	7.677
Barium	283	29.54	25.47	14.72	101.2	44.19	88.58	5.948	27.13	34.64	21.61
Beryllium	10	0.9403	0.412	0.7216	0.9041	1.233	0.9952	0.3044	0.3715	1.496	1.056
Cadmium	0.36	ND	ND	ND	ND	ND	0.2176	0.1125	0.2638	ND	ND
Calcium	NAV	664.1	452.9	440.1	950.6	1662	1169	152.9	400.1	1188	491.6
Chromium	0.4	**87.14**	**31.37**	**81.6**	**58.97**	**90.25**	**78.52**	**14.29**	**18.99**	**100.1**	**82.22**
Cobalt	13	6.07	1.335	0.8229	2.301	2.645	4.073	0.2267	1.23	2.967	1.778
Copper	28	15.39	17.84	6.733	14.76	15.96	**83.51**	3.742	9.851	5.622	3.459
Iron	NAV	40040	10340	30770	24580	32850	34590	5510	7582	36290	26710
Lead	11	**55.83**	**22.07**	**14.64**	**45.25**	**108.8**	**2379**	8.725	**71.13**	10.39	9.338
Magnesium	NAV	1089	698.6	2093	2144	3720	1506	335.4	664.8	3941	2704
Manganese	220	153.5	74.62	30.56	147.5	76.07	118.1	5.243	21.19	95.3	47.43
Mercury	0.00051	**0.588**	**0.037**	**0.036**	**0.213**	**0.9**	**0.459**	**0.039**	**17.584**	**0.671**	**0.058**
Nickel	30	11.51	2.826	3.717	7.104	8.858	13.31	1.59	4.389	7.747	5.302
Potassium	NAV	2466	1529	6333	5418	7138	4203	460.3	1084	7084	5398
Selenium	0.21	ND	ND	**0.599**	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	52.66	40.01	229.7	159.4	71.89	110.9	25.7	57.27	81.7	49.79
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**79.15**	**18.81**	**32.76**	**29.63**	**42.8**	**82.13**	**13.82**	**18.5**	**44.53**	**37.72**
Zinc	8.5	**91.96**	**35.88**	**28.84**	**58.2**	**81.92**	**178.4**	**26.47**	**73.37**	**59.43**	**41.41**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3567.10 B62 (6-12") 5/14/1998	3567.14 B63 (6-12") 5/14/1998	3567.19 B64 (6-12") 5/14/1998	3571.02 B65 (6-12") 5/15/1998	3571.06 B66 (6-12") 5/15/1998	3571.10 B67 (6-12") 5/15/1998	3571.13 B68 (6-12") 5/15/1998	3571.17 B69 (6-12") 5/15/1998	3576.02 B70 (6-12") 5/18/1998	3576.06 B71 (6-12") 5/18/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	0.14J	ND	0.26J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18J
Acenaphthylene	682	ND	0.14J	0.15J	ND	ND	0.19J	ND	ND	ND	0.74
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	0.15J	ND	0.74
Benzo[a]anthracene	5.21	ND	0.56	0.66	ND	ND	0.76	ND	0.7	ND	3.1
Benzo[a]pyrene	1.52	ND	0.58	0.66	ND	0.12J	0.72	ND	0.72	ND	**3**
Benzo[b]fluoranthene	59.8	ND	0.41	0.56	ND	0.11J	0.41	ND	0.74	ND	2.4
Benzo[g,h,I]perylene	119	ND	0.44	0.54	ND	ND	0.53	ND	0.45	ND	2.3
Benzo[k]fluoranthene	148	ND	0.52	0.56	ND	0.11J	0.53	ND	0.7	ND	2.4
bis(2-Ethylhexyl)phthalate	0.925	0.11J	0.21J	0.28J	ND	0.12J	ND	ND	0.11J	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.88	1.5	ND	0.12J	1.2	0.18J	0.97	ND	**5.0**
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.45J	0.38J	0.82J	0.21J	0.59J	0.25J	0.18J	0.22J	0.54J	1.0
Fluoranthene	122	ND	0.89	1.2	ND	0.17J	1.2	0.14J	1.5	ND	4.5
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.46
Indeno[1,2,3-cd]pyrene	109	ND	0.37	0.44	ND	ND	0.43	ND	0.47	ND	1.9
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	**0.12J**	ND	**0.22J**
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.54	1.1	ND	ND	1.5	0.17J	0.95	ND	3.8
Pyrene	78.5	ND	1.3	2.2	ND	0.15J	2.1	0.2J	1.3	ND	6.4
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	0.196	ND	ND	ND	ND	0.038	ND	ND
4,4'-DDE	0.596	0.001	0.007	**1.184**	0.002	ND	ND	0.041	0.069	0.001	0.103
4,4'-DDT	0.0035	ND	**0.01**	**0.532**	0.002	ND	ND	**0.069**	**0.287**	0.002	**0.104**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3567.10 B62 (6-12") 5/14/1998	3567.14 B63 (6-12") 5/14/1998	3567.19 B64 (6-12") 5/14/1998	3571.02 B65 (6-12") 5/15/1998	3571.06 B66 (6-12") 5/15/1998	3571.10 B67 (6-12") 5/15/1998	3571.13 B68 (6-12") 5/15/1998	3571.17 B69 (6-12") 5/15/1998	3576.02 B70 (6-12") 5/18/1998	3576.06 B71 (6-12") 5/18/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**5436**	**7195**	**15670**	**8058**	**3044**	**7248**	**6761**	**7952**	**11120**	**9388**
Antimony	0.27	**0.921**	**1.01**	**1.059**	**0.997**	**0.443**	**0.35**	**1.209**	**1.305**	**1.249**	**0.789**
Arsenic	9.9	5.493	8.63	**14.6**	7.83	3.083	7.19	**11.44**	**10.21**	**10.11**	9.62
Barium	283	18.86	111.8	52.75	28.5	21.9	15.88	44.56	125.5	25.88	51.51
Beryllium	10	0.6189	0.8207	1.179	0.8404	0.4444	0.604	0.8332	0.8544	1.128	0.9041
Cadmium	0.36	**0.7023**	0.2273	ND	ND	ND	ND	0.1382	**1.154**	ND	ND
Calcium	NAV	181.1	1930	969	744.4	266.5	518.3	1209	1407	586.5	1169
Chromium	0.4	**49.99**	**57.85**	**81.95**	**68.44**	**23.91**	**42.72**	**57.83**	**51.07**	**114.5**	**77.94**
Cobalt	13	0.5732	1.54	4.367	3.136	0.5376	2.701	4.179	5.826	4.8	3.255
Copper	28	20.54	**50.68**	8.773	5.669	7.449	3.409	**42.05**	**1544**	2.028	**39.85**
Iron	NAV	15460	22510	34010	29740	8577	25900	27790	27860	47050	33340
Lead	11	**94.89**	**673.7**	**20.2**	**30.1**	**37.51**	9.825	**90.71**	**852.3**	**11.87**	**122.6**
Magnesium	NAV	948.3	1648	2740	1237	710.2	895.3	730.7	817.3	1074	1435
Manganese	220	18.48	144	175.4	76.07	29.05	79.87	54.71	195.3	103.5	76.53
Mercury	0.00051	**0.161**	**0.115**	**0.17**	**0.074**	**0.088**	**0.068**	**0.268**	ND	ND	**0.079**
Nickel	30	3.305	8.803	13.41	9.24	2.565	7.65	10.39	17.71	16.38	10.52
Potassium	NAV	2311	3715	5202	3399	1602	1460	1202	1922	2684	3817
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	1.082	ND	ND
Sodium	NAV	51.48	439.1	287.7	56.68	11.9	43.74	72.72	175.9	92.7	92.75
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**39.39**	**27.81**	**74.48**	**74.42**	**14.64**	**56.21**	**74.83**	**52.52**	**148.9**	**82.7**
Zinc	8.5	**32.25**	**338.9**	**73.04**	**55.34**	**43.34**	**42.07**	**49.92**	**455**	**81.93**	**117.6**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3576.10 B72 (6-12") 5/18/1998	3576.14 B73 (6-12") 5/18/1998	3580.02 B74 (6-12") 5/19/1998	3580.05 B75 (6-12") 5/19/1998	3580.08 B76 (6-12") 5/19/1998	3580.11 B77 (6-12") 5/19/1998	3580.14 B78 (6-12") 5/19/1998	3580.18 B79 (6-12") 5/19/1998	3580.22 B80 (6-12") 5/19/1998	3580.26 B81 (6-12") 5/19/1998	3580.30 B82 (6-12") 5/19/1998
Semi-Volatiles (mg/kg)												
2-Methylnaphthalene	3.24	0.23J	ND	ND	ND	ND	ND	ND	ND	ND	0.66	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND
Anthracene	1,480	0.13J	ND	ND	ND	ND	ND	ND	ND	ND	0.16J	ND
Benzo[a]anthracene	5.21	0.97	0.24	ND	0.18J	0.31	ND	ND	ND	ND	0.3	ND
Benzo[a]pyrene	1.52	1.1	0.26	ND	0.13J	0.29	ND	ND	ND	ND	0.24	ND
Benzo[b]fluoranthene	59.8	1.2	0.21J	ND	0.11J	0.2J	ND	ND	ND	ND	0.18J	ND
Benzo[g,h,I]perylene	119	0.77	0.22J	ND	ND	0.19J	ND	ND	ND	ND	0.19J	ND
Benzo[k]fluoranthene	148	1.2	0.23	ND	0.13J	0.22	ND	ND	ND	ND	0.22	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	0.28J	0.1J	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	1.7	0.43	0.12J	0.3	0.52	ND	ND	ND	ND	0.51	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17J	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12J	ND
Di-n-butylphthalate	200	0.82J	0.51J	0.32J	0.76J	0.78J	0.38J	0.67J	0.6J	0.27J	0.84J	0.17J
Fluoranthene	122	2.3	0.33	0.13J	0.3	0.5	0.19J	ND	ND	ND	0.4	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J	ND
Indeno[1,2,3-cd]pyrene	109	0.76	ND	ND	ND	0.16J	ND	ND	ND	ND	0.15J	ND
Naphthalene	0.0994	**0.22J**	ND	ND	ND	ND	ND	ND	ND	ND	**0.4**	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15J	ND
Phenanthrene	45.7	1.2	0.25	0.12J	0.48	0.72	0.17J	0.13J	ND	ND	0.57	ND
Pyrene	78.5	2.2	0.56	0.17J	0.51	0.82	0.12J	0.12J	ND	ND	0.58	ND
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)												
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.087	0.005	0.009	ND	ND	ND	0.01	0.002	0.005	ND	0.001
4,4'-DDT	0.0035	**0.072**	**0.005**	**0.01**	ND	ND	ND	**0.007**	0.002	**0.006**	ND	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3576.10 B72 (6-12") 5/18/1998	3576.14 B73 (6-12") 5/18/1998	3580.02 B74 (6-12") 5/19/1998	3580.05 B75 (6-12") 5/19/1998	3580.08 B76 (6-12") 5/19/1998	3580.11 B77 (6-12") 5/19/1998	3580.14 B78 (6-12") 5/19/1998	3580.18 B79 (6-12") 5/19/1998	3580.22 B80 (6-12") 5/19/1998	3580.26 B81 (6-12") 5/19/1998	3580.30 B82 (6-12") 5/19/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**8881**	**8643**	**2868**	**1781**	**6780**	**8537**	**10590**	**10590**	**10450**	**2577**	**2449**
Antimony	0.27	**0.724**	**1.158**	**0.57**	ND	**0.686**	**1.309**	**1.531**	**1.531**	**1.642**	**0.308**	**0.356**
Arsenic	9.9	8.338	7.981	4.511	1.452	6.874	8.003	**10.88**	**10.88**	**10.26**	5.594	1.387
Barium	283	58.95	25.84	12.69	5.525	26.72	24.35	24.94	24.94	24.91	36.08	15.13
Beryllium	10	0.6764	0.867	0.4361	0.2615	0.6806	0.9024	1.19	1.19	1.143	0.2973	0.3248
Cadmium	0.36	0.1899	ND	ND	ND	ND	ND	ND	ND	ND	0.0968	ND
Calcium	NAV	1570	691	327.2	117.9	510	440.1	809.2	809.2	611.8	865.2	316.7
Chromium	0.4	**46.85**	**85.23**	**27.92**	**18.67**	**61.92**	**97.55**	**96.08**	**96.08**	**112.3**	**11.66**	**19.27**
Cobalt	13	3.326	5.769	0.7721	0.4013	2.925	2.623	5.587	5.587	5.818	1.554	0.4012
Copper	28	**46.73**	6.715	5.597	2.002	8.638	3.266	27.74	27.74	4.975	17.64	1.524
Iron	NAV	17160	34570	10120	6671	28090	36430	56400	56400	47360	6221	6563
Lead	11	**58.5**	**75.52**	**18.46**	5.525	**48.57**	**16.89**	**33.19**	**33.19**	**65.52**	**36.85**	4.79
Magnesium	NAV	1940	941	664.5	334.2	887.6	863.8	1385	1385	1003	318.6	568.3
Manganese	220	89.7	168.8	30.3	13.35	67.87	62.27	160.5	160.5	141.4	17.63	12.37
Mercury	0.00051	**0.115**	**0.053**	**0.041**	ND	**0.028**	**0.029**	ND	ND	ND	**0.061**	ND
Nickel	30	8.935	11.23	2.749	1.679	8.334	10.82	13.68	13.68	15.43	4.848	1.503
Potassium	NAV	4607	2201	1340	614.6	1966	2023	3911	3911	2351	648.6	1045
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.385**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	262.7	62.74	61.08	27.75	32.16	31.08	150.5	150.5	27.11	138.3	13.7
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**34.6**	**101.9**	**22.17**	**16.56**	**73.25**	**103**	**123**	**123**	**154.8**	**18.03**	**13.74**
Zinc	8.5	**123.4**	**104.7**	**25.57**	**12.77**	**53.92**	**58.91**	**72.31**	**72.31**	**70.89**	**29.27**	**12.57**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3580.34 B83 (6-12") 5/19/1998	3584.02 B84 (6-12") 5/20/1998	3584.06 B85 (6-12") 5/20/1998	3584.10 B86 (6-12") 5/20/1998	3584.14 B87 (6-12") 5/20/1998	3584.18 B88 (6-12") 5/20/1998	3584.22 B89 (6-12") 5/20/1998	3584.26 B90 (6-12") 5/20/1998	3584.30 B91 (6-12") 5/20/1998	3584.34 B92 (6-12") 5/20/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	**4.9**	ND	ND	ND	ND	ND	0.17J	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	**1.0**	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	1.9	ND	ND	ND	ND	ND	ND	ND	0.59
Acenaphthylene	682	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	3.2	ND	ND	ND	ND	ND	ND	ND	3.3
Benzo[a]anthracene	5.21	ND	**13E**	ND	ND	ND	ND	ND	0.36	ND	**7200**
Benzo[a]pyrene	1.52	ND	**11000**	ND	ND	ND	ND	ND	0.41	ND	**5300**
Benzo[b]fluoranthene	59.8	ND	9.2	ND	ND	ND	ND	ND	0.25J	ND	5.6
Benzo[g,h,I]perylene	119	ND	5.8	ND	ND	ND	ND	ND	0.23J	ND	2.8
Benzo[k]fluoranthene	148	ND	8.8	ND	ND	ND	ND	ND	0.34	ND	3.9
bis(2-Ethylhexyl)phthalate	0.925	ND	0.12J	0.11J	0.15J	0.16J	ND	ND	0.12J	0.11J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	**21E**	0.12J	ND	ND	ND	ND	0.59	ND	**9700**
Dibenz[a,h]anthracene	18.4	ND	2.9	ND	ND	ND	ND	ND	ND	ND	0.64
Dibenzofuran	NAV	ND	0.54	ND	ND	ND	ND	ND	ND	ND	0.64
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.18J	0.27J	0.64J	0.87J	0.66J	0.29J	ND	0.51J	0.32J	0.28J
Fluoranthene	122	ND	16E	ND	ND	ND	ND	ND	0.48	ND	ND
Fluorene	122	ND	5.3	ND	ND	ND	ND	ND	ND	ND	1.1
Indeno[1,2,3-cd]pyrene	109	ND	4.6	ND	ND	ND	ND	ND	0.2J	ND	3.0
Naphthalene	0.0994	ND	**2.3**	ND	ND	ND	ND	ND	**0.13J**	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	29E	ND	ND	ND	ND	ND	0.48	ND	ND
Pyrene	78.5	ND	30E	0.14J	ND	ND	ND	ND	0.84	ND	11.0
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.018	0.208	ND	0.002	0.007	ND	0.006	0.001	0.002	ND
4,4'-DDT	0.0035	**0.028**	**0.803**	ND	ND	0.003	ND	0.003	0.002	0.002	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3580.34 B83 (6-12") 5/19/1998	3584.02 B84 (6-12") 5/20/1998	3584.06 B85 (6-12") 5/20/1998	3584.10 B86 (6-12") 5/20/1998	3584.14 B87 (6-12") 5/20/1998	3584.18 B88 (6-12") 5/20/1998	3584.22 B89 (6-12") 5/20/1998	3584.26 B90 (6-12") 5/20/1998	3584.30 B91 (6-12") 5/20/1998	3584.34 B92 (6-12") 5/20/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**1275**	**9216**	**6650**	**7711**	**7796**	**5870**	**4347**	**4758**	**2982**	**2424**
Antimony	0.27	0.255	**1.288**	**0.52**	**1.219**	**0.834**	**0.834**	**0.237**	**0.945**	**0.542**	**0.305**
Arsenic	9.9	0.858	11.23	4.61	8.103	**10.68**	**12.43**	2.981	**15.53**	4.745	1.092
Barium	283	4.896	29.34	14.66	14.57	29.97	192.3	25.61	8.797	21.03	12.71
Beryllium	10	0.1492	0.634	0.3893	0.9604	0.9373	4.787	0.3072	0.4409	0.3972	0.3802
Cadmium	0.36	ND	ND	ND	ND	ND	**0.674**	ND	ND	ND	ND
Calcium	NAV	134.9	817.1	590.2	646.2	1477	1547	1663	181.2	987.9	168.5
Chromium	0.4	**12.27**	**62.61**	**37.09**	**91.08**	**88.9**	**54.19**	**7.984**	**58.29**	**27.55**	**16.35**
Cobalt	13	0.2038	1.854	2.493	2.845	3.717	7.393	3.526	0.5178	0.9371	0.4263
Copper	28	1.995	**43.09**	3.002	0.413	4.648	**2314**	**46.74**	**139.2**	10.16	2.46
Iron	NAV	4284	24830	13010	41350	41280	12220	5168	15660	12860	6114
Lead	11	6.115	**126.8**	6.786	7.797	**90.95**	**1267**	**15.43**	**19.27**	**50.74**	5.981
Magnesium	NAV	317.3	1392	974.8	780.5	1019	614.5	359.5	1090	748	517.9
Manganese	220	8.873	40	85.56	49.43	101.9	175.7	97.42	9.783	28.45	22.4
Mercury	0.00051	ND	**0.123**	**0.024**	ND	**0.034**	**0.044**	**0.039**	**0.044**	**0.053**	**0.036**
Nickel	30	0.8202	7.483	3.728	12.44	14.15	22.36	10.93	2.453	3.39	1.526
Potassium	NAV	490	4076	1656	1321	1580	1654	633.6	3985	1988	1086
Selenium	0.21	ND	ND	ND	ND	ND	**1.379**	ND	**1.146**	ND	ND
Silver	2	ND	ND	ND	ND	ND	**3.472**	ND	ND	ND	ND
Sodium	NAV	23.19	61.43	38.89	40.52	116.5	335.1	440.7	186.3	128.8	22.98
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**9.388**	**58.91**	**32.18**	**108.4**	**113.1**	**18.83**	**9.574**	**11.28**	**11.94**	**9.943**
Zinc	8.5	**7.018**	**46.59**	**20.41**	**57.83**	**79.89**	**500.7**	**26.7**	**35.88**	**76.22**	**14.81**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3588.02 B93 (6-12") 5/21/1998	3588.06 B94 (6-12") 5/21/1998	3588.10 B95 (6-12") 5/21/1998	3588.14 B96 (6-12") 5/21/1998	3588.18 B97 (6-12") 5/21/1998	3588.22 B98 (6-12") 5/21/1998	3593.02 B99 (6-12") 5/26/1998	3665.12 B158 (6-12") 6/17/1998	3665.16 B159 (6-12") 6/17/1998	3665.19 B160 (6-12") 6/17/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	0.12J	0.14J	ND	ND	ND	0.15J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	0.11J	ND	ND	ND	ND	0.13J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	0.11J	0.16J	ND	ND	ND	0.14J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.1J	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	0.17J	0.29J	ND	ND	ND	0.34
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.47J	0.27J	ND	0.43J	0.73J	0.5J	ND	0.23J	0.21J	0.9
Fluoranthene	122	ND	ND	ND	ND	0.24	0.21J	ND	ND	ND	0.3
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	0.16J	ND	ND	ND	ND
Pyrene	78.5	ND	ND	ND	ND	0.16J	0.2J	ND	ND	ND	0.4
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.004	ND	ND	ND	0.003	0.02	ND	ND	ND	ND
4,4'-DDE	0.596	0.008	0.002	ND	0.003	0.008	0.166	0.008	ND	0.003	0.011
4,4'-DDT	0.0035	**0.032**	**0.004**	ND	0.002	**0.014**	**0.077**	**0.008**	ND	0.003	**0.019**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	0.009	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3588.02 B93 (6-12") 5/21/1998	3588.06 B94 (6-12") 5/21/1998	3588.10 B95 (6-12") 5/21/1998	3588.14 B96 (6-12") 5/21/1998	3588.18 B97 (6-12") 5/21/1998	3588.22 B98 (6-12") 5/21/1998	3593.02 B99 (6-12") 5/26/1998	3665.12 B158 (6-12") 6/17/1998	3665.16 B159 (6-12") 6/17/1998	3665.19 B160 (6-12") 6/17/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003
Heptachlor Epoxide	0.152	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**6587**	**7273**	**6776**	**1231**	**8665**	**2673**	**3319**	**2715**		**6285**
Antimony	0.27	**0.864**	**0.705**	**0.293**	**1.11**	**0.813**	**0.397**	**1.522**	**0.349**		**0.487**
Arsenic	9.9	9.735	9.53	7.075	**12.33**	9.33	7.349	4.823	1.328		8.398
Barium	283	18.68	21.47	50.99	96.83	35.87	108.4	25.33	15.24		16.27
Beryllium	10	0.49	0.7067	0.591	0.1224	0.6407	0.2846	0.2113	0.401		0.5945
Cadmium	0.36	ND	ND	ND	ND	ND	**0.415**	**8.552**	0.1991		ND
Calcium	NAV	393.2	502.8	1605	383.6	1533	1042	1011	230.8		705.6
Chromium	0.4	**56.44**	**57.07**	**28.21**	**11.51**	**41.47**	**11.65**	**20.07**	**20.65**		**48.92**
Cobalt	13	1.026	3.164	4.892	1.152	3.802	2.666	2.289	0.3999		2.458
Copper	28	11.74	2.615	19.37	26.15	14.07	**48.11**	**1168**	1.01		7.446
Iron	NAV	21140	28210	10070	7920	21290	4878	7295	7173		25200
Lead	11	**30.17**	**131.3**	**18.73**	**78.99**	**46.73**	**69.52**	**4549**	3.345		**22.86**
Magnesium	NAV	879	895	1135	286	1372	342.3	783.4	712.5		914.9
Manganese	220	16.42	67.3	32.46	15.55	78.04	59.09	**2581**	20.15		50.78
Mercury	0.00051	**0.051**	**0.024**	**0.05**	**0.184**	**0.099**	**0.34**	**4.465**	ND		**0.032**
Nickel	30	4.015	8.536	14.98	4.765	11.81	8.137	6.487	1.697		6.746
Potassium	NAV	2804	2075	2495	472.2	3002	456	1426	1740		1640
Selenium	0.21	ND	ND	**0.627**	**3.91**	ND	**1.474**	**0.504**	ND		ND
Silver	2	ND	ND	ND	ND	ND	0.421	**37.83**	ND		ND
Sodium	NAV	91.43	37.29	216.6	58.66	183.9	177.3	235.1	61.53		62.96
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND		ND
Vanadium	2	**51.64**	**75.4**	**25.26**	**9.353**	**50.3**	**10.97**	**16.76**	**11.98**		**58.35**
Zinc	8.5	**27.7**	**41.81**	**27.54**	**13.94**	**43.54**	**73.52**	**9772**	**15.95**		**39.62**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3665.22 B161 (6-12") 6/17/1998	3686.04 B162 (6-12") 6/26/1998	3686.07 B163 (6-12") 6/26/1998	3686.10 B164 (6-12") 6/26/1998	3688.02 B165 (6-12") 6/29/1998	3688.06 B166 (6-12") 6/29/1998	3688.09 B167 (6-12") 6/29/1998	3688.12 B168 (6-12") 6/29/1998	3688.15 B169 (6-12") 6/29/1998	3722.12 B178 (6-12") 7/13/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.59	ND	ND	ND	0.28	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	0.53	ND	ND	ND	0.21	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.61	ND	ND	0.17J	0.2J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	0.31	ND	ND	ND	0.14J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	0.63	ND	ND	0.14J	0.22	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	**13.0**	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	1.1	ND	ND	0.16J	0.58	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.18J	0.46J	1.1	0.38J	0.24J	0.29J	0.12J	0.48J	0.19J	0.58J
Fluoranthene	122	ND	ND	0.83	ND	ND	ND	0.47	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.29	ND	ND	0.12J	0.12J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.23	ND	ND	ND	0.74	ND	ND	ND
Pyrene	78.5	ND	ND	1.1	ND	0.11J	ND	0.92	ND	ND	ND
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	0.016	ND	ND	ND
4,4'-DDE	0.596	ND	ND	ND	ND	0.011	0.003	0.067	0.003	ND	ND
4,4'-DDT	0.0035	ND	ND	ND	ND	**0.01**	**0.01**	**0.091**	0.002	ND	ND
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3665.22 B161 (6-12") 6/17/1998	3686.04 B162 (6-12") 6/26/1998	3686.07 B163 (6-12") 6/26/1998	3686.10 B164 (6-12") 6/26/1998	3688.02 B165 (6-12") 6/29/1998	3688.06 B166 (6-12") 6/29/1998	3688.09 B167 (6-12") 6/29/1998	3688.12 B168 (6-12") 6/29/1998	3688.15 B169 (6-12") 6/29/1998	3722.12 B178 (6-12") 7/13/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**5319**	**2685**	**7000**	**1807**	**5053**	**9267**	**6171**	**3375**	**1764**	**5330**
Antimony	0.27	**0.579**	**0.337**	**4.693**	**0.31**	**0.822**	**1.298**	**0.638**	ND	**0.368**	**0.54**
Arsenic	9.9	4.368	5.292	**67.77**	0.977	6.525	**17.45**	9.463	4.215	3.946	6.39
Barium	283	11.72	35.73	180.7	8.533	15.48	14.34	54.63	31.47	45.13	21.4
Beryllium	10	0.4884	0.2658	0.562	0.3014	0.4805	0.5758	0.5529	0.3019	0.1749	0.728
Cadmium	0.36	ND	**0.4376**	ND	**0.4001**	0.2383	ND	0.3187	**0.3736**	0.3013	ND
Calcium	NAV	395	1154	9589	211.4	665	441.5	1435	1273	624.1	851
Chromium	0.4	**41.48**	**13.87**	**65.41**	**14.53**	**55.07**	**72.9**	**47.49**	**10.58**	**3.82**	**58.8**
Cobalt	13	1.602	2.082	**14.15**	0.2978	0.9522	0.8807	2.798	4.252	1.702	1.22
Copper	28	1.858	23.12	**433**	1.341	12.07	7.172	**38.89**	20.07	14.28	4.95
Iron	NAV	13430	5905	131900	5494	18160	30120	21260	4301	2469	19400
Lead	11	4.473	**46.83**	**98.63**	2.754	**42.83**	**14.31**	**94.14**	**20.43**	**18.74**	7.58
Magnesium	NAV	1036	494.8	1008	363.8	983.2	902.7	1306	468.3	159.2	1620
Manganese	220	34.64	24.99	**623.9**	17.74	30.92	12.46	59.92	34.87	17.16	38.7
Mercury	0.00051	ND	**0.031**	**0.067**	ND	**0.051**	**0.064**	**0.101**	**0.025**	ND	**1.68**
Nickel	30	2.982	5.629	**67.18**	1.4	3.563	4.461	8.902	11.23	4.544	3.57
Potassium	NAV	2860	716.6	1579	587.3	2960	2850	3105	598.3	193.8	3980
Selenium	0.21	ND	ND	ND	ND	ND	**0.371**	**0.342**	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	ND	134.2	953.4	4.653	46.52	7.854	690	226.4	147.4	84.8
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**30.25**	**17.05**	**15.28**	**10.23**	**43.13**	**62.26**	**41.98**	**14.73**	**9.161**	**18.3**
Zinc	8.5	**17.6**	**29.63**	**457.1**	**13.81**	**37.72**	**32.28**	**61.39**	**28.85**	**11.74**	**48.4**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3722.15 B179 (6-12") 7/13/1998	3722.18 B180 (6-12") 7/13/1998	3722.21 B181 (6-12") 7/13/1998	3805.02 B197 (6-12") 8/12/1998	3805.04 B198 (6-12") 8/12/1998	3805.06 B199 (6-12") 8/12/1998	3805.08 B200 (6-12") 8/12/1998	3805.10 B201 (6-12") 8/12/1998	3805.12 B202 (6-12") 8/12/1998	3805.14 B203 (6-12") 8/12/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	0.078J	ND	ND	0.53	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	0.28	0.39	ND
Benzo[a]anthracene	5.21	ND	0.14J	ND	ND	ND	0.23J	0.13J	0.47	2.7	0.26
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	0.24	0.13J	0.39	**2.9**	0.26
Benzo[b]fluoranthene	59.8	ND	0.11J	ND	ND	ND	0.22J	0.16J	0.36	3.1	0.23J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	2.2	0.14J
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	0.23	0.17J	0.36	2.8	0.25
bis(2-Ethylhexyl)phthalate	0.925	0.11J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.39	ND	ND	ND	0.46	0.29	0.67	**4.9**	0.49
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.31J	0.61J	0.76J	ND	0.72J	0.7J	0.63J	1.2	0.57J	0.21J
Fluoranthene	122	ND	0.23	ND	ND	ND	0.4	0.17J	1.1	4.5	0.51
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	2.1	0.15J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	**0.13J**	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.25	ND	ND	ND	0.26	ND	1.0	2.1	0.38
Pyrene	78.5	ND	0.37	ND	ND	ND	0.56	0.26	0.95	5.1	0.74
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	0.001	0.001	0.116	ND	ND	ND	0.031
4,4'-DDE	0.596	0.002	0.006	ND	0.033	0.017	0.26	0.01	0.047	0.016	0.102
4,4'-DDT	0.0035	0.002	**0.009**	ND	**0.015**	**0.019**	**1.321**	**0.01**	ND	**0.054**	**0.34**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	**1.499**	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3722.15 B179 (6-12") 7/13/1998	3722.18 B180 (6-12") 7/13/1998	3722.21 B181 (6-12") 7/13/1998	3805.02 B197 (6-12") 8/12/1998	3805.04 B198 (6-12") 8/12/1998	3805.06 B199 (6-12") 8/12/1998	3805.08 B200 (6-12") 8/12/1998	3805.10 B201 (6-12") 8/12/1998	3805.12 B202 (6-12") 8/12/1998	3805.14 B203 (6-12") 8/12/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**1710**	**10000**	**12500**	**5970**	**4720**	**9820**	**10500**	**5920**	**5990**	**6500**
Antimony	0.27	**0.391**	**0.537**	**1.16**	**0.253**	**1.48**	**6.56**	**0.35**	**0.617**	**0.751**	**0.359**
Arsenic	9.9	1.55	**9.99**	**11.6**	4.98	**59.1**	**11.5**	8.59	5.5	7.11	6.34
Barium	283	5.27	42.8	14.2	47.1	68.6	**363**	147	84.6	113	25.5
Beryllium	10	0.255	1.35	1.8	0.53	0.548	0.9	0.743	0.92	0.58	0.428
Cadmium	0.36	ND	ND	ND	ND	ND	ND	**0.543**	**0.929**	ND	ND
Calcium	NAV	127	1240	86.4	1720	918	537	1390	1500	455	2470
Chromium	0.4	**19.6**	**110**	**139**	**17.1**	**19.5**	**77.4**	**25.8**	**37.8**	**49.8**	**36**
Cobalt	13	0.247	1.97	1.1	5.69	11.4	5.14	7.57	5.81	1.98	4.27
Copper	28	1	7.44	ND	**37.8**	**92.6**	**122**	**38.6**	**47.3**	**77.4**	**36.4**
Iron	NAV	7740	35100	48800	7220	38400	33400	15300	12600	23300	14600
Lead	11	7.32	**14.6**	6.18	**40**	**119**	**494**	**37.6**	**62.8**	**268**	**23.8**
Magnesium	NAV	436	4220	1660	791	491	1700	900	1430	1680	2450
Manganese	220	4.3	45.3	17.6	47.8	121	143	126	**332**	39.1	83.9
Mercury	0.00051	**0.013**	**0.042**	**0.028**	**0.063**	**0.029**	**0.153**	**0.044**	**0.391**	**0.115**	**0.602**
Nickel	30	1.14	5.91	6.24	14.9	18.2	23.6	19.6	10.5	5.95	11
Potassium	NAV	774	9010	3210	1300	1330	4160	3580	3670	3720	3560
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	42.6	109	56.6	290	393	535	485	526	566	411
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	0.498	ND
Vanadium	2	**17**	**40.3**	**92.1**	**23.2**	**17.5**	**43.5**	**30.9**	**25.3**	**31.2**	**36.7**
Zinc	8.5	**10.5**	**51.5**	**44.9**	**31.9**	**114**	**116**	**80.2**	**514**	**38.1**	**39.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3805.16 B204 (6-12") 8/12/1998	3805.18 B205 (6-12") 8/12/1998	3805.20 B206 (6-12") 8/12/1998	3805.22 B207 (6-12") 8/12/1998	3805.24 B208 (6-12") 8/12/1998	3805.26 B209 (6-12") 8/12/1998	3805.28 B210 (6-12") 8/12/1998	3805.30 B211 (6-12") 8/12/1998	3809.02 B212 (6-12") 8/13/1998	3809.04 B213 (6-12") 8/13/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	0.12J	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	0.26	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.12J	ND	ND	ND	ND	ND	0.11J	ND	0.23J	0.2J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	0.4	ND	ND	0.2J	0.22J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	0.53	ND	ND	0.18J	0.19J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	0.19J	ND	ND	0.21J	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	0.22J	0.24J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.24J	ND	ND	ND	ND	ND	0.24J	ND	0.36J	0.46J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	0.17J	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.21J	0.27J	0.24J	ND	0.25J	0.54J	0.84	0.58J	0.33J	0.67J
Fluoranthene	122	0.14J	ND	ND	ND	ND	1.4	0.19J	0.16J	0.37J	0.37J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	0.19J	ND	ND	0.12J	0.14J
Naphthalene	0.0994	ND	ND	ND	ND	ND	**0.12J**	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	0.06J	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	0.76	ND	0.15J	0.14J	0.28J
Pyrene	78.5	0.26	ND	ND	ND	ND	1.1	0.26	0.27	0.4J	0.56J
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.004	ND	0.003	ND	ND	0.025	0.014	0.008	ND	**0.814**
4,4'-DDE	0.596	0.024	ND	0.004	ND	0.005	0.028	0.057	0.057	ND	0.473
4,4'-DDT	0.0035	**0.019**	ND	0.003	ND	**0.006**	**0.167**	**0.025**	**0.014**	ND	**1.042**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	0.165	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3805.16 B204 (6-12") 8/12/1998	3805.18 B205 (6-12") 8/12/1998	3805.20 B206 (6-12") 8/12/1998	3805.22 B207 (6-12") 8/12/1998	3805.24 B208 (6-12") 8/12/1998	3805.26 B209 (6-12") 8/12/1998	3805.28 B210 (6-12") 8/12/1998	3805.30 B211 (6-12") 8/12/1998	3809.02 B212 (6-12") 8/13/1998	3809.04 B213 (6-12") 8/13/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**3940**	**4920**	**12300**	**3020**	**3420**	**6840**	**5330**	**958**	**3050**	**3690**
Antimony	0.27	ND	ND	ND	**0.411**	**0.737**	**0.87**	**0.665**	ND	ND	**0.466**
Arsenic	9.9	5.27	7.61	8.46	6.07	**10.7**	8.17	9.51	1.23	9	**10.5**
Barium	283	35.5	61.6	99.6	22.3	71.1	59.7	43.6	129	55.3	70.3
Beryllium	10	0.389	0.354	0.985	0.288	0.525	0.671	0.525	0.0934	0.423	0.492
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	1100	1010	1270	670	714	1740	2000	405	1440	777
Chromium	0.4	**19.8**	**12.9**	**26.4**	**18.4**	**32**	**43.7**	**36.8**	**2.75**	**5.38**	**26.1**
Cobalt	13	4.61	4.8	9.39	3.91	2.42	3.08	2.66	1.56	2.47	2.82
Copper	28	**35**	18.1	**110**	**31.8**	**58**	**36.6**	26.3	12.1	14.6	**33.1**
Iron	NAV	8620	5100	10200	15100	14800	18600	15500	2220	5180	16000
Lead	11	**35**	**28.6**	**39.9**	**12.6**	**135**	**289**	**73.8**	**7.32**	**25.3**	**146**
Magnesium	NAV	630	342	540	329	995	1800	1850	136	316	918
Manganese	220	61.8	21.1	63.2	65.6	36.2	72.7	73.2	25.5	23.1	105
Mercury	0.00051	**0.064**	ND	ND	**0.047**	**0.075**	**0.072**	**0.036**	ND	**0.041**	**0.645**
Nickel	30	8.78	14.5	24.5	11.9	7.99	10.4	7.49	3.63	5.3	11
Potassium	NAV	1470	989	2280	852	3150	2920	3840	248	369	2690
Selenium	0.21	ND	**1.24**	ND	**0.606**	ND	ND	ND	ND	ND	**0.618**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	207	339	460	252	404	294	327	159	349	412
Thallium	1	ND	ND	ND	ND	0.505	ND	ND	0.422	0.437	ND
Vanadium	2	**22.9**	**23.7**	**31.5**	**17.1**	**21.1**	**38.1**	**32.7**	**5.82**	**11.2**	**21.5**
Zinc	8.5	**29.2**	**27.2**	**31.8**	**165**	**48.9**	**197**	**48**	**11.7**	**22.3**	**178**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3809.06 B214 (6-12") 8/13/1998	3809.08 B215 (6-12") 8/13/1998	3809.10 B216 (6-12") 8/13/1998	3809.12 B217 (6-12") 8/13/1998	3809.14 B218 (6-12") 8/13/1998	3809.16 B219 (6-12") 8/13/1998	3809.18 B220 (6-12") 8/13/1998	3809.20 B221 (6-12") 8/13/1998	3809.22 B222 (6-12") 8/13/1998	3812.02 B223 (6-12") 8/14/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	**6.6**	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	3.3	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.48J	ND	5.2	0.12J	ND	0.26J
Anthracene	1,480	ND	ND	ND	ND	0.25J	ND	6	ND	ND	0.15J
Benzo[a]anthracene	5.21	0.12J	ND	0.14J	ND	1.0J	0.11J	0.01	0.32J	0.16J	0.7J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	1.0J	ND	**6700**	0.36J	0.13J	0.77J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	1.1	0.17J	9.5	0.33J	0.14J	0.67J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	0.49J	ND	2.0	ND	ND	0.49J
Benzo[k]fluoranthene	148	ND	ND	ND	ND	1.2	ND	1.3	0.43J	0.18J	0.72J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	0.12J	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.24J	ND	0.28J	ND	2.5	0.28J	0.03	0.68J	0.29J	1.5
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	0.83J	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.26J	0.66J	0.25J	0.19J	0.65J	0.38J	0.49J	0.22J	1.0 J	0.31J
Fluoranthene	122	0.22J	0.16J	0.28J	0.19J	2.9	0.22J	0.02	0.64J	0.27J	1.3
Fluorene	122	ND	ND	ND	ND	ND	ND	8.0	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.55J	ND	2.0	ND	ND	0.55J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	**3.6**	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.19J	0.16J	ND	0.14J	1.3	0.11J	0.06	0.56J	0.22J	1.0J
Pyrene	78.5	0.31J	0.27J	0.34J	0.18J	3.5	0.28J	0.04	0.9J	0.37J	1.9
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.214	0.004	0.008	0.012	0.17	0.082	0.021	**2.225**	0.03	ND
4,4'-DDE	0.596	0.313	0.013	0.088	0.013	0.315	0.233	0.104	0.433	0.068	**0.644**
4,4'-DDT	0.0035	**0.463**	**0.015**	**0.106**	**0.039**	**0.444**	**0.472**	**0.15**	**5.604**	**0.427**	**1.237**
alpha-Chlordane	0.22	ND	ND	ND	0.001	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	**0.004**	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3809.06 B214 (6-12") 8/13/1998	3809.08 B215 (6-12") 8/13/1998	3809.10 B216 (6-12") 8/13/1998	3809.12 B217 (6-12") 8/13/1998	3809.14 B218 (6-12") 8/13/1998	3809.16 B219 (6-12") 8/13/1998	3809.18 B220 (6-12") 8/13/1998	3809.20 B221 (6-12") 8/13/1998	3809.22 B222 (6-12") 8/13/1998	3812.02 B223 (6-12") 8/14/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.061**
gamma-Chlordane	0.224	ND	ND	ND	0.004	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	0.004	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	0.023	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**6270**	**7680**	**10900**	**8370**	**2150**	**3880**	**4400**	**7220**	**6310**	**8000**
Antimony	0.27	**1.24**	**0.827**	**1.7**	ND	ND	**0.285**	**0.763**	**1.38**	**0.483**	**0.759**
Arsenic	9.9	**10.9**	6.37	**18.5**	5.26	5.78	7.42	**10**	9.59	**10.2**	8.04
Barium	283	42.5	28.8	9.95	25	24.4	98.9	70.6	55.2	26	40.3
Beryllium	10	0.591	0.885	1.27	0.422	0.227	0.804	0.534	1.1	0.446	0.764
Cadmium	0.36	ND	ND	ND	ND	ND	0.115	ND	ND	ND	ND
Calcium	NAV	320	747	511	774	901	1700	983	654	314	1210
Chromium	0.4	**67.3**	**78.2**	**122**	**28.8**	**12.9**	**21.4**	**37.5**	**74.3**	**69**	**60.4**
Cobalt	13	0.937	1.07	0.799	1.68	1.77	2.73	2.52	1.09	1.08	2.47
Copper	28	7.75	4.39	3.87	4.41	24.9	**30.3**	**29.8**	**32.9**	4.04	22
Iron	NAV	36000	24600	36400	11900	6370	10700	19400	28900	17800	21500
Lead	11	**20.2**	**11.8**	**12.6**	**23.4**	**54.3**	**117**	**122**	**137**	**12.9**	**67.7**
Magnesium	NAV	2080	2350	3600	1120	443	2390	1440	2280	1680	2160
Manganese	220	13	31.9	26.6	48.9	30	103	49.5	20.7	12.9	69.5
Mercury	0.00051	**0.244**	**0.061**	**0.042**	**0.095**	**0.159**	**0.236**	**2.341**	**0.392**	**0.197**	**0.096**
Nickel	30	4.41	4.35	4.77	4.55	4.61	6.11	6.6	5.86	4.76	8.15
Potassium	NAV	4850	4890	6900	3200	882	2270	4340	4950	5820	4300
Selenium	0.21	ND	ND	ND	ND	**0.582**	ND	ND	ND	**0.353**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	650	132	101	95.2	142	491	386	723	572	168
Thallium	1	0.564	0.531	0.738	ND	0.348	ND	0.54	ND	0.527	ND
Vanadium	2	**38.4**	**48.5**	**45.5**	**24.2**	**16**	**20.5**	**28.3**	**34.4**	**38.7**	**41.8**
Zinc	8.5	**27.8**	**43.1**	**34**	**28.6**	**30.6**	**67.3**	**57.2**	**62**	**25.8**	**79.5**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3812.04 B224 (6-12") 8/14/1998	3812.06 B225 (6-12") 8/14/1998	3812.08 B226 (6-12") 8/14/1998	3812.10 B227 (6-12") 8/14/1998	3812.12 B228 (6-12") 8/14/1998	3812.14 B229 (6-12") 8/14/1998	3812.16 B230 (6-12") 8/14/1998	3812.18 B231 (6-12") 8/14/1998	3827.02 B232 (6-12") 8/25/1998	3827.04 B233 (6-12") 8/25/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.12J	0.11J	ND	ND	ND	ND	ND	ND	0.23J
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17J
Benzo[a]anthracene	5.21	ND	0.24J	0.28J	ND	ND	0.16J	0.19J	0.13J	ND	0.57J
Benzo[a]pyrene	1.52	ND	0.28J	0.32J	ND	ND	0.15J	0.21J	0.15J	ND	0.57J
Benzo[b]fluoranthene	59.8	ND	0.32J	0.31J	ND	ND	0.13J	0.18J	0.14J	ND	0.45J
Benzo[g,h,I]perylene	119	ND	0.21J	0.19J	ND	ND	ND	0.13J	ND	ND	0.29J
Benzo[k]fluoranthene	148	ND	0.38J	0.36J	ND	ND	0.2J	0.21J	0.16J	ND	0.62J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.72J	0.61J	ND	0.2J	0.34J	0.45J	0.35J	ND	1.0J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.49J	0.21J	0.53J	0.21J	0.67J	0.71J	0.47J	0.16J	0.42J	0.45J
Fluoranthene	122	0.095J	0.71J	0.5J	ND	0.16J	0.29J	0.36J	0.25J	0.13J	0.95J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.2J	0.2J	ND	ND	ND	0.12J	ND	ND	0.33J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.42J	0.36J	ND	0.17J	0.28J	0.31J	ND	ND	0.59J
Pyrene	78.5	0.11J	0.89J	0.7J	0.14J	0.27J	0.43J	0.55J	0.38J	0.2J	1.2
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.004	0.048	0.164	0.276	0.419	0.179	0.127	0.089	0.181	0.068
4,4'-DDE	0.596	0.024	0.422	**0.612**	0.241	0.262	0.169	0.483	0.366	0.383	0.104
4,4'-DDT	0.0035	**0.05**	**1.0**	**0.973**	**0.859**	ND	**1.07**	**0.833**	**0.626**	**1.344**	**0.345**
alpha-Chlordane	0.22	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	**0.003**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	**2.215**	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3812.04 B224 (6-12") 8/14/1998	3812.06 B225 (6-12") 8/14/1998	3812.08 B226 (6-12") 8/14/1998	3812.10 B227 (6-12") 8/14/1998	3812.12 B228 (6-12") 8/14/1998	3812.14 B229 (6-12") 8/14/1998	3812.16 B230 (6-12") 8/14/1998	3812.18 B231 (6-12") 8/14/1998	3827.02 B232 (6-12") 8/25/1998	3827.04 B233 (6-12") 8/25/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.002	ND	ND	ND	ND	ND	ND	ND	0.007	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**8920**	**3360**	**5370**	**6730**	**8520**	**4570**	**6620**	**7420**	**7250**	**3370**
Antimony	0.27	ND	**0.444**	**0.648**	No Data	**1.17**	**1.06**	**0.918**	**1.12**	**1.28**	**0.374**
Arsenic	9.9	4.76	6.16	7.7	6.64	8.79	**11**	9.13	7.76	9.52	6.66
Barium	283	25.7	28.3	47.9	38.5	39.9	31.5	19	31	45.3	35.5
Beryllium	10	0.399	0.336	0.719	0.916	1.43	0.514	0.723	0.786	0.958	0.5
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	606	631	1020	519	395	344	420	786	862	708
Chromium	0.4	**27.1**	**22.4**	**44.1**	**73.2**	**92.1**	**51.5**	**62.7**	**59.1**	**74.3**	**20.6**
Cobalt	13	1.6	1.47	2.1	0.94	1.42	0.718	1.55	2.61	1.36	3.37
Copper	28	3.7	23.1	**32.9**	8.81	5.93	17.7	11.6	12.9	14.2	11.9
Iron	NAV	11300	10800	18800	25700	30100	30800	20200	26600	29600	12200
Lead	11	**15.3**	**81.2**	**111**	**21.4**	**23.9**	**18.8**	**36.3**	**47.5**	**55.9**	**25.5**
Magnesium	NAV	1040	748	1470	2690	2940	1530	1890	1430	2260	684
Manganese	220	46.6	29.2	40	11.5	26.8	10.5	45.2	45.2	21.2	61.6
Mercury	0.00051	**0.351**	**0.301**	**0.283**	**0.198**	**0.212**	**0.182**	**0.067**	**0.078**	**0.278**	**0.22**
Nickel	30	4.31	5.43	7.43	4.49	5.39	3.49	5.19	9.07	6.07	6.49
Potassium	NAV	3180	1920	4750	5430	6580	3610	3780	5360	4740	1950
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	94.2	262	448	483	315	565	135	241	360	297
Thallium	1	ND	0.457	0.457	0.898	0.567	0.69	ND	0.429	0.725	0.456
Vanadium	2	**23.5**	**23.1**	**28.9**	**24.8**	**32.1**	**34**	**42.3**	**60.8**	**40.3**	**15.7**
Zinc	8.5	**22.5**	**48**	**50.3**	**34.3**	**50.8**	**43.5**	**32.1**	**36.3**	**43.4**	**59.6**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3827.06 B234 (6-12") 8/25/1998	3827.08 B235 (6-12") 8/25/1998	3827.10 B236 (6-12") 8/25/1998	3836.02 B237 (6-12") 8/26/1998	3836.04 B238 (6-12") 8/26/1998	3836.06 B239 (6-12") 8/26/1998	3836.08 B240 (6-12") 8/26/1998	3836.10 B241 (6-12") 8/26/1998	3836.12 B242 (6-12") 8/26/1998	3836.14 B243 (6-12") 8/26/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	0.21 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	0.2J	ND	ND	0.34J	0.26J	ND	ND	ND
Anthracene	1,480	0.75 J	ND	0.12J	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	2.1	0.22J	0.38J	0.22J	0.2J	0.55J	0.51J	ND	ND	ND
Benzo[a]pyrene	1.52	**1600**	0.21J	0.4J	ND	ND	0.56J	0.51J	ND	ND	ND
Benzo[b]fluoranthene	59.8	1.6	0.2J	0.34J	ND	ND	0.5J	0.41J	ND	ND	ND
Benzo[g,h,I]perylene	119	0.65J	0.12J	0.19J	ND	ND	0.23J	0.22J	ND	ND	ND
Benzo[k]fluoranthene	148	1.6	0.24J	0.42J	ND	ND	0.52J	0.47J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	3.1	0.45J	0.86J	0.49J	0.41J	1.3	1.1	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.58 J	0.41J	0.28J	0.32J	ND	0.19J	0.44J	0.42J	ND	0.29J
Fluoranthene	122	5.1	0.41J	0.7J	0.31J	0.35J	0.95J	0.85J	0.25J	0.18J	ND
Fluorene	122	0.26 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.88 J	ND	0.18J	ND	ND	0.24J	0.21J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	3.2	0.37J	0.67J	0.3J	0.44J	1.0J	0.99J	0.21J	ND	ND
Pyrene	78.5	4.7	0.57J	1.1	0.61J	0.58J	1.8	1.6	0.39J	0.31J	ND
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.143	0.209	0.158	0.021	0.033	**0.779**	0.287	0.077	0.056	0.037
4,4'-DDE	0.596	0.08	0.204	0.272	0.275	0.412	0.592	0.445	0.195	0.036	0.135
4,4'-DDT	0.0035	**1.143**	**1.028**	**1.28**	**0.65**	**1.438**	**2.914**	**1.636**	**0.599**	**0.07**	**0.62**
alpha-Chlordane	0.22	ND	ND	ND	0.011	0.007	0.003	0.002	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	**0.049**	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3827.06 B234 (6-12") 8/25/1998	3827.08 B235 (6-12") 8/25/1998	3827.10 B236 (6-12") 8/25/1998	3836.02 B237 (6-12") 8/26/1998	3836.04 B238 (6-12") 8/26/1998	3836.06 B239 (6-12") 8/26/1998	3836.08 B240 (6-12") 8/26/1998	3836.10 B241 (6-12") 8/26/1998	3836.12 B242 (6-12") 8/26/1998	3836.14 B243 (6-12") 8/26/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	0.012	0.007	0.004	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**4870**	**5200**	**10200**	**4020**	**6180**	**5840**	**7580**	**5080**	**5800**	**7380**
Antimony	0.27	**0.9**	**1.04**	**1.67**	**0.604**	**0.948**	**0.721**	**1.16**	**0.821**	**0.593**	**1.15**
Arsenic	9.9	6.23	7.87	9.48	5.11	8.95	9.08	**12.6**	7.6	6.45	**10**
Barium	283	25.8	36.4	36.3	16.8	20.1	49.4	48.1	46.5	24.5	51
Beryllium	10	0.861	0.887	1.39	0.479	0.733	0.799	0.949	1.15	0.736	0.927
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	199	442	583	595	290	371	421	332	575	427
Chromium	0.4	**55.4**	**57.3**	**112**	**40.3**	**59.8**	**61.8**	**71.4**	**52.1**	**45.8**	**72**
Cobalt	13	0.88	0.948	1.67	1.79	2.79	1.01	1.26	1.11	0.951	2.04
Copper	28	2.95	10.5	5.84	8.44	1.78	17.6	18.4	6.5	7.62	12.3
Iron	NAV	19900	22900	41300	17300	31700	24100	28500	21100	17000	33900
Lead	11	**14.4**	**30.7**	**21.9**	**26**	**13.4**	**50.6**	**55.8**	**28.5**	**19.4**	**17**
Magnesium	NAV	1640	1690	4380	928	872	1690	2060	1470	1420	1930
Manganese	220	14.7	14.1	15.7	53.3	60.2	13.9	16.9	13	28.1	24.9
Mercury	0.00051	**0.213**	**0.288**	**0.217**	**0.037**	**0.015**	**0.38**	**0.391**	**0.332**	**0.19**	**0.255**
Nickel	30	3.35	4.77	6.44	5.85	7.59	4.97	6.16	5	**431**	8.64
Potassium	NAV	6550	3720	10200	2360	2490	6150	4130	5540	4830	7840
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	194	431	582	104	97	320	374	304	362	898
Thallium	1	0.68	0.475	0.589	0.402	0.57	0.606	**1.06**	**1.03**	0.426	0.71
Vanadium	2	**17.6**	**22.7**	**51.8**	**39.8**	**74.9**	**28.9**	**40.4**	**21.3**	**19.8**	**59.3**
Zinc	8.5	**28.8**	**43.8**	**43.6**	**39.1**	**46.3**	**39.6**	**43.7**	**43.8**	**53.5**	**35.8**

See Notes at End of Table

Table A-4
Soil Sampling Results
M5 Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3836.16 B244 (6-12") 8/26/1998	3836.18 B245 (6-12") 8/26/1998	3836.20 B246 (6-12") 8/26/1998	3836.22 B247 (6-12") 8/26/1998	3836.24 B248 (6-12") 8/26/1998	3836.26 B249 (6-12") 8/26/1998	3836.28 B250 (6-12") 8/26/1998	3836.30 B251 (6-12") 8/26/1998	3836.32 B252 (6-12") 8/26/1998	3836.34 B253 (6-12") 8/26/1998	3836.36 B254 (6-12") 8/26/1998
Semi-Volatiles (mg/kg)												
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	0.21J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25J
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.41J	0.22J	ND	ND	ND	ND	ND	ND	0.22J	ND	0.69J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.32J
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.88J	0.46J	ND	ND	ND	ND	ND	ND	0.43J	ND	1.4
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.96J	0.46J	0.96J	0.44J	0.44J	0.35J	0.78J	0.39J	0.37J	ND	ND
Fluoranthene	122	0.72J	0.42J	0.36J	0.19J	0.19J	ND	0.31J	0.29J	0.3J	ND	1.3
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.1	0.44J	0.36J	ND	ND	ND	0.4J	0.3J	0.24J	ND	1.8
Pyrene	78.5	1.4	0.68J	0.57J	0.31J	0.3J	ND	0.56J	0.45J	0.57J	ND	2.4
Pyridine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)												
4,4'-DDD	0.758	0.178	0.08	0.171	0.145	0.045	0.378	0.729	0.046	0.041	0.043	**3.787**
4,4'-DDE	0.596	**1.003**	0.164	0.33	0.408	0.083	**0.903**	**3.33**	**0.742**	**1.104**	0.23	**4.185**
4,4'-DDT	0.0035	**2.781**	**0.789**	**2.226**	**1.918**	**0.525**	**13.949**	**23.629**	**2.094**	**1.746**	**0.856**	**56.446**
alpha-Chlordane	0.22	ND	ND	0.003	ND	ND	ND	0.023	ND	ND	ND	0.026
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-Sulfate	0.0358	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table A-4
Soil Sampling Results
M5 Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3836.16 B244 (6-12") 8/26/1998	3836.18 B245 (6-12") 8/26/1998	3836.20 B246 (6-12") 8/26/1998	3836.22 B247 (6-12") 8/26/1998	3836.24 B248 (6-12") 8/26/1998	3836.26 B249 (6-12") 8/26/1998	3836.28 B250 (6-12") 8/26/1998	3836.30 B251 (6-12") 8/26/1998	3836.32 B252 (6-12") 8/26/1998	3836.34 B253 (6-12") 8/26/1998	3836.36 B254 (6-12") 8/26/1998
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	0.015	ND	ND	ND	0.021
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**3900**	**8730**	**5890**	**5890**	**6970**	**3390**	**8150**	**6430**	**5560**	**4350**	**6740**
Antimony	0.27	**0.495**	**1.28**	**0.94**	**0.931**	**1.14**	**0.654**	**1.43**	**1.31**	**0.774**	**0.688**	**0.916**
Arsenic	9.9	6.62	9.43	8.91	8.61	9.13	5.72	7.84	**11.3**	9.19	5.88	**10.1**
Barium	283	34.5	53.7	53.3	40.9	34.6	25.1	31.1	69.6	32.2	17	48.4
Beryllium	10	0.45	1.25	0.811	1.02	0.945	0.538	1.02	0.824	0.736	0.84	2.05
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	929	396	306	787	1140	278	389	828	1100	563	143
Chromium	0.4	**31.3**	**88.1**	**63.2**	**60.5**	**72.5**	**39.3**	**90.1**	**72.6**	**56.7**	**46.7**	**52.8**
Cobalt	13	1.85	1.68	0.96	0.998	1.55	0.926	1.02	1.36	1.43	1.21	2.76
Copper	28	27	**45.3**	22.5	18	10.1	5.01	5.52	**110**	15.8	11.9	10.1
Iron	NAV	13200	33700	28200	24400	30600	17500	32800	31400	21200	16400	27700
Lead	11	**94.5**	**50.5**	**53.2**	**47.4**	**21.6**	**23.1**	**20.2**	**163**	**69.8**	**12.4**	**40.3**
Magnesium	NAV	1090	2980	1660	1830	2730	1160	3380	2210	1920	1330	1130
Manganese	220	53.9	18.8	15	19	33.2	8.41	12.4	38.5	49.7	15.4	38
Mercury	0.00051	**0.228**	**0.355**	**0.385**	**0.371**	**0.229**	**0.267**	**0.163**	**0.275**	**0.361**	**0.069**	**0.706**
Nickel	30	5.75	7.73	4.64	4.52	6.14	2.99	4.74	5.81	5.24	3.33	6.57
Potassium	NAV	3120	7070	3650	3760	5980	4390	8120	4900	3860	5380	4170
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.413
Sodium	NAV	262	303	310	349	360	336	342	388	147	84.6	99.8
Thallium	1	0.389	0.969	0.665	0.863	0.563	0.681	0.6	0.709	0.535	0.332	0.691
Vanadium	2	**27.8**	**45.4**	**28.6**	**27.3**	**33**	**15.9**	**40**	**35.1**	**25.7**	**13.5**	**26.8**
Zinc	8.5	**65.6**	**47.6**	**181**	**43.6**	**69.5**	**27.2**	**39.4**	**123**	**115**	**32.1**	**51.5**

Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
NAV = No Available Value
ND = Not Detected
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.
E = Value exceeded linear range.

Table A-5
Soil Sampling Results
M-8 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4045.02 B1 (6-12") 11/10/1998	4045.04 B2 (6-12") 11/10/1998	4045.06 B3 (6-12") 11/10/1998	4045.08 B4 (6-12") 11/10/1998	4045.10 B5 (6-12') 11/10/1998	4095.02 B6 (6-12') 11/30/1998	4095.04 B7 (6-12") 11/30/1998	4095.06 B8 (6-12") 11/30/1998	4095.08 B9 (6-12") 11/30/1998	4095.10 B10 (6-12") 11/30/1998	4095.12 B11 (6-12") 11/30/1998	4145.02 B12 (6-12") 12/15/1998
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J
Di-n-butylphthalate	200	0.22 J	1.1	0.56 J	0.20 J	0.39 J	ND	ND	ND	1.1 J	1.0 J	ND	1.3
Fluoranthene	122	ND	3.4	ND	0.13 J	ND	1.4 J	ND	ND	ND	ND	ND	1.5
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	2.5	ND	0.24 J	ND	1.1 J	ND	ND	ND	1.4 J	ND	1.4
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	2.1	ND	0.41 J	ND	ND	ND	ND	ND	ND	ND	0.73 J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.6 J**	ND	0.29 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND
Benzo[b]fluoranthene	59.8	ND	0.9 J	ND	0.76 J	ND	ND	ND	ND	ND	ND	ND	0.57 J
Benzo[k]fluoranthene	148	ND	0.89 J	ND	0.52 J	ND	ND	ND	ND	ND	ND	ND	0.68 J
Benzo[a]pyrene	1.52	ND	0.97 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59 J
Indeno[1,2,3-cd]pyrene	109	ND	0.54 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.53 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4045.02 B1 (6-12") 11/10/1998	4045.04 B2 (6-12") 11/10/1998	4045.06 B3 (6-12") 11/10/1998	4045.08 B4 (6-12") 11/10/1998	4045.10 B5 (6-12') 11/10/1998	4095.02 B6 (6-12') 11/30/1998	4095.04 B7 (6-12") 11/30/1998	4095.06 B8 (6-12") 11/30/1998	4095.08 B9 (6-12") 11/30/1998	4095.10 B10 (6-12") 11/30/1998	4095.12 B11 (6-12") 11/30/1998	4145.02 B12 (6-12") 12/15/1998
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	0.014	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.036	0.04	0.017	0.089	0.044	0.049	0.057	0.207	0.379	0.066	0.074	0.014
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.046	0.051	0.033	0.427	0.07	0.066	0.094	**2.123**	0.364	0.089	0.176	0.027
4,4'-DDT	0.0035	**0.061**	**0.036**	**0.038**	**0.117**	**0.093**	**0.145**	**0.179**	**0.175**	**0.05**	**0.029**	**0.038**	**0.015**
gamma-Chlordane	0.224	ND	0.003	0.005	0.03	0.005	ND	ND	0.094	0.022	ND	0.024	0.011
alpha-Chlordane	0.224	ND	ND	0.005	0.02	0.003	ND	ND	0.11	0.017	ND	0.026	0.008
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**5660**	**11200**	**12700**	**7380**	**5420**	**8130**	**9230**	**11300**	**9880**	**18500**	**10900**	**7970**
Antimony	0.27	ND	ND	ND	**2.53**	ND	**0.742**	**0.846**	**14.1**	**2.22**	0.253	**3.28**	**0.532**
Arsenic	9.9	8.08	**10.8**	**14.7**	8.78	8.39	8.12	9.85	**10.9**	**14.8**	**15.4**	9.07	7.36
Barium	283	26.4	42.4	42.9	67.0	31.3	31.5	**287**	44.7	90.7	90.3	62.8	61.4
Beryllium	10	0.762	1.43	1.59	0.788	0.659	0.999	1.52	1.43	1.21	1.82	1.10	0.673
Cadmium	0.36	0.343	**0.756**	**0.705**	**0.923**	0.339	0.142	**0.425**	**0.514**	**0.945**	**0.431**	**0.52**	0.308
Calcium	NAV	459	1540	3810	1900	417	771	992	1140	3480	3450	2380	11300
Chromium	0.4	**85.1**	**101**	**128**	**63.3**	**73.6**	**66.6**	**85.9**	**99.5**	**125**	**199**	**85.6**	**60.1**
Cobalt	13	1.04	2.45	2.94	2.73	1.00	2.11	5.30	2.20	1.61	3.21	3.40	3.02
Copper	28	4.99	14.1	11.4	25.0	4.84	16.8	24.1	13.2	**43.2**	11.3	20.0	19.2
Iron	NAV	21600	34600	42600	18800	17000	26300	27000	24000	29700	45000	31700	23600
Lead	11	8.34	**52.5**	**45.5**	**445**	**16.0**	**74.4**	**223**	**104**	**52.5**	**24.0**	**585**	**104**
Magnesium	NAV	2030	4180	4800	2050	1890	2780	3030	2880	3790	5780	3450	3400
Manganese	220	37.5	45.8	104	46.3	18.1	59.1	126	22.9	34.2	101	52.4	84.8
Mercury	0.00051	**0.02**	**0.045**	**0.115**	**0.156**	**0.053**	**0.065**	**0.101**	**0.059**	**0.481**	**0.233**	**0.199**	**0.089**
Nickel	30	4.33	10.7	15.2	8.52	3.43	8.22	14.2	12.5	10.9	13.1	12.7	8.93
Potassium	NAV	3590	8500	9500	2950	3310	6510	6970	6640	9030	14500	7150	4480
Selenium	0.21	**0.847**	**0.80**	**0.842**	**0.903**	**1.02**	**0.706**	**0.613**	**1.38**	**1.35**	**1.31**	**0.763**	**0.915**
Silver	2	ND	ND	ND	ND	0.893	ND	ND	ND	ND	**2.36**	ND	ND
Sodium	NAV	105	209	255	115	103	98.1	94.4	125	117	116	78.6	293
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**35.6**	**47.8**	**60.6**	**37.3**	**26.8**	**42.2**	**51.9**	**64.0**	**65.4**	**103**	**53.5**	**43.3**
Zinc	8.5	**47.1**	**95.7**	**113**	**329**	**65.7**	**71.3**	**306**	**111**	**252**	**135**	**216**	**123**

See Notes at End of Table

Table A-5
Soil Sampling Results
M-8 Landfill Site
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Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4145.04 B13 (6-12") 12/15/1998	4145.06 B14 (6-12") 12/15/1998	4145.08 B15 (6-12") 12/16/1998	4145.10 B16 (6-12") 12/16/1998	4145.12 B17 (6-12") 12/16/1998	4145.14 B18 (6-12") 12/16/1998	4145.16 B19 (6-12") 12/16/1998	4145.18 B20 (6-12") 12/16/1998	4145.20 B21 (6-12") 12/16/1998	4145.22 B22 (6-12") 12/16/1998	4145.24 B23 (6-12") 12/16/1998	4145.26 B24 (6-12") 12/16/1998
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	**0.27 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.24 J	0.2 J	0.16 J	ND	0.23 J	ND	ND	ND	0.13 J	0.2 J	ND
Acenaphthene	20	ND	ND	0.54 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	0.26 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	3	2.6	1.9	1.6	1.3 J	1.3 J	0.21 J	0.17 J	ND	ND	ND	0.82 J
Fluorene	122	ND	ND	0.45 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.33 J	1.8	5.6	0.83 J	0.46 J	1.1 J	0.19 J	0.14 J	0.19 J	1.2	1.0 J	0.26 J
Anthracene	1480	ND	0.33 J	1.1 J	0.22 J	ND	0.28 J	ND	ND	ND	0.32 J	0.24 J	ND
Di-n-butylphthalate	200	0.53 J	1.3 J	1.8	1.2	0.42 J	0.43	1.3	1.2	2	1.2	1.0 J	2
Fluoranthene	122	0.80 J	4.0	8.2	2.0	0.67 J	2.8	0.33 J	0.33 J	0.44 J	2.2	2.6	0.69 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.68 J	3.1	5.7	1.9	0.71 J	3.9	0.33 J	0.35 J	0.49 J	2.2	2.3	1.0 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.3 J	1.4	2.8	0.99 J	0.27 J	0.77 J	0.16 J	0.18 J	0.22 J	0.94 J	1.2 J	0.45 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.46 J	2.0	3.5	1.7	0.4 J	2.2	0.21 J	0.26 J	0.27 J	1.2	1.6	0.52 J
bis(2-Ethylhexyl)phthalate	0.925	0.27 J	0.16 J	0.41 J	0.21 J	0.14 J	0.39 J	0.29 J	0.18 J	0.18 J	0.22 J	0.51 J	0.26 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.4 J	1.6	3.1	1.4	0.36 J	1.6	0.17 J	0.21 J	0.33 J	0.93 J	1.6	0.79 J
Benzo[k]fluoranthene	148	0.42 J	1.6	2.9	1.4	0.42 J	1.6	0.19 J	0.27 J	0.34 J	1.0 J	1.6	0.9 J
Benzo[a]pyrene	1.52	0.34 J	1.5	**2.7**	1.0 J	0.29 J	1.1 J	0.19 J	0.22 J	0.4 J	0.79 J	1.3	0.59 J
Indeno[1,2,3-cd]pyrene	109	.017 J	0.6 J	0.86 J	0.35 J	ND	0.31 J	ND	ND	0.14 J	0.24 J	0.36 J	ND
Dibenz[a,h]anthracene	18.4	ND	0.18 J	0.25 J	0.14 J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.21 J	0.68 J	0.92 J	0.38 J	ND	0.34 J	0.11 J	ND	0.18 J	0.26 J	0.39 J	ND

See Notes at End of Table

Table A-5
Soil Sampling Results
M-8 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4145.04 B13 (6-12") 12/15/1998	4145.06 B14 (6-12") 12/15/1998	4145.08 B15 (6-12") 12/16/1998	4145.10 B16 (6-12") 12/16/1998	4145.12 B17 (6-12") 12/16/1998	4145.14 B18 (6-12") 12/16/1998	4145.16 B19 (6-12") 12/16/1998	4145.18 B20 (6-12") 12/16/1998	4145.20 B21 (6-12") 12/16/1998	4145.22 B22 (6-12") 12/16/1998	4145.24 B23 (6-12") 12/16/1998	4145.26 B24 (6-12") 12/16/1998
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	0.017	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.04	0.053	0.071	0.07	0.015	0.181	0.05	0.11	0.105	0.061	0.082	0.036
Dieldrin	0.0049	ND	ND	ND	**0.023**	**0.006**	**0.023**	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.131	0.191	0.307	0.268	0.04	0.604	0.041	0.071	0.187	0.16	0.199	0.08
4,4'-DDT	0.0035	**0.017**	**0.032**	**0.051**	**0.287**	**0.013**	**0.09**	**0.021**	**0.044**	**0.04**	ND	**0.027**	**0.03**
gamma-Chlordane	0.224	0.009	ND	ND	0.056	ND	0.045	0.055	ND	0.026	0.027	0.044	0.022
alpha-Chlordane	0.224	ND	ND	ND	0.071	ND	0.023	0.05	ND	0.022	0.022	0.015	0.021
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**13600**	**8860**	**8280**	**11300**	**8170**	**13900**	**4030**	**7590**	**10000**	**15800**	**13600**	**9510**
Antimony	0.27	**1.30**	ND	**1.91**	**1.77**	**1.36**	**1.88**	ND	**0.468**	**1.63**	**30.7**	**1.39**	**7.64**
Arsenic	9.9	**19.8**	**17.0**	**19.0**	**23.7**	8.88	**21.4**	4.01	6.68	**12.9**	**14.6**	**18.0**	7.31
Barium	283	54.7	23.7	36.6	32.6	28.6	51.4	18.1	27.4	48.3	72.5	52.8	40.4
Beryllium	10	1.63	0.897	0.822	1.62	0.805	1.10	0.362	0.645	1.13	1.29	1.10	0.96
Cadmium	0.36	0.161	**1.33**	**0.435**	**1.25**	**0.382**	**1.69**	0.206	0.224	0.218	**4.63**	**3.86**	**2.09**
Calcium	NAV	1410	2170	1990	1190	2050	1670	3640	2230	1920	4940	2880	1780
Chromium	0.4	**139**	**100**	**108**	**202**	**72.4**	**166**	**65.6**	**58.4**	**98.5**	**119**	**138**	**63.5**
Cobalt	13	3.11	2.11	1.92	1.69	2.27	2.77	1.74	2.41	2.25	4.22	3.07	3.70
Copper	28	**31.3**	**30.5**	**29.9**	**61.8**	**1160**	**74.6**	10.0	14.9	16.5	**43.4**	**49.2**	25.1
Iron	NAV	46400	37500	35600	51000	25100	45200	13500	24300	31700	43600	38400	23200
Lead	11	**193**	**32.3**	**115**	**115**	**54.0**	**269**	**39.8**	**25.9**	**45.3**	**119**	**187**	**68.1**
Magnesium	NAV	4040	3320	3150	5430	2690	4630	1940	2540	3760	3730	3700	2170
Manganese	220	56.4	56.0	48.8	33.9	62.9	51.6	**228**	73.5	91.9	75.5	48.3	63.1
Mercury	0.00051	**0.356**	**0.122**	**0.258**	**0.253**	**0.085**	**0.616**	**0.064**	**0.087**	**0.132**	**0.301**	**0.424**	**0.175**
Nickel	30	12.4	7.83	7.48	8.94	7.49	11.6	5.18	7.23	7.28	13.2	10.6	9.47
Potassium	NAV	7990	6670	6660	12300	4990	9410	2560	4280	7500	7220	8270	4060
Selenium	0.21	**2.07**	**1.20**	**1.95**	**2.10**	**0.986**	**2.09**	ND	**0.678**	**0.905**	**1.12**	**1.73**	**0.579**
Silver	2	**3.15**	ND	**4.17**	**4.93**	ND	**6.13**	ND	ND	ND	ND	**5.31**	ND
Sodium	NAV	742	474	233	282	213	407	199	281	260	303	301	133
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**79.0**	**57.0**	**63.8**	**80.4**	**45.8**	**93.4**	**23.3**	**47.0**	**57.5**	**86.5**	**82.5**	**51.6**
Zinc	8.5	**76.5**	**76.3**	**68.7**	**84.7**	**100**	**110**	**155**	**69.6**	**124**	**250**	**96.6**	**141**

See Notes at End of Table

Table A-5
Soil Sampling Results
M-8 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4145.28 B25 (6-12") 12/16/1998	4145.30 B26 (6-12") 12/16/1998	4145.32 B27 (6-12") 12/16/1998	4145.34 B28 (6-12') 12/16/1998	4194.02 B29 (6-12") 1/19/1999	4194.04 B30 (6-12") 1/19/1999	4194.06 B31 (6-12") 1/19/1999	4194.08 B32 (6-12") 1/19/1999	4194.10 B33 (6-12") 1/19/1999	4194.12 B34 (6-12") 1/19/1999	4194.14 B35 (6-12") 1/19/1999	4194.16 B36 (6-12") 1/19/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	0.84 J	ND	ND	ND	ND
Acenaphthene	20	ND	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J	ND
Fluorene	122	ND	0.12 J	ND	ND	ND	ND	ND	0.74 J	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.65 J	1.4	0.15 J	0.16 J	ND	ND	0.42 J	12	0.29 J	1.7 J	0.33 J	ND
Anthracene	1480	0.14 J	0.32 J	0.16 J	0.16 J	ND	ND	ND	1.8 J	ND	ND	ND	ND
Di-n-butylphthalate	200	1.1 J	1.0 J	1.4	0.34 J	1.6	0.97 J	1.4	1.1 J	1.8	26	1.3	1.4 J
Fluoranthene	122	1.3	2.1	1.7	0.4 J	0.19 J	ND	0.7 J	16	0.46 J	3.4 J	0.49 J	1.4 J
Benzidine	NAV	8.3	8	6.5	8.6	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	1.8	2.8	2.2	0.55 J	0.18 J	ND	0.69 J	11	0.43 J	2.7 J	0.47 J	2.1 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.61 J	0.9 J	0.63 J	0.23 J	ND	ND	0.33 J	**5.4 J**	0.21 J	1.0 J	0.23 J	0.88 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.77 J	1.2	0.9 J	0.29 J	0.13 J	ND	0.4 J	**5.9**	0.27 J	1.4 J	0.13 J	1.1 J
bis(2-Ethylhexyl)phthalate	0.925	0.3 J	0.26 J	0.34 J	ND	0.13 J	0.62 J	0.17 J	ND	0.13 J	ND	0.15 J	**1.0 J**
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.87 J	1.2	1.0 J	ND	ND	ND	0.32 J	3.7 J	0.17 J	1.2 J	0.19 J	ND
Benzo[k]fluoranthene	148	0.93 J	1.6	0.55 J	ND	0.12 J	ND	0.32 J	4.8 J	0.16 J	1.3 J	0.22 J	ND
Benzo[a]pyrene	1.52	0.7 J	1.1 J	0.85 J	ND	ND	ND	0.35 J	**4.1 J**	0.18 J	1.1 J	0.22 J	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	0.11 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	0.14 J	1.4 J	ND	ND	0.15 J	ND

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4145.28 B25 (6-12") 12/16/1998	4145.30 B26 (6-12") 12/16/1998	4145.32 B27 (6-12") 12/16/1998	4145.34 B28 (6-12') 12/16/1998	4194.02 B29 (6-12") 1/19/1999	4194.04 B30 (6-12") 1/19/1999	4194.06 B31 (6-12") 1/19/1999	4194.08 B32 (6-12") 1/19/1999	4194.10 B33 (6-12") 1/19/1999	4194.12 B34 (6-12") 1/19/1999	4194.14 B35 (6-12") 1/19/1999	4194.16 B36 (6-12") 1/19/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.048	0.044	0.09	ND	0.065	0.023	0.207	0.141	0.141	0.088	0.136	0.081
Dieldrin	0.0049	ND	**0.013**	ND	ND	**0.013**	**0.026**	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.099	0.128	0.215	ND	0.05	0.022	0.062	0.043	0.097	0.043	0.145	0.049
4,4'-DDT	0.0035	**0.241**	ND	**0.086**	ND	**0.144**	**0.075**	**0.739**	**0.332**	**0.662**	**0.182**	**0.253**	**0.276**
gamma-Chlordane	0.224	0.026	0.039	0.075	ND	0.032	ND	ND	ND	ND	0.025	0.02	0.015
alpha-Chlordane	0.224	0.018	0.035	0.059	ND	0.024	ND	ND	ND	ND	0.025	0.017	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**8990**	**12900**	**10600**	**13100**	**11100**	**10300**	**11400**	**9630**	**13000**	**7170**	**7240**	**8940**
Antimony	0.27	**0.956**	**2.13**	**3.72**	**1.07**	ND	**1.53**	**7.02**	**0.89**	**26.1**	**0.78**	**0.545**	**30.0**
Arsenic	9.9	8.82	**20.9**	7.77	**17.2**	7.23	5.26	7.28	6.77	6.94	7.37	6.89	**10.6**
Barium	283	31.1	44.1	66.1	37.4	46.6	35.0	69.8	44.0	57.0	45.1	36.8	282
Beryllium	10	0.66	1.02	1.02	1.58	0.872	0.608	0.726	0.782	0.734	0.814	0.768	0.76
Cadmium	0.36	**0.757**	**2.46**	**3.54**	0.345	**0.792**	**0.688**	**0.75**	**0.613**	**0.786**	**1.06**	**0.631**	**2.20**
Calcium	NAV	2960	1850	4490	2360	1560	4440	4540	1640	2420	2400	831	16600
Chromium	0.4	**66.5**	**167**	**66.0**	**157**	**75.9**	**53.8**	**61.0**	**64.3**	**62.5**	**67.6**	**65.3**	**66.0**
Cobalt	13	3.84	3.28	4.00	2.75	2.56	1.84	2.44	2.01	3.88	2.60	1.84	4.91
Copper	28	**29.8**	**87.1**	25.5	13.9	10.4	10.1	17.3	8.99	20.9	15.2	8.85	26.3
Iron	NAV	26300	42400	26400	50400	20500	19900	20400	20600	22700	19300	18300	31600
Lead	11	**48.6**	**194**	**71.9**	**33.3**	**54.5**	**60.7**	**191**	**40.0**	**76.7**	**56.3**	**43.2**	**1990**
Magnesium	NAV	3100	3540	2070	5660	2160	1780	2560	1860	2100	1750	1790	2360
Manganese	220	94.5	63.8	185	101	26.6	51.6	82.2	45.1	75.6	63.0	30.3	152
Mercury	0.00051	**0.128**	**0.568**	**0.200**	**0.073**	**0.08**	**0.07**	**0.07**	**0.18**	**0.12**	**0.21**	**0.16**	**1.25**
Nickel	30	9.97	13.3	11.7	11.1	11.4	6.71	14.9	12.6	10.5	7.51	5.87	15.5
Potassium	NAV	4320	6840	4200	11800	4670	2560	4460	3900	3370	3770	3790	4000
Selenium	0.21	ND	**1.74**	**0.678**	**1.30**	**0.648**	ND	**1.05**	**1.19**	**0.837**	**1.20**	**0.957**	**2.32**
Silver	2	ND	**7.58**	ND	ND	ND	ND	0.821	**3.57**	ND	**5.88**	**4.42**	1.42
Sodium	NAV	299	316	138	146	150	101	171	147	166	75.9	88.3	147
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**49.5**	**87.6**	**51.5**	**86.5**	**46.0**	**58.4**	**39.4**	**40.6**	**51.9**	**34.7**	**34.9**	**43.3**
Zinc	8.5	**140**	**128**	**183**	**95.3**	**59.9**	**83.1**	**237**	**67.7**	**127**	**106**	**58.3**	**904**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4194.18 B37 (6-12") 1/19/1999	4194.20 B38 (6-12") 1/19/1999	4194.22 B39 (6-12") 1/19/1999	4194.24 B40 (6-12") 1/19/1999	4194.26 B41 (6-12") 1/19/1999	4351.02 B1A (6-12") 3/16/1999	4351.04 B2B (6-12") 3/16/1999	4351.06 B3C (6-12") 3/16/1999	4351.08 B4D (6-12") 3/16/1999	4351.10 B5E (6-12") 3/16/1999	4351.12 B6F (6-12") 3/16/1999	4351.14 B7G (6-12") 3/16/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 J	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.42 J**	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.21 J	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	0.13 J	0.11 J	ND	ND	ND	ND	ND	0.14 J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.19 J	0.29 J	0.96 J	0.35 J	0.2 J	ND	0.16 J	ND	0.37 J	ND	ND	ND
Anthracene	1480	ND	ND	0.17 J	ND	0.14 J	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.35 J	1.0 J	0.4 J	0.52 J	1.3	ND	1.5	1.1 J	0.37 J	0.45 J	ND	2.70 J
Fluoranthene	122	0.46 J	0.6 J	1.3	0.58 J	0.56 J	ND	0.31 J	ND	0.65 J	0.19 J	0.29 J	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.36 J	0.5 J	1.0 J	0.77 J	0.74 J	ND	0.29 J	ND	0.61 J	0.2 J	0.24 J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.24 J	0.25 J	0.46 J	0.24 J	0.39 J	ND	0.16 J	ND	0.32 J	0.17 J	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.28 J	0.38 J	0.61 J	0.31 J	0.51 J	ND	0.32 J	ND	0.59 J	0.27 J	0.29 J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.13 J	ND	ND	0.36 J	ND	0.22 J	0.33 J	0.34 J	0.18 J	**1.4 J**	0.22 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.28 J	0.28 J	0.35 J	0.21 J	0.36 J	ND	0.18 J	ND	0.34 J	0.17 J	ND	ND
Benzo[k]fluoranthene	148	0.28 J	0.29 J	0.44 J	0.26 J	0.44 J	ND	0.21 J	ND	0.36 J	0.16 J	ND	ND
Benzo[a]pyrene	1.52	0.23 J	0.24 J	0.37 J	0.35 J	0.46 J	ND	0.17 J	ND	0.36 J	0.18 J	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.15 J	0.2 J	ND	0.14 J	ND	0.13 J	ND	0.23 J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.18 J	0.25 J	0.29 J	0.17 J	ND	0.14 J	ND	0.27 J	ND	ND	ND

See Notes at End of Table

Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4194.18 B37 (6-12") 1/19/1999	4194.20 B38 (6-12") 1/19/1999	4194.22 B39 (6-12") 1/19/1999	4194.24 B40 (6-12") 1/19/1999	4194.26 B41 (6-12") 1/19/1999	4351.02 B1A (6-12") 3/16/1999	4351.04 B2B (6-12") 3/16/1999	4351.06 B3C (6-12") 3/16/1999	4351.08 B4D (6-12") 3/16/1999	4351.10 B5E (6-12") 3/16/1999	4351.12 B6F (6-12") 3/16/1999	4351.14 B7G (6-12") 3/16/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.064	0.072	0.097	0.011	0.021	0.022	0.02	0.054	0.073	0.058	0.046	0.021
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	**0.03**	**0.022**	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.042	0.03	0.053	ND	ND	0.073	ND	0.043	0.351	0.268	0.07	ND
4,4'-DDT	0.0035	**0.246**	**0.138**	**0.133**	ND	**0.051**	**0.10**	ND	**0.209**	**0.042**	**0.05**	ND	**0.049**
gamma-Chlordane	0.224	0.02	0.013	ND	ND	0.017	0.034	ND	ND	0.035	0.033	ND	ND
alpha-Chlordane	0.224	0.013	ND	ND	ND	0.017	0.021	ND	ND	0.023	0.019	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	**0.727**	ND	**0.445**	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**7840**	**10200**	**5410**	**9850**	**6960**	**12500**	**13600**	**7060**	**13300**	**8600**	**19700**	**13100**
Antimony	0.27	**4.78**	**0.846**	**0.909**	**1.21**	**2.14**	**7.28**	ND	**1.21**	**2.52**	**22.6**	**4.47**	ND
Arsenic	9.9	**10.2**	**11.6**	6.79	7.46	8.35	**10.4**	**18.0**	**11.7**	**16.1**	9.48	**13.5**	9.24
Barium	283	135	61.4	31.6	39.5	41.8	35.6	55.5	47.4	61.4	101	78.6	51.7
Beryllium	10	0.851	1.06	0.557	0.96	0.742	1.18	1.97	0.657	1.33	0.83	1.73	0.952
Cadmium	0.36	**1.38**	**1.13**	**0.617**	**0.578**	**1.15**	**0.432**	0.286	ND	0.164	**1.02**	**0.968**	0.348
Calcium	NAV	2210	1300	246	10400	2460	3410	4540	1190	3710	2580	3780	622
Chromium	0.4	**72.3**	**102**	**62.7**	**203**	**58.4**	**103**	**217**	**73.5**	**97.7**	**69.7**	**122**	**66.0**
Cobalt	13	3.05	2.61	0.724	3.97	3.14	2.26	3.00	1.63	5.17	3.30	3.91	2.34
Copper	28	**35.4**	**28.8**	15.8	**354**	**80.6**	26.3	**46.1**	**66.2**	**34.8**	**38.1**	**56.1**	19.3
Iron	NAV	25000	30300	19200	22900	22800	41800	53600	25500	43400	25400	45800	23800
Lead	11	**528**	**62.7**	**45.9**	**27.7**	**81.9**	**115**	**52.9**	**125**	**136**	**468**	**236**	**17.0**
Magnesium	NAV	2360	3260	1680	2320	2110	3840	6760	2100	3780	2450	4910	2330
Manganese	220	88.7	40.4	160	74.8	84.2	55.7	22.9	33.0	143	73.5	90.2	73.0
Mercury	0.00051	**0.35**	**0.16**	**0.33**	**0.06**	**0.09**	**0.26**	**0.18**	**0.61**	**18.17**	**0.33**	**0.26**	**0.08**
Nickel	30	8.44	8.91	3.64	12.2	**40.4**	7.76	8.67	5.37	20.3	8.91	16.4	5.85
Potassium	NAV	4540	6570	4030	2820	3410	8640	17100	4530	7940	4770	10400	5540
Selenium	0.21	**1.61**	**1.07**	**1.03**	**1.09**	**1.36**	ND	**1.99**	**0.75**	**1.18**	ND	ND	ND
Silver	2	ND	**2.38**	1.07	ND	ND	ND	1.19	ND	ND	ND	ND	ND
Sodium	NAV	239	185	162	180	119	290	394	371	229	229	285	225
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**35.6**	**38.1**	**25.1**	**44.3**	**299**	**66.2**	**57.7**	**36.6**	**73.3**	**44.1**	**83.5**	**42.3**
Zinc	8.5	**262**	**75.1**	**41.3**	**79.9**	**197**	**361**	**166**	**61.2**	**197**	**345**	**222**	**53.4**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4351.16 B8H (6-12") 3/16/1999	4351.18 B9I (6-12") 3/16/1999	4351.20 B10J (6-12") 3/16/1999	4351.22 B11K (6-12") 3/16/1999	4351.24 B12L (6-12") 3/16/1999	4351.26 B13M (6-12") 3/16/1999	4354.02 B14N (6-12") 3/17/1999	4354.04 B15O (6-12") 3/17/1999	4354.06 B16P (6-12") 3/17/1999	4354.08 B17Q (6-12") 3/17/1999	4354.10 B18R (6-12") 3/17/1999	4354.12 B19S (6-12") 3/17/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	0.78 J	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	0.31 J	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	**0.24 J**	ND	ND	ND	ND	ND	ND	**0.16 J**	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	0.21 J	ND	ND	ND	ND	ND	0.59 J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34 J	ND
Diethylphthalate	100	ND	ND	ND	0.16 J	0.16 J	0.19 J	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	ND	0.67 J	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.73 J	0.68 J	ND	0.23 J	2.7	0.27 J	ND	0.39 J	ND	0.13 J	6.1	0.15 J
Anthracene	1480	0.2 J	0.18 J	ND	ND	0.84 J	ND	ND	ND	ND	ND	1.9	ND
Di-n-butylphthalate	200	0.61 J	0.32 J	0.31 J	1.1 J	0.48 J	0.56 J	0.6 J	0.69 J	1.5	0.78 J	0.27 J	0.18 J
Fluoranthene	122	1.1 J	1.3 J	ND	0.89 J	4.3	0.53 J	0.15 J	0.82 J	0.21 J	0.27 J	6.8	0.24 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	1.0 J	1.2 J	ND	1.4 J	3.3	0.5 J	0.14 J	0.63 J	0.2 J	0.25 J	4.8	0.26 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.48 J	0.65 J	ND	0.87 J	1.8	0.26 J	ND	0.34 J	ND	0.14 J	2.5	0.13 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.79 J	1.1 J	ND	1.8	2.8	0.54J	0.16 J	0.57 J	0.21 J	0.28 J	3.8	0.26 J
bis(2-Ethylhexyl)phthalate	0.925	0.3 J	0.19 J	0.26 J	0.34 J	0.18 J	0.16 J	0.17 J	0.46 J	0.17 J	0.21 J	0.14 J	0.18 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.33 J	0.63 J	ND	0.52 J	1.8	0.31 J	ND	0.3 J	ND	0.16 J	2.1	0.17 J
Benzo[k]fluoranthene	148	0.47 J	0.75 J	ND	0.77 J	1.6	0.33 J	ND	0.36 J	ND	0.22 J	2.0	0.14 J
Benzo[a]pyrene	1.52	0.47 J	0.75 J	ND	0.76 J	**1.7**	0.3 J	ND	0.34 J	0.12 J	0.15 J	**2.5**	0.15 J
Indeno[1,2,3-cd]pyrene	109	0.26 J	0.38 J	ND	0.25 J	0.66 J	0.22 J	ND	0.22 J	ND	ND	1.4	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	0.39 J	ND
Benzo[g,h,I]perylene	119	0.28 J	0.37 J	ND	0.29 J	0.55 J	0.26 J	ND	0.18 J	ND	ND	1.3	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4351.16 B8H (6-12") 3/16/1999	4351.18 B9I (6-12") 3/16/1999	4351.20 B10J (6-12") 3/16/1999	4351.22 B11K (6-12") 3/16/1999	4351.24 B12L (6-12") 3/16/1999	4351.26 B13M (6-12") 3/16/1999	4354.02 B14N (6-12") 3/17/1999	4354.04 B15O (6-12") 3/17/1999	4354.06 B16P (6-12") 3/17/1999	4354.08 B17Q (6-12") 3/17/1999	4354.10 B18R (6-12") 3/17/1999	4354.12 B19S (6-12") 3/17/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.033	0.065	0.022	0.134	0.062	0.039	0.019	ND	0.021	0.058	ND	0.206
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.049	0.232	0.018	0.366	0.245	0.074	0.037	ND	0.088	0.119	ND	0.077
4,4'-DDT	0.0035	ND	**0.965**	**0.027**	ND	**0.032**	**0.065**	ND	**0.06**	**0.162**	**0.043**	ND	**0.409**
gamma-Chlordane	0.224	ND	0.04	ND	0.021	0.016	0.016	ND	0.011	0.201	0.045	ND	0.019
alpha-Chlordane	0.224	ND	0.025	ND	0.016	ND	ND	ND	ND	0.171	0.036	ND	0.015
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.169
Metals (mg/kg)													
Aluminum	50	**11700**	**12300**	**7480**	**13000**	**9700**	**14500**	**11700**	**6050**	**7470**	**7880**	**12300**	**10400**
Antimony	0.27	ND	**2.88**	**0.89**	**30.1**	**9.00**	**1.25**	**0.608**	**0.669**	ND	**0.936**	ND	**0.522**
Arsenic	9.9	**13.4**	**11.1**	**10.8**	8.18	7.60	**15.1**	**14.8**	5.20	**10.2**	4.82	**12.3**	9.42
Barium	283	68.8	63.9	27.1	185	87.9	61.9	80.4	19.0	38.4	22.7	40.4	48.5
Beryllium	10	1.73	1.53	0.885	1.05	0.823	1.29	1.62	0.544	0.803	0.598	1.28	0.933
Cadmium	0.36	**0.942**	ND	ND	**0.417**	**8.88**	0.142	ND	ND	ND	ND	ND	ND
Calcium	NAV	3120	1740	526	13100	3490	2740	970	2050	1680	2020	1650	2060
Chromium	0.4	**155**	**136**	**88.4**	**76.6**	**70.8**	**154**	**173**	**51.8**	**73.1**	**61.5**	**114**	**93.7**
Cobalt	13	2.62	2.33	1.65	3.31	2.57	2.41	1.24	2.36	1.74	3.13	0.849	2.09
Copper	28	19.5	**33.0**	12.4	19.8	20.5	**34.7**	20.9	17.0	22.9	26.6	8.46	16.8
Iron	NAV	34300	39800	24500	27400	22800	45700	45300	18400	26200	17800	28800	25500
Lead	11	**17.8**	**55.4**	10.7	**672**	**334**	**160**	**35.1**	**58.1**	**74.7**	**47.7**	9.58	**39.8**
Magnesium	NAV	5150	4680	2760	4040	2920	4920	5500	2550	2540	2430	3810	2840
Manganese	220	33.8	38.6	38.8	126	38.9	82.5	17.9	48.9	50.3	42.6	40.4	43.6
Mercury	0.00051	**0.08**	**0.39**	**0.04**	**0.45**	**0.28**	**0.21**	**0.25**	**1.50**	**0.167**	**0.17**	**0.045**	**0.195**
Nickel	30	11.9	12.6	4.40	11.0	9.72	8.90	7.19	6.05	7.85	10.6	4.36	6.98
Potassium	NAV	11600	10400	6390	6490	5320	11200	14500	3630	5130	4100	7960	6090
Selenium	0.21	**1.23**	**1.09**	**0.988**	ND	**0.335**	**1.00**	**3.51**	**0.900**	**1.86**	**0.973**	**1.45**	**1.33**
Silver	2	ND	**2.76**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.83**
Sodium	NAV	159	235	158	262	162	262	238	103	93.7	364	69.0	89.3
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**71.4**	**122**	**45.6**	**52.1**	**55.3**	**78.5**	**49.6**	**30.6**	**38.7**	**66.4**	**47.9**	**48.2**
Zinc	8.5	**80.7**	**151**	**37.5**	**346**	**181**	**313**	**83.3**	**47.6**	**73.4**	**47.3**	**41.3**	**67.8**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4354.14 B20T (6-12") 3/17/1999	4354.16 B21U (6-12") 3/17/1999	4354.18 B22V (6-12") 3/17/1999	4354.20 B23W (6-12") 3/17/1999	4354.22 B24X (6-12") 3/17/1999	4354.24 B25Y (6-12") 3/17/1999	4354.26 B26Z (6-12") 3/17/1999	4354.28 B27AA (6-12" 3/17/1999	4357.02 B28BB (6-12" 3/18/1999	4357.04 B29CC (6-12" 3/18/1999	4357.06 B30DD (6-12" 3/18/1999	4357.08 B31EE (6-12" 3/18/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	0.78 J	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	**7.0**	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	**5.2**	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.17 J	ND	ND	ND	0.12 J	0.16 J	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	0.12 J	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.45 J	0.57 J	ND	0.29 J	0.62 J	0.15 J	0.16 J	ND	0.2 J	ND	0.14 J
Anthracene	1480	ND	0.15 J	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.59 J	0.55 J	0.17 J	0.46 J	0.4 J	0.6 J	0.12 J	0.55 J	1.1 J	0.13 J	0.4 J	0.13 J
Fluoranthene	122	ND	1.0 J	1.3	0.2 J	0.34 J	0.64 J	0.29 J	0.34 J	0.27 J	0.26 J	ND	0.28 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	1.1 J	1.3	0.19 J	0.28 J	0.78 J	0.38 J	0.36 J	0.2 J	0.25 J	ND	0.26 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	**0.77 J**	ND	ND	ND	ND	0.16 J	ND	ND
Benzo[a]anthracene	5.21	ND	0.55 J	0.69 J	0.12 J	0.18 J	0.37 J	0.26 J	0.22 J	0.16 J	0.14 J	ND	0.17 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.3	1.5	0.21 J	0.45 J	0.74 J	0.48 J	0.45 J	0.25 J	0.34 J	ND	0.29 J
bis(2-Ethylhexyl)phthalate	0.925	0.21 J	0.48 J	0.2 J	0.14 J	0.14 J	ND	ND	0.3 J	0.17 J	0.47 J	ND	0.16 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.98 J	1.4	0.16 J	0.27 J	0.28 J	0.31 J	0.3 J	0.17 J	0.15 J	ND	0.2 J
Benzo[k]fluoranthene	148	ND	0.9 J	1.0 J	0.12 J	0.32 J	0.29 J	0.33 J	0.21 J	0.17 J	0.15 J	ND	0.24 J
Benzo[a]pyrene	1.52	ND	0.65 J	**1.9**	0.15 J	ND	0.34 J	0.38 J	0.27 J	0.17 J	0.15 J	ND	0.18 J
Indeno[1,2,3-cd]pyrene	109	ND	0.27 J	1.5	ND	ND	0.18 J	0.24 J	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	1.6	ND	ND	0.23 J	0.28 J	ND	ND	ND	ND	ND

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Lab Sample ID		4354.14	4354.16	4354.18	4354.20	4354.22	4354.24	4354.26	4354.28	4357.02	4357.04	4357.06	4357.08
Field Sample Location	ESC (mg/kg)	B20T (6-12")	B21U (6-12")	B22V (6-12")	B23W (6-12")	B24X (6-12")	B25Y (6-12")	B26Z (6-12")	B27AA (6-12"	B28BB (6-12"	B29CC (6-12"	B30DD (6-12"	B31EE (6-12"
Sample Date		3/17/1999	3/17/1999	3/17/1999	3/17/1999	3/17/1999	3/17/1999	3/17/1999	3/17/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.035	0.096	0.083	0.054	0.033	0.147	ND	0.039	0.025	0.126	0.049	0.026
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.06	0.083	0.018	0.029	0.047	0.167	ND	0.134	0.048	0.135	0.018	0.018
4,4'-DDT	0.0035	ND	**0.199**	**0.185**	**0.159**	**0.115**	**0.254**	ND	**0.043**	**0.07**	**0.34**	**0.161**	**0.085**
gamma-Chlordane	0.224	ND	0.03	ND	0.012	ND	ND	ND	0.034	ND	0.017	ND	ND
alpha-Chlordane	0.224	ND	0.017	ND	ND	ND	ND	ND	0.022	ND	0.012	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**11100**	**15400**	**9060**	**7560**	**9690**	**6450**	**10200**	**8410**	**12800**	**13500**	**6270**	**10500**
Antimony	0.27	**0.415**	ND	ND	ND	**2.92**	ND	ND	**2.91**	**2.76**	**1.93**	ND	**9.24**
Arsenic	9.9	**15.7**	**20.7**	5.97	5.96	**13.4**	7.64	7.11	7.72	**12.5**	**11.2**	5.05	6.93
Barium	283	67.3	66.1	27.8	23.6	40.6	30.1	26.0	50.4	107	60.8	23.8	132
Beryllium	10	0.816	1.61	0.722	0.636	0.981	0.532	0.902	0.857	1.17	1.42	0.471	0.777
Cadmium	0.36	ND	ND	ND	ND	ND	0.316	ND	ND	**1.96**	ND	ND	**2.43**
Calcium	NAV	882	1060	2420	2500	936	385	1720	2400	2860	2280	1940	2120
Chromium	0.4	**74.4**	**208**	**63.8**	**57.9**	**116**	**73.3**	**86.4**	**63.4**	**104**	**137**	**45.8**	**104**
Cobalt	13	1.39	1.45	2.73	2.63	1.29	0.882	1.92	2.74	3.53	2.05	2.10	2.95
Copper	28	10.5	**31.9**	21.8	26.2	**29.3**	20.7	**56.5**	19.2	**28.9**	19.7	23.1	17.5
Iron	NAV	24900	56400	25000	21100	35900	21600	27900	19800	36700	35200	16100	22500
Lead	11	**11.9**	**119**	**29.6**	**36.4**	**91.9**	**35.0**	**19.6**	**148**	**1060**	**240**	**45.1**	**686**
Magnesium	NAV	2990	6420	3110	2820	3390	1870	3000	1950	3830	4220	2070	2530
Manganese	220	26.5	30.7	66.0	56.5	25.9	18.0	54.5	31.2	112	38.8	49.4	138
Mercury	0.00051	**0.049**	**0.271**	**0.127**	**0.125**	**0.33**	**0.103**	**0.067**	**0.705**	**0.286**	**0.152**	**0.148**	**0.200**
Nickel	30	4.92	7.45	7.36	6.55	5.66	3.75	5.67	9.97	12.5	7.49	6.96	9.36
Potassium	NAV	5270	15500	5170	4250	8160	4600	6600	4150	7930	9860	3210	4700
Selenium	0.21	**1.01**	**1.83**	**1.09**	**0.731**	**1.89**	**0.841**	**0.768**	**1.69**	**1.81**	**1.57**	ND	**1.39**
Silver	2	ND	**2.79**	ND	ND	**2.38**	1.24	ND	ND	ND	ND	ND	ND
Sodium	NAV	76.2	405	208	137	508	217	90.3	126	163	149	176	177
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**40.0**	**95.3**	**44.1**	**36.5**	**48.1**	**33.2**	**44.6**	**40.0**	**73.9**	**63.3**	**34.3**	**48.8**
Zinc	8.5	**34.7**	**79.0**	**89.8**	**59.6**	**65.2**	**40.6**	**40.4**	**174**	**410**	**112**	**61.4**	**532**

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Lab Sample ID		4357.10	4357.12	4357.14	4357.16	4357.18	4357.20	4357.22	4357.24	4357.26	4357.28	4357.30	4372.02
Field Sample Location	ESC (mg/kg)	B32FF (6-12"	B33GG (6-12"	B34HH (6-12"	B35II (6-12")	B36JJ (6-12")	B37KK (6-12"	B38LL (6-12"	B39MM (6-12	B40NN (6-12"	B41OO (6-12	B42PP (6-12"	B43 (6-12")
Sample Date		3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/26/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	0.2 J	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.17 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.76 J	0.18 J	ND	ND	ND	ND	ND	ND	ND	0.14 J	0.17 J
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.39 J	0.85 J	0.14 J	0.16 J	0.42 J	0.53 J	ND	0.37J	0.17 J	0.12 J	0.47J	0.81 J
Fluoranthene	122	0.27 J	0.55 J	1.5	ND	ND	ND	0.14 J	0.42 J	0.47 J	ND	0.19 J	0.39 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.27 J	0.99 J	1.1 J	ND	ND	ND	0.15 J	0.36 J	0.64 J	ND	0.23 J	0.34 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.17 J	0.4 J	0.37 J	ND	ND	ND	0.13 J	0.21 J	0.4 J	ND	ND	0.25 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.32 J	0.81 J	0.91 J	ND	ND	ND	0.2 J	0.48 J	0.66 J	ND	0.2 J	0.45 J
bis(2-Ethylhexyl)phthalate	0.925	0.12 J	0.25 J	0.17 J	ND	ND	0.14 J	0.17 J	0.16 J	0.5 J	0.19 J	0.66 J	0.15 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.19 J	0.23 J	0.35 J	ND	ND	ND	ND	0.15 J	0.43 J	ND	ND	0.26 J
Benzo[k]fluoranthene	148	0.21 J	0.31 J	0.28 J	ND	ND	ND	ND	0.15 J	0.43 J	ND	ND	0.25 J
Benzo[a]pyrene	1.52	0.19 J	0.32 J	0.24 J	ND	ND	ND	ND	0.22 J	0.39 J	ND	ND	0.24 J
Indeno[1,2,3-cd]pyrene	109	0.13 J	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.15 J	ND	0.18 J	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID		4357.10	4357.12	4357.14	4357.16	4357.18	4357.20	4357.22	4357.24	4357.26	4357.28	4357.30	4372.02
Field Sample Location	ESC (mg/kg)	B32FF (6-12"	B33GG (6-12"	B34HH (6-12"	B35II (6-12")	B36JJ (6-12")	B37KK (6-12"	B38LL (6-12")	B39MM (6-12"	B40NN (6-12"	B41OO (6-12"	B42PP (6-12"	B43 (6-12")
Sample Date		3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/18/1999	3/26/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.055	0.046	0.061	ND	ND	0.024	0.029	0.078	0.056	0.014	0.042	0.097
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.031	0.093	0.173	ND	ND	0.021	0.137	0.302	0.087	ND	0.119	0.35
4,4'-DDT	0.0035	**0.099**	**0.217**	**0.038**	ND	ND	**0.051**	ND	**0.032**	ND	**0.036**	ND	**0.292**
gamma-Chlordane	0.224	ND	ND	0.021	ND	ND	ND	0.018	0.024	0.021	ND	ND	0.02
alpha-Chlordane	0.224	ND	ND	0.016	ND	ND	ND	0.013	0.022	0.029	ND	ND	0.015
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**10100**	**6890**	**10600**	**15400**	**10200**	**7400**	**8850**	**12100**	**9160**	**9440**	**7360**	**10600**
Antimony	0.27	ND	**73.5**	ND	ND	ND	**0.719**	**4.61**	**4.68**	**5.07**	**0.635**	**7.26**	**0.531**
Arsenic	9.9	**13.6**	5.47	**10.0**	**10.8**	**14.8**	5.40	7.37	8.32	8.77	**10.6**	**9.93**	**11.5**
Barium	283	64.7	68.1	44.4	40.0	64.6	41.7	37.8	60.9	131	38.4	68.2	63.9
Beryllium	10	0.946	0.573	0.789	1.48	1.12	0.608	0.811	0.923	0.854	0.851	1.07	1.00
Cadmium	0.36	**1.33**	**0.542**	ND	ND	ND	ND	0.129	0.246	**5.29**	ND	ND	ND
Calcium	NAV	824	21100	1260	1780	691	1070	2340	5270	4130	1810	1450	2420
Chromium	0.4	**90.5**	**47.0**	**124**	**164**	**145**	**57.6**	**74.5**	**85.2**	**465**	**66.6**	**84.8**	**103**
Cobalt	13	1.31	4.11	1.46	0.726	1.16	2.52	1.85	3.48	2.89	1.35	1.18	1.63
Copper	28	**30.0**	**35.1**	**53.5**	3.38	18.7	15.3	9.28	20.1	**135**	14.0	25.4	24.1
Iron	NAV	28100	19500	28200	35800	40800	17000	23000	27600	27400	21700	28100	27200
Lead	11	**68.3**	**1090**	**59.4**	8.02	**79.1**	**24.0**	**108**	**181**	**112**	**17.4**	**90.1**	**134**
Magnesium	NAV	2540	1910	2980	5300	3940	1490	2450	3000	2530	1880	2670	3560
Manganese	220	25.7	110	27.1	23.5	18.1	79.1	27.3	132	43.1	29.3	21.0	39.9
Mercury	0.00051	**0.082**	**0.318**	**0.127**	**0.025**	**0.121**	**0.131**	**0.096**	**0.28**	**2.17**	**0.186**	**0.217**	**0.249**
Nickel	30	5.75	9.00	5.49	5.24	5.99	7.62	7.91	17.3	15.4	5.91	6.73	7.54
Potassium	NAV	5980	3430	6320	12000	10500	3380	5310	5970	5190	3620	5950	6710
Selenium	0.21	**2.02**	**1.46**	**1.13**	**3.25**	**2.08**	**0.919**	**0.942**	**1.04**	**1.45**	**1.29**	**1.18**	**0.752**
Silver	2	ND	ND	ND	ND	**2.34**	ND	ND	ND	**124**	ND	ND	ND
Sodium	NAV	256	206	160	141	198	105	136	148	215	152	223	165
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**40.7**	**38.0**	**52.8**	**71.5**	**46.5**	**44.1**	**48.5**	**121**	**71.4**	**37.9**	**37.6**	**53.0**
Zinc	8.5	**70.2**	**485**	**38.3**	**41.9**	**75.6**	**95.5**	**158**	**249**	**518**	**37.6**	**125**	**81.6**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4372.04 B44 (6-12") 3/26/1999	4372.06 B45 (6-12") 3/26/1999	4372.08 B46 (6-12") 3/18/1999	4372.10 B47 (6-12") 3/26/1999	4372.12 B48 (6-12") 3/26/1999	4376.02 B49 (6-12") 3/29/1999	4376.04 B50 (6-12") 3/29/1999	4376.06 B51 (6-12") 3/29/1999	4376.08 B52 (6-12") 3/29/1999	4376.10 B53 (6-12") 3/29/1999	4376.12 B54 (6-12") 3/29/1999	4376.14 B55 (6-12") 3/29/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	0.35 J	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	**0.23 J**	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	0.36 J	ND	ND	ND
Acenaphthylene	682	ND	0.15 J	ND	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	0.17 J	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.54 J	0.36 J	ND	ND	ND	0.19 J	ND	0.88 J	0.14 J	0.12 J	ND
Anthracene	1480	ND	0.21 J	ND	ND	ND	ND	ND	ND	0.14 J	ND	ND	ND
Di-n-butylphthalate	200	0.79 J	0.63 J	0.45 J	0.39 J	0.22 J	0.65 J	0.26 J	0.98 J	0.59 J	1.1	0.55 J	0.26 J
Fluoranthene	122	ND	1.1 J	0.46 J	ND	0.21 J	ND	0.29 J	ND	0.53 J	0.29 J	0.26 J	0.15 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	1.2	0.49 J	0.17 J	0.36 J	0.34 J	0.41 J	ND	0.88 J	0.16 J	0.26 J	0.16 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.58 J	0.25 J	ND	0.2 J	ND	0.2 J	ND	0.36 J	ND	0.14 J	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.0 J	0.48 J	0.18 J	0.44 J	0.35 J	0.4 J	ND	0.73 J	0.23 J	0.26 J	0.17 J
bis(2-Ethylhexyl)phthalate	0.925	0.13 J	0.41 J	0.19 J	0.28 J	0.26 J	0.37 J	0.15 J	0.15 J	0.34 J	ND	0.2 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.56 J	0.26 J	ND	0.23 J	ND	0.18 J	ND	0.19 J	0.11 J	0.12 J	ND
Benzo[k]fluoranthene	148	ND	0.53 J	0.22 J	ND	0.21 J	ND	0.18 J	ND	0.2 J	0.15 J	0.14 J	ND
Benzo[a]pyrene	1.52	ND	0.64 J	0.25 J	ND	0.21 J	ND	0.21 J	ND	0.31 J	0.12 J	0.13 J	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.22 J	ND	ND	ND	ND	ND	ND	0.17 J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.25 J	ND	ND	ND	ND	ND	ND	0.24 J	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4372.04 B44 (6-12") 3/26/1999	4372.06 B45 (6-12") 3/26/1999	4372.08 B46 (6-12") 3/18/1999	4372.10 B47 (6-12") 3/26/1999	4372.12 B48 (6-12") 3/26/1999	4376.02 B49 (6-12") 3/29/1999	4376.04 B50 (6-12") 3/29/1999	4376.06 B51 (6-12") 3/29/1999	4376.08 B52 (6-12") 3/29/1999	4376.10 B53 (6-12") 3/29/1999	4376.12 B54 (6-12") 3/29/1999	4376.14 B55 (6-12") 3/29/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	ND	0.082	0.024	0.158	0.12	0.081	0.043	0.045	ND	0.073	0.015	0.022
Dieldrin	0.0049	ND	ND	ND	**0.011**	ND	ND	**0.022**	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	0.358	0.108	0.309	0.458	0.203	0.071	0.067	0.039	0.407	ND	0.043
4,4'-DDT	0.0035	ND	**0.042**	ND	**0.043**	ND	ND	**0.031**	**0.28**	ND	**0.047**	**0.055**	ND
gamma-Chlordane	0.224	ND	0.016	0.012	0.022	0.021	0.016	0.02	ND	ND	0.023	0.013	ND
alpha-Chlordane	0.224	ND	0.013	ND	0.014	0.012	ND	0.018	ND	ND	0.016	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**8030**	**7910**	**9610**	**8180**	**15300**	**36900**	**13500**	**6650**	**17000**	**9670**	**7520**	**14800**
Antimony	0.27	**0.492**	**3.10**	**1.63**	**19.8**	**1.94**	**29.8**	**2.77**	**0.503**	ND	**0.469**	ND	**0.537**
Arsenic	9.9	5.98	8.56	**11.1**	8.45	9.18	9.76	**10.7**	7.55	**11.5**	5.86	**11.8**	7.37
Barium	283	12.0	62.5	57.6	40.3	55.1	157	45.0	26.7	58.2	39.3	32.7	10.7
Beryllium	10	0.609	0.768	1.05	0.836	1.47	1.05	1.09	0.803	1.32	0.653	0.726	1.02
Cadmium	0.36	ND	**0.526**	ND	0.228	ND	**0.488**	**0.546**	ND	ND	ND	**0.39**	ND
Calcium	NAV	716	3340	2560	1740	1550	4080	2640	620	2370	526	2480	824
Chromium	0.4	**57.6**	**58.1**	**94.1**	**79.8**	**96.1**	**83.6**	**84.7**	**82.4**	**137**	**51.3**	**67.4**	**108**
Cobalt	13	2.40	4.65	2.85	3.00	2.76	6.89	3.87	0.865	2.88	1.57	2.09	1.66
Copper	28	4.32	**49.4**	**44.4**	19.5	10.1	**40.1**	**28.9**	12.9	24.7	11.4	18.2	18.3
Iron	NAV	21200	23100	31400	24200	31700	32200	27800	21800	38100	17500	24000	38800
Lead	11	4.48	**87.2**	**90.6**	**141**	**59.1**	**1490**	**188**	**21.0**	**30.0**	**17.3**	**49.2**	8.41
Magnesium	NAV	1450	2820	3290	2170	3490	3000	2780	2400	4490	1720	2880	3530
Manganese	220	91.7	101	80.9	75.7	40.3	152	91.1	16.9	95.2	38.2	60.9	27.1
Mercury	0.00051	**0.067**	**0.26**	**0.297**	**0.838**	**0.098**	**0.221**	**0.155**	**0.048**	**0.086**	**0.166**	**4.472**	**0.516**
Nickel	30	3.99	12.6	17.9	12.7	12.3	19.4	15.3	3.94	14.4	5.29	7.60	9.07
Potassium	NAV	3640	3530	6230	4600	7360	5170	4390	5820	10400	3240	5220	5180
Selenium	0.21	ND	**1.16**	**0.698**	**0.722**	ND	ND	ND	**0.648**	**0.896**	ND	ND	**0.995**
Silver	2	ND	ND	1.93	1.71	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	168	215	192	219	161	310	356	137	269	537	185	107
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**58.3**	**50.3**	**107**	**39.5**	**60.9**	**48.6**	**62.4**	**37.1**	**78.1**	**29.6**	**38.5**	**58.2**
Zinc	8.5	**25.0**	**320**	**221**	**231**	**129**	**651**	**360**	**32.2**	**85.7**	**30.9**	**91.0**	**72.7**

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4376.16 B56 (6-12") 3/29/1999	4376.18 B57 (6-12") 3/29/1999	4376.20 B58 (6-12") 3/29/1999	4376.22 B59 (6-12") 3/29/1999	4376.24 B60 (6-12") 3/29/1999	4376.26 B61 (6-12") 3/29/1999	4376.28 B62 (6-12") 3/29/1999	4376.30 B63 (6-12") 3/29/1999	4376.32 B64 (6-12") 3/29/1999	4376.34 B65 (6-12") 3/29/1999	4376.36 B66 (6-12") 3/29/1999	4382.02 B67 (6-12") 3/30/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	1.6 J	0.26 J	ND	ND	0.61 J	ND	ND	4.2	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	**0.24 J**	ND	ND	ND	**0.54 J**	ND	ND	**10**	**0.56 J**	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	0.27 J	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	0.56 J	ND	ND	0.48 J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	0.33 J	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22 J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	0.74 J	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.23 J	0.29 J	0.22 J	0.53 J	ND	ND	0.18 J	6.3	0.26 J	ND	0.27 J	0.32 J
Anthracene	1480	ND	ND	ND	0.15 J	ND	ND	ND	1.9	ND	ND	ND	ND
Di-n-butylphthalate	200	1.3	0.59 J	2.5	0.63 J	0.32 J	0.17 J	0.21 J	0.42 J	ND	2.7	0.65 J	0.22 J
Fluoranthene	122	0.43 J	0.7 J	0.21 J	0.63 J	ND	ND	0.31 J	8.0	0.41 J	ND	0.96 J	0.75 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.4 J	0.66 J	0.29 J	0.63 J	ND	ND	0.24 J	6.2	0.34 J	ND	0.91 J	0.68 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.2 J	0.4 J	ND	0.31 J	ND	ND	0.24 J	3.6	0.22 J	ND	0.29 J	0.41 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.39 J	0.63 J	0.29 J	0.58 J	ND	ND	0.23 J	**5.4**	0.35 J	ND	0.46 J	0.7 J
bis(2-Ethylhexyl)phthalate	0.925	0.22 J	ND	**3.6**	0.8 J	0.16 J	0.18 J	**28**	0.17 J	0.49 J	**4.9**	**1.9**	0.23 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.18 J	0.31 J	ND	0.25 J	ND	ND	ND	3.4	0.17 J	ND	0.3 J	0.45 J
Benzo[k]fluoranthene	148	0.18 J	0.28 J	ND	0.23 J	ND	ND	ND	2.3	0.15 J	ND	0.31 J	0.4 J
Benzo[a]pyrene	1.52	0.19 J	0.35 J	ND	0.27 J	ND	ND	ND	**3.1**	0.18 J	ND	0.25 J	0.45 J
Indeno[1,2,3-cd]pyrene	109	0.17 J	0.24 J	ND	0.15 J	ND	ND	ND	1.7	ND	ND	ND	0.2 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	0.82 J	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.17 J	0.25 J	ND	0.16 J	ND	ND	ND	1.5	ND	ND	ND	0.2 J

See Notes at End of Table

Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4376.16 B56 (6-12") 3/29/1999	4376.18 B57 (6-12") 3/29/1999	4376.20 B58 (6-12") 3/29/1999	4376.22 B59 (6-12") 3/29/1999	4376.24 B60 (6-12") 3/29/1999	4376.26 B61 (6-12") 3/29/1999	4376.28 B62 (6-12") 3/29/1999	4376.30 B63 (6-12") 3/29/1999	4376.32 B64 (6-12") 3/29/1999	4376.34 B65 (6-12") 3/29/1999	4376.36 B66 (6-12") 3/29/1999	4382.02 B67 (6-12") 3/30/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.13	0.093	ND	0.077	0.072	0.045	0.054	0.08	0.073	ND	0.052	0.153
Dieldrin	0.0049	ND	ND	ND	ND	**0.022**	ND	ND	ND	ND	ND	ND	**0.033**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.101	0.414	0.087	0.144	0.111	0.124	0.272	0.043	0.10	0.144	0.173	0.737
4,4'-DDT	0.0035	**0.247**	**0.057**	ND	**0.078**	**0.145**	**0.079**	ND	**0.214**	ND	**0.658**	ND	**0.093**
gamma-Chlordane	0.224	0.012	0.028	ND	ND	0.019	ND	ND	ND	ND	ND	0.014	0.08
alpha-Chlordane	0.224	ND	0.018	ND	ND	0.015	ND	ND	ND	ND	ND	ND	0.062
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	**4.763**	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**11800**	**9840**	**9520**	**7790**	**15400**	**8470**	**12400**	**11200**	**13900**	**10200**	**8630**	**9030**
Antimony	0.27	ND	**4.02**	ND	**1.30**	**4.46**	**4.48**	**1.95**	**0.648**	**0.627**	**10.3**	ND	**5.21**
Arsenic	9.9	**11.7**	8.78	8.56	8.72	8.62	7.85	5.72	8.89	**11.9**	8.31	8.66	**18.3**
Barium	283	30.9	79.3	66.8	64.1	43.3	53.6	85.0	39.8	83.2	**498**	35.6	48.2
Beryllium	10	0.802	0.88	0.646	0.745	0.759	0.700	0.58	0.907	1.30	0.461	1.02	0.768
Cadmium	0.36	ND	**1.26**	ND	ND	ND	ND	**2.25**	0.124	ND	ND	ND	**5.63**
Calcium	NAV	748	2050	4140	8930	1500	2460	3850	894	706	8150	431	4960
Chromium	0.4	**97.8**	**74.5**	**57.5**	**75.4**	**62.0**	**61.5**	**107**	**69.1**	**119**	**90.7**	**99.2**	**92.2**
Cobalt	13	1.70	3.00	3.71	3.06	4.93	3.56	4.81	3.02	2.48	5.68	1.42	6.07
Copper	28	22.5	22.7	**38.8**	**63.5**	12.6	16.1	**91.7**	16.6	**72.5**	**145**	18.0	**69.9**
Iron	NAV	32400	26600	34900	80600	25600	23200	37700	30600	40600	69200	29200	80500
Lead	11	**50.4**	**883**	**187**	**169**	**666**	**352**	**199**	**37.1**	**117**	**222**	**20.3**	**243**
Magnesium	NAV	3380	2460	2380	2380	2090	2330	1460	2120	3600	1640	2840	2810
Manganese	220	38.6	35.2	**222**	**455**	178	165	210	99.7	41.8	**324**	27.8	**340**
Mercury	0.00051	**0.168**	**0.367**	**2.805**	**1.632**	**0.425**	**0.377**	**1.572**	**0.273**	**0.661**	**0.500**	**0.089**	**0.314**
Nickel	30	6.45	11.0	16.1	12.7	11.3	9.06	**56.7**	11.0	10.9	27.0	7.08	22.0
Potassium	NAV	7380	5110	3680	4350	3680	4030	2690	4670	8060	3290	6890	5610
Selenium	0.21	ND	**0.847**	ND	**0.882**	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	**3.49**	ND	ND	**2.93**	ND	ND	**5.80**	ND	ND
Sodium	NAV	528	169	312	274	132	126	145	108	208	259	122	132
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**52.0**	**73.0**	**42.1**	**38.5**	**47.7**	**40.9**	**27.1**	**62.8**	**61.8**	**29.4**	**44.7**	**52.8**
Zinc	8.5	**44.3**	**249**	**189**	**327**	**544**	**380**	**2820**	**108**	**116**	**375**	**70.7**	**1710**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4382.04 B68 (6-12") 3/30/1999	4382.06 B69 (6-12") 3/30/1999	4382.08 B70 (6-12") 3/30/1999	4382.10 B71 (6-12") 3/30/1999	4382.12 B72 (6-12") 3/30/1999	4382.14 B73 (6-12") 3/30/1999	4382.16 B74 (6-12") 3/30/1999	4382.18 B75 (6-12") 3/30/1999	4382.20 B76 (6-12") 3/30/1999	4382.22 B77 (6-12") 3/30/1999	4382.24 B78 (6-12") 3/30/1999	4382.28 B79 (6-12") 3/30/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	0.4 J	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.3 J**	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.18 J	ND	0.49 J	ND	ND	ND	ND	0.14 J
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	0.18 J	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	1.0 J	0.24 J	0.15 J	0.58 J	ND	1.3	ND	ND	0.14 J	0.29 J	0.15 J
Anthracene	1480	ND	0.2 J	ND	ND	0.25 J	ND	0.51 J	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.68 J	0.61 J	0.44 J	0.52 J	0.53 J	0.74 J	0.23 J	0.13 J	0.22 J	0.16 J	0.92 J	0.45 J
Fluoranthene	122	ND	2.1	0.51 J	0.76 J	1.4	ND	2.4	ND	0.2 J	0.18 J	0.4 J	0.38 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	1.6	0.45 J	0.7 J	1.3	ND	2.4	ND	0.19 J	0.19 J	0.55 J	0.45 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.92 J	0.26 J	0.5 J	0.78 J	ND	1.3	ND	ND	ND	0.16 J	0.26 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.6	0.64 J	0.81 J	1.4	ND	2.3	ND	0.2 J	0.2 J	0.47 J	0.48 J
bis(2-Ethylhexyl)phthalate	0.925	0.16 J	ND	0.19 J	0.33 J	0.92 J	0.28 J	0.35 J	ND	0.18 J	0.27 J	**5.0**	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	0.26 J	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.86 J	0.4 J	0.67 J	0.88 J	ND	1.5	ND	0.13 J	ND	ND	0.29 J
Benzo[k]fluoranthene	148	ND	0.86 J	0.34 J	0.49 J	0.89 J	ND	1.4	ND	ND	ND	ND	0.28 J
Benzo[a]pyrene	1.52	ND	0.96 J	0.29 J	0.48 J	0.89 J	ND	1.5	ND	ND	ND	ND	0.33 J
Indeno[1,2,3-cd]pyrene	109	ND	0.65 J	0.24 J	0.2 J	0.45 J	ND	0.75 J	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	0.22 J	ND	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.7 J	0.25 J	0.18 J	0.43 J	ND	0.7 J	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4382.04 B68 (6-12") 3/30/1999	4382.06 B69 (6-12") 3/30/1999	4382.08 B70 (6-12") 3/30/1999	4382.10 B71 (6-12") 3/30/1999	4382.12 B72 (6-12") 3/30/1999	4382.14 B73 (6-12") 3/30/1999	4382.16 B74 (6-12") 3/30/1999	4382.18 B75 (6-12") 3/30/1999	4382.20 B76 (6-12") 3/30/1999	4382.22 B77 (6-12") 3/30/1999	4382.24 B78 (6-12") 3/30/1999	4382.28 B79 (6-12") 3/30/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.074	ND	0.04	0.01	0.045	0.023	0.2	0.02	0.198	0.208	0.122	0.025
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	**0.12**	ND	**0.121**	**0.128**	ND	**0.015**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.03	ND	0.058	ND	0.174	0.042	**2.173**	0.025	**1.108**	**0.973**	0.099	0.037
4,4'-DDT	0.0035	**0.104**	ND	**0.029**	**0.048**	ND	ND	**0.121**	ND	**0.846**	**0.344**	**0.08**	**0.039**
gamma-Chlordane	0.224	0.021	ND	0.011	ND	0.022	ND	0.209	ND	0.065	0.045	0.043	0.02
alpha-Chlordane	0.224	0.023	ND	ND	ND	0.018	ND	0.204	ND	0.042	0.034	0.034	0.016
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.554**	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**11700**	**17500**	**18100**	**6300**	**10700**	**18500**	**12000**	**9690**	**15000**	**13600**	**9350**	**9400**
Antimony	0.27	**0.537**	ND	ND	**0.53**	**6.95**	ND	**1.11**	ND	**9.21**	**5.47**	**1.52**	ND
Arsenic	9.9	8.71	**13.4**	**15.7**	5.61	7.99	**18.6**	**10.2**	**11.2**	**10.5**	9.73	**11.0**	8.14
Barium	283	66.9	28.0	46.9	20.4	85.3	94.3	**304**	60.6	66.9	117	86.4	50.2
Beryllium	10	0.962	2.07	1.61	0.45	0.87	2.05	0.992	1.16	1.70	1.29	0.764	0.952
Cadmium	0.36	ND	ND	ND	ND	**0.751**	ND	**1.67**	ND	0.152	ND	0.27	ND
Calcium	NAV	2150	1480	1760	5240	49400	4170	7270	765	1990	1020	2000	1200
Chromium	0.4	**80.8**	**194**	**196**	**48.4**	**76.0**	**254**	**89.7**	**110**	**103**	**101**	**74.9**	**88.8**
Cobalt	13	2.40	1.76	2.73	2.18	2.96	0.695	5.47	1.72	3.21	1.97	4.69	2.34
Copper	28	10.6	7.53	**36.6**	23.5	23.4	**28.2**	**115**	3.76	15.0	13.4	**58.5**	13.1
Iron	NAV	18000	61600	50000	26100	27300	68200	36000	31000	36600	33200	47100	26000
Lead	11	**25.1**	**29.2**	**69.2**	**46.1**	**353**	**47.5**	**137**	8.35	**549**	**255**	**145**	**44.3**
Magnesium	NAV	2110	7490	7990	3750	3550	7730	4220	3260	4450	3830	2500	3050
Manganese	220	55.5	47.8	60.6	113	**495**	104	102	62.5	48.7	31.2	**663**	57.7
Mercury	0.00051	**0.095**	**0.162**	**0.185**	**0.15**	**0.378**	**0.312**	**1.963**	**0.228**	**0.147**	**0.108**	**11.096**	**0.949**
Nickel	30	8.05	8.48	11.6	8.26	11.7	6.96	29.1	6.82	16.6	9.07	27.8	12.6
Potassium	NAV	3330	17900	14000	3140	5420	17600	5980	7430	8070	8300	4650	6610
Selenium	0.21	ND	ND	**1.08**	ND	ND	**4.02**	ND	**0.732**	ND	ND	**0.965**	**0.906**
Silver	2	ND	ND	1.36	ND	ND	ND	**35.6**	ND	ND	ND	**2.58**	1.74
Sodium	NAV	129	156	363	199	154	170	425	93.0	123	131	193	145
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**48.5**	**85.7**	**81.8**	**31.2**	**60**	**91.2**	**87.1**	**49.7**	**62**	**57.6**	**71.7**	**65.0**
Zinc	8.5	**82.5**	**82.5**	**122**	**66.6**	**362**	**82.5**	**553**	**35.2**	**383**	**114**	**663**	**77.3**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4382.30 B80 (6-12") 3/30/1999	4382.32 B81 (6-12") 3/30/1999	4382.34 B82 (6-12") 3/30/1999	4382.38 B83 (6-12") 3/30/1999	4382.40 B84 (6-12") 3/30/1999	4382.42 B85 (6-12") 3/30/1999	4382.44 B86 (6-12") 3/30/1999	4382.46 B87 (6-12") 3/30/1999	4382.48 B88 (6-12") 3/30/1999	4389.02 B89 (6-12") 4/1/1999	4389.04 B90 (6-12") 4/1/1999	4389.06 B91 (6-12") 4/1/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	0.41 J	ND	ND	ND	ND	3.2 J
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	**0.21 J**	ND	ND	ND	ND	**3.3 J**
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6 J
Acenaphthylene	682	0.39 J	0.50 J	ND	ND	ND	ND	ND	ND	1.7 J	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	0.17 J	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	0.14 J	0.16 J	0.18 J	ND	0.40 J	ND	ND	ND	ND
Fluorene	122	0.48 J	ND	ND	ND	ND	ND	ND	ND	3.9 J	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	3.6	0.40 J	ND	ND	0.20 J	0.21 J	0.38 J	0.63 J	26	ND	ND	1.0 J
Anthracene	1480	1.6	0.24 J	ND	ND	ND	ND	ND	ND	8.6 J	ND	ND	ND
Di-n-butylphthalate	200	0.32 J	0.42 J	ND	0.22 J	0.16 J	0.69 J	0.15 J	1.1 J	ND	1.0 J	0.36 J	1.4 J
Fluoranthene	122	8.9	0.74 J	ND	0.19 J	0.44 J	0.45 J	0.61 J	ND	39	ND	0.18 J	1.1 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	8	1.2 J	ND	0.16 J	0.43 J	0.42 J	0.52 J	ND	31	0.15 J	0.19 J	1.6 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	5.2	0.40 J	ND	ND	0.27 J	0.25 J	0.25 J	ND	**19**	ND	ND	1.3 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	**7.2**	1.1 J	ND	0.20 J	0.5 J	0.45 J	0.45 J	ND	**28**	0.17 J	0.20 J	1.6 J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.21 J	ND	ND	ND	ND	0.58 J	**9.3**	ND	ND	0.32 J	**2.0 J**
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	6.0	0.70 J	ND	ND	0.23 J	0.22 J	0.24 J	ND	15	ND	0.15 J	ND
Benzo[k]fluoranthene	148	4.7	0.54 J	ND	ND	0.29 J	0.26 J	0.23 J	ND	15	ND	0.14 J	ND
Benzo[a]pyrene	1.52	**4.8**	0.89 J	ND	ND	0.27 J	0.27 J	0.25 J	ND	**17**	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	2	ND	ND	ND	0.21 J	0.18 J	ND	ND	9.2 J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	1.0 J	ND	ND	ND	ND	ND	ND	ND	4.5 J	ND	ND	ND
Benzo[g,h,I]perylene	119	1.7	ND	ND	ND	0.23 J	0.2 J	ND	ND	9.2 J	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4382.30 B80 (6-12") 3/30/1999	4382.32 B81 (6-12") 3/30/1999	4382.34 B82 (6-12") 3/30/1999	4382.38 B83 (6-12") 3/30/1999	4382.40 B84 (6-12") 3/30/1999	4382.42 B85 (6-12") 3/30/1999	4382.44 B86 (6-12") 3/30/1999	4382.46 B87 (6-12") 3/30/1999	4382.48 B88 (6-12") 3/30/1999	4389.02 B89 (6-12") 4/1/1999	4389.04 B90 (6-12") 4/1/1999	4389.06 B91 (6-12") 4/1/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.075	0.071	0.009	0.016	0.056	0.058	0.051	ND	0.069	0.29	0.023	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	**0.017**	ND	ND	**0.085**	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.102	0.306	0.012	0.021	0.09	0.069	0.096	ND	0.199	0.594	0.03	0.032
4,4'-DDT	0.0035	**0.045**	**0.058**	**0.026**	**0.037**	**0.057**	ND	**0.029**	ND	**0.038**	**1.811**	**0.027**	ND
gamma-Chlordane	0.224	0.031	0.016	ND	ND	0.018	0.02	0.012	ND	0.082	0.045	0.019	ND
alpha-Chlordane	0.224	0.019	0.018	ND	ND	0.014	0.012	ND	ND	0.055	0.038	0.015	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	**12.604**	ND	ND	ND	**50.742**
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**6640**	**13000**	**5160**	**21600**	**9310**	**6870**	**7390**	**13400**	**5840**	**10600**	**8310**	**8260**
Antimony	0.27	ND	**4.89**	**0.553**	ND	**0.461**	**88.4**	**122**	**3.00**	ND	**6.90**	**0.712**	**1.62**
Arsenic	9.9	7.27	**11.7**	1.43	**16.2**	8.42	**97.8**	**130**	**10.4**	9.29	9.65	7.38	2.84
Barium	283	16.3	65.0	36.3	58.1	38.1	**447**	**569**	162	29.4	40.7	35.7	**303**
Beryllium	10	0.62	0.993	0.287	2.65	0.981	**20.0**	**25.7**	0.491	0.612	1.11	0.803	ND
Cadmium	0.36	ND	**0.42**	ND	ND	ND	**9.24**	**12.7**	**1.25**	0.241	ND	ND	**8.99**
Calcium	NAV	1790	2350	2420	1510	515	2200	1280	3190	1580	2440	2470	4300
Chromium	0.4	**68.4**	**106**	**20.9**	**325**	**92.2**	**104**	**141**	**69.6**	**48.4**	**85.1**	**73.2**	**31.4**
Cobalt	13	1.10	2.79	2.88	1.05	1.22	**94.4**	**130**	6.10	2.28	3.06	2.74	1.64
Copper	28	9.16	20.6	18.6	13.2	8.40	**136**	**162**	**1030**	24.9	14.5	16.9	**321**
Iron	NAV	18700	38700	10700	72400	26300	23600	22400	40200	22200	31600	24400	14200
Lead	11	**18.8**	**235**	**62.9**	**25.0**	**39.8**	**314**	**158**	**300**	**68.5**	**298**	**94.4**	**118**
Magnesium	NAV	2530	3520	1160	10700	2960	1760	2080	1630	2000	3470	2930	486
Manganese	220	24.4	70.2	46.5	21.7	27.7	172	171	204	218	89.7	72.1	87.6
Mercury	0.00051	**0.112**	**0.495**	**0.070**	**0.062**	**0.097**	**0.348**	**0.182**	**3.361**	**2.213**	**0.154**	**0.109**	**21.9**
Nickel	30	3.86	11.7	10.5	6.70	6.52	**103**	**138**	**43.1**	8.43	12.3	10.2	7.60
Potassium	NAV	5120	7950	1370	26400	7010	3960	4810	1780	3650	6620	4980	820
Selenium	0.21	ND	ND	ND	ND	ND	**87.7**	**119**	ND	ND	ND	ND	ND
Silver	2	ND	1.73	ND	ND	ND	**15.3**	**19.8**	**5.60**	ND	ND	ND	**8.37**
Sodium	NAV	108	223	236	107	108	89.6	200	241	177	133	126	266
Thallium	1	ND	ND	ND	ND	ND	**86.9**	**119**	ND	ND	ND	ND	ND
Vanadium	2	**40.5**	**59.8**	**16.4**	**105**	**44.4**	**128**	**157**	**42.6**	**29.4**	**47.9**	**46.8**	**13.1**
Zinc	8.5	**37.2**	**146**	**63.9**	**85.7**	**54.0**	**311**	**330**	**851**	**358**	**302**	**99.4**	**9550**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4389.08 B92 (6-12") 4/1/1999	4389.10 B93 (6-12") 4/1/1999	4389.12 B94 (6-12") 4/1/1999	4389.14 B95 (6-12") 4/1/1999	4389.16 B96 (6-12") 4/1/1999	4389.18 B97 (6-12") 4/1/1999	4389.20 B98 (6-12") 4/1/1999	4389.22 B99 (6-12") 4/1/1999	4389.24 B100 (6-12") 4/1/1999	4389.26 B101 (6-12") 4/1/1999	4389.28 B102 (6-12") 4/1/1999	4389.30 B103 (6-12") 4/1/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	0.27 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	**0.17 J**	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	7.9 J	0.84 J	0.29 J	ND	0.31 J	0.42 J	ND	ND	0.11 J	ND	ND	0.74 J
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	0.19 J	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	9.9 J	0.77 J	0.83 J	ND	0.38 J	1.7	0.20 J	ND	0.34 J	0.15 J	ND	0.27 J
Anthracene	1480	4.7 J	0.60 J	0.41 J	ND	0.17 J	0.46 J	ND	ND	0.14 J	ND	ND	0.19 J
Di-n-butylphthalate	200	ND	0.68 J	0.41 J	0.86 J	0.59 J	1.2 J	1.5	0.39 J	0.35 J	0.66 J	0.60 J	1.3 J
Fluoranthene	122	16	5.2	1.8	ND	0.66 J	1.9	0.41 J	0.24 J	0.69 J	0.36 J	0.15 J	0.39 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	20	8.2	2.3	ND	0.84 J	2.0	0.50 J	0.25 J	0.71 J	0.35 J	0.18 J	0.99 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12 J	ND
Benzo[a]anthracene	5.21	**13 J**	3.2	1.0 J	ND	0.53 J	1.1 J	0.26 J	ND	0.37 J	0.20 J	ND	0.38 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	**22**	**6.2**	1.9	ND	1.7	1.9	0.49 J	0.23 J	0.67 J	0.33 J	0.19 J	0.80 J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.34 J	ND	ND	0.58 J	0.25 J	ND	0.26 J	ND	0.16 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	11 J	7.3	1.2 J	ND	0.94 J	0.81 J	0.31 J	ND	0.45 J	0.19 J	ND	0.44 J
Benzo[k]fluoranthene	148	11 J	5.0	0.97 J	ND	0.72 J	0.96 J	0.29 J	ND	0.43 J	0.21 J	ND	0.44 J
Benzo[a]pyrene	1.52	**15**	**7.9**	0.99 J	ND	0.78 J	1.1 J	0.28 J	ND	0.41 J	0.21 J	0.12 J	0.76 J
Indeno[1,2,3-cd]pyrene	109	7.8 J	2.4	0.38 J	ND	0.42 J	0.51 J	ND	ND	ND	ND	ND	0.28 J
Dibenz[a,h]anthracene	18.4	3.1 J	1.2	ND	ND	0.24 J	0.21 J	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	8.5 J	2.0	ND	ND	0.44 J	0.52 J	ND	ND	ND	0.12 J	ND	0.40J

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4389.08 B92 (6-12") 4/1/1999	4389.10 B93 (6-12") 4/1/1999	4389.12 B94 (6-12") 4/1/1999	4389.14 B95 (6-12") 4/1/1999	4389.16 B96 (6-12") 4/1/1999	4389.18 B97 (6-12") 4/1/1999	4389.20 B98 (6-12") 4/1/1999	4389.22 B99 (6-12") 4/1/1999	4389.24 B100 (6-12") 4/1/1999	4389.26 B101 (6-12") 4/1/1999	4389.28 B102 (6-12") 4/1/1999	4389.30 B103 (6-12") 4/1/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.093	0.037	0.109	0.016	0.018	0.031	0.122	ND	0.025	0.029	0.012	0.107
Dieldrin	0.0049	ND	ND	**0.017**	ND	ND	ND	**0.016**	ND	ND	ND	**0.026**	**0.019**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.499	0.052	**0.943**	0.027	0.028	0.06	0.172	ND	0.049	0.024	ND	0.118
4,4'-DDT	0.0035	**0.159**	ND	**0.03**	ND	ND	ND	**0.081**	ND	**0.024**	ND	ND	**0.131**
gamma-Chlordane	0.224	0.039	ND	0.054	ND	ND	0.015	0.031	ND	ND	ND	ND	0.019
alpha-Chlordane	0.224	0.032	ND	0.033	ND	ND	0.014	0.028	ND	ND	ND	ND	0.016
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**19600**	**7630**	**17200**	**8990**	**11300**	**8190**	**10600**	**8450**	**9740**	**11300**	**8510**	**9250**
Antimony	0.27	**1.60**	ND	**0.482**	ND	ND	**0.539**	ND	**152**	**0.975**	ND	ND	**3.13**
Arsenic	9.9	**17.7**	8.52	**10.3**	7.47	**11.2**	9.81	7.72	**12.6**	7.94	**10.9**	8.28	**12.7**
Barium	283	88.8	51.2	86.1	23.1	67.4	47.2	37.4	42.4	43.7	34.2	30.3	57.1
Beryllium	10	1.87	1.09	1.84	0.981	1.41	0.947	1.01	0.824	1.24	0.932	0.961	0.89
Cadmium	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.309
Calcium	NAV	2350	2130	2740	373	2490	1590	3170	2390	876	1700	1380	5510
Chromium	0.4	**162**	**104**	**168**	**101**	**137**	**83.0**	**70.2**	**71.6**	**92.7**	**82.7**	**94.3**	**88.4**
Cobalt	13	4.49	1.37	3.64	0.984	2.14	2.09	4.85	4.73	2.61	3.24	1.69	2.98
Copper	28	**38.6**	10.0	10.3	3.52	12.5	23.5	18.8	17.5	11.8	11.2	4.88	**31.1**
Iron	NAV	51100	27100	36200	26600	34300	30000	29000	47000	25800	36200	25300	27400
Lead	11	**118**	**30.9**	**49.2**	9.51	**26.6**	**50.3**	**70.9**	**298**	**79.7**	**129**	**17.9**	**637**
Magnesium	NAV	5650	3240	5390	3210	4400	2550	3510	2390	3000	1520	3000	2910
Manganese	220	82.5	38.2	51.8	22.5	53.4	112	114	168	41.2	127	30.6	86.7
Mercury	0.00051	**0.801**	**0.111**	**0.246**	ND	**0.183**	**0.508**	**0.175**	**0.177**	**0.105**	**0.154**	**0.058**	**0.362**
Nickel	30	20.2	7.48	13.3	4.05	9.60	8.47	13.4	21.4	9.37	12.3	7.53	14.0
Potassium	NAV	11200	7430	11800	7510	9320	5790	4290	4530	6500	3380	6790	5560
Selenium	0.21	ND	ND	**0.73**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	**2.22**	ND	**2.38**	ND	**2.03**	**2.43**	ND	ND	ND	ND	ND	1.16
Sodium	NAV	772	100	117	107	158	131	186	123	116	150	220	145
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**98.8**	**43.4**	**74.7**	**46.7**	**64.4**	**48.2**	**61.2**	**75.1**	**53.1**	**105**	**41.3**	**77.1**
Zinc	8.5	**159**	**71.9**	**180**	**39.3**	**143**	**204**	**116**	**622**	**110**	**281**	**55.9**	**424**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4394.02 B104 (6-12") 4/5/1999	4394.04 B105 (6-12") 4/5/1999	4394.06 B106 (6-12") 4/5/1999	4394.08 B107 (6-12") 4/5/1999	4394.10 B108 (6-12") 4/5/1999	4394.12 B109 (6-12") 4/5/1999	4394.14 B110 (6-12") 4/5/1999	4394.16 B111 (6-12") 4/5/1999	4394.18 B112 (6-12") 4/5/1999	4394.20 B113 (6-12") 4/5/1999	4394.22 B114 (6-12") 4/5/1999	4394.26 B115 (6-12") 4/5/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	0.95 J	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J
Diethylphthalate	100	ND	ND	0.14 J	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38 J
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.15 J	ND	0.4 J	0.41 J	0.61 J	0.18 J	0.21 J	0.21 J	ND	3.9
Anthracene	1480	ND	ND	ND	ND	ND	ND	0.18 J	ND	ND	ND	ND	1.2 J
Di-n-butylphthalate	200	ND	ND	21	0.90 J	0.30 J	0.24 J	0.22 J	0.61 J	0.31 J	0.28 J	0.66 J	0.94 J
Fluoranthene	122	ND	ND	0.33 J	ND	0.59 J	0.65 J	1.5	0.38 J	0.57 J	0.42 J	0.23 J	5.4
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	ND	0.31 J	ND	0.55 J	0.55 J	1.3	0.33 J	0.59 J	0.38 J	0.21 J	3.6
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.17 J	ND	0.28 J	0.32 J	.76 J	0.17 J	0.27 J	0.19 J	0.12 J	1.6
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	0.32 J	0.13 J	0.56 J	0.6 J	1.3	0.37 J	0.7 J	0.44 J	0.26 J	2.8
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.14 J	ND	0.21 J	0.15 J	0.19 J	0.12 J	ND	0.18 J	ND	0.5 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.19 J	ND	0.29 J	0.32 J	0.88 J	0.25 J	0.38 J	0.26 J	0.14 J	2.1
Benzo[k]fluoranthene	148	ND	ND	0.17 J	ND	0.28 J	0.29 J	0.79 J	0.22 J	0.32 J	0.23 J	0.12 J	1.6
Benzo[a]pyrene	1.52	ND	ND	0.2 J	ND	0.30 J	0.33 J	0.89 J	0.18 J	0.24 J	0.23 J	0.12 J	**1.9**
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.14 J	ND	0.18 J	0.22 J	0.42 J	ND	0.16 J	0.19 J	ND	0.78 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36 J
Benzo[g,h,I]perylene	119	ND	ND	0.15 J	ND	0.19 J	0.24 J	0.41 J	ND	0.17 J	0.21 J	ND	0.7 J

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4394.02 B104 (6-12") 4/5/1999	4394.04 B105 (6-12") 4/5/1999	4394.06 B106 (6-12") 4/5/1999	4394.08 B107 (6-12") 4/5/1999	4394.10 B108 (6-12") 4/5/1999	4394.12 B109 (6-12") 4/5/1999	4394.14 B110 (6-12") 4/5/1999	4394.16 B111 (6-12") 4/5/1999	4394.18 B112 (6-12") 4/5/1999	4394.20 B113 (6-12") 4/5/1999	4394.22 B114 (6-12") 4/5/1999	4394.26 B115 (6-12") 4/5/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.013	0.074	0.129	ND	0.171	0.04	0.031	0.04	0.379	0.076	0.053	0.069
Dieldrin	0.0049	ND	**0.02**	**0.014**	ND	ND	ND	**0.017**	ND	**0.034**	ND	**0.019**	**0.018**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	0.054	0.071	ND	0.156	0.046	0.089	0.043	0.213	0.089	0.039	0.035
4,4'-DDT	0.0035	**0.066**	**0.191**	**0.169**	**0.029**	**0.244**	**0.078**	**0.052**	**0.036**	**0.12**	ND	**0.11**	**0.039**
gamma-Chlordane	0.224	ND	0.04	0.024	0.013	0.026	0.027	0.018	ND	0.025	0.016	0.018	ND
alpha-Chlordane	0.224	ND	0.035	0.021	ND	0.025	0.021	ND	ND	0.022	ND	0.014	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**15800**	**18500**	**12500**	**11700**	**11300**	**7480**	**9860**	**15100**	**8570**	**13400**	**11300**	**9530**
Antimony	0.27	**16.4**	ND	ND	**2.37**	ND	ND	**1.04**	ND	**0.496**	ND	ND	**0.865**
Arsenic	9.9	**11.4**	**15.4**	7.56	**10.4**	7.67	4.87	**12.3**	**12.4**	8.65	**16.0**	7.84	**12.6**
Barium	283	135	123	79.7	48.7	59.6	35.1	67.2	64.4	32.3	61.2	36.0	82.9
Beryllium	10	0.971	1.70	0.855	0.807	0.896	0.569	0.591	1.40	0.789	1.45	0.734	0.561
Cadmium	0.36	**0.589**	ND	0.316	**0.761**	ND	ND	**0.814**	ND	0.156	ND	ND	**0.584**
Calcium	NAV	17200	1560	1650	1940	1860	2660	3590	1360	810	1210	618	4530
Chromium	0.4	**99.4**	**208**	**81.1**	**92.3**	**80.7**	**115**	**60.4**	**157**	**74.9**	**172**	**77.0**	**114**
Cobalt	13	6.85	1.96	2.31	2.25	2.47	2.45	2.83	1.52	2.68	1.73	2.00	6.71
Copper	28	**88.3**	**33.5**	15.1	**35.4**	**34.4**	15.2	24.6	25.6	**31.3**	21.3	9.57	**50.6**
Iron	NAV	29000	52200	22900	26000	22700	17600	33000	39900	24100	43700	24100	89300
Lead	11	**1010**	**146**	**65.7**	**158**	**58.2**	**293**	**266**	**44.1**	**50.9**	**47.7**	**33.9**	**170**
Magnesium	NAV	3420	6690	2300	2950	2490	1920	1980	5270	2180	5620	2370	1790
Manganese	220	141	40.4	73.1	74.6	49.9	63.9	86.9	27.4	66.3	33.2	57.3	**779**
Mercury	0.00051	**0.826**	**0.259**	**0.195**	**0.098**	**0.145**	**0.103**	**0.192**	**0.128**	**4.776**	**0.171**	**0.132**	**0.361**
Nickel	30	13.1	8.59	10.1	8.26	8.22	6.19	10.6	6.28	7.24	7.13	5.56	21.3
Potassium	NAV	8110	18400	5470	6010	4950	3730	4490	13700	5650	13800	5870	3900
Selenium	0.21	**1.09**	**1.10**	ND	ND	ND	ND	**0.772**	**1.20**	ND	**1.14**	ND	**0.841**
Silver	2	**27.0**	**6.50**	**4.54**	1.19	**5.28**	1.58	ND	ND	ND	ND	ND	**6.58**
Sodium	NAV	7940	3170	1570	932	1020	602	647	507	339	581	265	310
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**62.0**	**96.0**	**49.0**	**57.2**	**45.2**	**34.4**	**45.6**	**71.7**	**47.9**	**69.7**	**54.2**	**36.9**
Zinc	8.5	**1010**	**133**	**108**	**166**	**56.1**	**51.5**	**185**	**58.6**	**71.4**	**59.2**	**37.3**	**449**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4394.28 B116 (6-12") 4/5/1999	4394.30 B117 (6-12") 4/5/1999	4394.32 B118 (6-12") 4/5/1999	4394.34 B119 (6-12") 4/5/1999	4394.36 B120 (6-12") 4/5/1999	4394.38 B121 (6-12") 4/5/1999	4394.40 B122 (6-12") 4/5/1999	4394.42 B123 (6-12") 4/5/1999	4394.44 B124 (6-12") 4/5/1999	4401.02 B125 (6-12") 4/8/1999	4401.04 B126 (6-12") 4/8/1999	4401.06 B127 (6-12") 4/8/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.15 J	ND	0.22 J	0.40 J	0.6 J	ND	ND	ND	ND	0.26 J	0.19 J	0.3 J
Anthracene	1480	ND	ND	ND	0.12 J	0.15 J	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.41 J	0.49 J	0.68 J	1.4	0.49 J	1.1 J	0.62 J	0.55 J	ND	0.62 J	0.36 J	0.72 J
Fluoranthene	122	0.28 J	0.24 J	0.39 J	1.0 J	0.84 J	0.15 J	ND	ND	ND	0.52 J	0.39 J	0.62 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.24 J	0.43 J	0.39 J	0.92 J	0.88 J	0.17 J	ND	0.18 J	ND	0.47 J	0.35 J	0.49 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.13 J	0.16 J	0.20 J	0.51 J	0.45 J	ND	ND	ND	ND	0.27 J	0.19 J	0.28 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.26 J	0.34 J	0.41 J	0.96 J	0.74 J	0.25 J	ND	0.19 J	ND	0.53 J	0.4 J	0.46 J
bis(2-Ethylhexyl)phthalate	0.925	0.14 J	0.29 J	0.17 J	0.67 J	0.65 J	0.19 J	0.13 J	ND	ND	ND	ND	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.16 J	ND	0.2 J	0.59 J	0.48 J	0.17 J	ND	ND	ND	0.27 J	0.23 J	0.21 J
Benzo[k]fluoranthene	148	0.12 J	ND	0.21 J	0.55 J	0.47 J	0.12 J	ND	ND	ND	0.25 J	0.22 J	0.26 J
Benzo[a]pyrene	1.52	0.14 J	ND	0.23 J	0.52 J	0.42 J	0.17 J	ND	ND	ND	0.26 J	0.22 J	0.27 J
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.15 J	0.24 J	ND	ND	ND	ND	ND	0.15 J	0.18 J	0.16 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.12 J	ND	0.17 J	0.23 J	ND	ND	ND	ND	ND	0.16 J	0.19 J	0.18 J

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4394.28 B116 (6-12") 4/5/1999	4394.30 B117 (6-12") 4/5/1999	4394.32 B118 (6-12") 4/5/1999	4394.34 B119 (6-12") 4/5/1999	4394.36 B120 (6-12") 4/5/1999	4394.38 B121 (6-12") 4/5/1999	4394.40 B122 (6-12") 4/5/1999	4394.42 B123 (6-12") 4/5/1999	4394.44 B124 (6-12") 4/5/1999	4401.02 B125 (6-12") 4/8/1999	4401.04 B126 (6-12") 4/8/1999	4401.06 B127 (6-12") 4/8/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	**0.013**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	**1.267**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	**0.482**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.032	0.071	0.197	0.044	ND	0.03	0.022	0.036	0.027	0.079	0.119	0.042
Dieldrin	0.0049	ND	ND	ND	ND	ND	**0.012**	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	**0.29**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.015	0.156	0.056	0.080	ND	0.026	0.022	0.059	0.02	0.031	0.05	ND
4,4'-DDT	0.0035	**0.048**	**1.025**	**0.257**	**0.181**	ND	ND	**0.074**	**0.075**	**0.062**	**0.162**	**0.194**	**0.029**
gamma-Chlordane	0.224	ND	**7.144**	0.021	0.028	ND	ND	ND	ND	ND	ND	0.019	ND
alpha-Chlordane	0.224	ND	**7.929**	0.02	0.018	ND	ND	ND	ND	ND	ND	0.019	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	**3.406**	ND	ND	ND	**0.665**	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**13900**	**14300**	**6990**	**11600**	**6710**	**11600**	**13300**	**15000**	**10100**	**12200**	**8630**	**8800**
Antimony	0.27	ND	**1.80**	ND	**1.08**	**0.821**	ND	ND	ND	**3.26**	ND	ND	ND
Arsenic	9.9	**11.3**	**12.5**	9.08	**13.9**	7.83	9.84	7.08	8.79	8.04	9.27	7.91	6.24
Barium	283	51.4	78.1	38.9	50.6	11.2	56.2	55.0	77.2	51.4	40.3	27.2	13.7
Beryllium	10	1.26	1.54	0.737	0.948	0.529	1.08	1.34	1.23	0.62	0.969	0.78	0.482
Cadmium	0.36	**0.641**	**1.68**	ND	0.255	**0.935**	ND	ND	ND	**1.67**	0.155	ND	ND
Calcium	NAV	2780	10400	1170	1600	1530	2810	2380	2930	5090	1080	668	479
Chromium	0.4	**123**	**95.7**	**66.4**	**115**	**76.7**	**77.8**	**75.7**	**78.1**	**50.4**	**88.6**	**88.3**	**62.9**
Cobalt	13	3.39	2.58	1.71	2.13	1.80	2.79	3.80	3.03	2.75	2.96	1.24	1.01
Copper	28	20.6	**28.7**	10.9	**70.4**	19.9	**45.4**	12.0	11.1	10.7	14.2	16.6	0.718
Iron	NAV	34700	27800	18900	47000	26600	32900	27900	34000	24600	27400	25700	18700
Lead	11	**56.6**	**77.6**	**43.8**	**126**	**23.7**	**159**	**96.8**	**270**	**85.5**	**125**	**56.5**	6.93
Magnesium	NAV	4020	7320	1860	3650	1400	2930	3250	3530	1430	2330	2490	1130
Manganese	220	85.6	136	21.6	76.4	41.9	54.0	183	101	82.3	98.4	22.5	26.2
Mercury	0.00051	**0.078**	**0.13**	**0.13**	**0.209**	**0.025**	**0.121**	**0.089**	**0.132**	**0.099**	**0.189**	**0.066**	ND
Nickel	30	9.49	9.24	6.05	9.79	8.70	7.69	11.3	10.8	8.04	8.33	4.79	3.68
Potassium	NAV	9450	7530	4860	8570	4520	7210	6770	6770	2080	5660	6140	3320
Selenium	0.21	**0.943**	ND	ND	**0.986**	ND	**0.72**	ND	ND	ND	**0.802**	**0.759**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	311	346	178	297	182	180	172	197	267	130	142	77.9
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**60.3**	**50.0**	**34.9**	**55.7**	**100**	**44.7**	**47.0**	**44.9**	**52.4**	**51.6**	**44.4**	**85.3**
Zinc	8.5	**78.4**	**146**	**63.4**	**356**	**68.6**	**139**	**231**	**252**	**137**	**64.1**	**37.1**	**20.2**

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Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4401.08 B128 (6-12") 4/8/1999	4401.10 B129 (6-12") 4/8/1999	4401.12 B130 (6-12") 4/8/1999	4401.14 B131 (6-12") 4/8/1999	4401.16 B132 (6-12") 4/8/1999	4401.18 B133 (6-12") 4/8/1999	4401.20 B134 (6-12") 4/8/1999	4401.22 B135 (6-12") 4/8/1999	4401.24 B136 (6-12") 4/8/1999	4401.26 B137 (6-12") 4/8/1999	4401.28 B138 (6-12") 4/8/1999	4401.30 B139 (6-12") 4/8/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.40 J**
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.18 J	0.24 J	ND	ND	ND	ND	ND	0.21 J	ND	ND	0.43 J	0.36 J
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.13 J	0.48 J	0.43 J	ND	0.18 J	0.15 J	0.63 J	ND	0.71 J	ND	0.33 J	0.42 J
Fluoranthene	122	0.32 J	0.56 J	ND	ND	ND	ND	0.24 J	0.28 J	ND	ND	0.80 J	0.41 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.33 J	0.48 J	ND	ND	ND	ND	0.22 J	0.38 J	ND	ND	0.80 J	0.55 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.16 J	0.25 J	ND	ND	ND	ND	ND	0.17 J	ND	ND	0.47 J	0.22 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.38 J	0.61 J	ND	ND	ND	ND	0.26 J	0.34 J	ND	ND	0.72 J	0.46 J
bis(2-Ethylhexyl)phthalate	0.925	0.20 J	0.24 J	ND	ND	0.22 J	ND	ND	ND	0.14 J	ND	0.13 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.19 J	0.34 J	ND	ND	ND	ND	0.14 J	0.17 J	ND	ND	0.41 J	0.16 J
Benzo[k]fluoranthene	148	0.19 J	0.30 J	ND	ND	ND	ND	0.12 J	0.18 J	ND	ND	0.40 J	0.19 J
Benzo[a]pyrene	1.52	0.17 J	0.28 J	ND	ND	ND	ND	0.13 J	0.18 J	ND	ND	0.43 J	0.18 J
Indeno[1,2,3-cd]pyrene	109	0.12 J	0.23 J	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J	0.17 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.14 J	0.24 J	ND	ND	ND	ND	ND	ND	ND	ND	0.17 J	0.21 J

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Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4401.08 B128 (6-12") 4/8/1999	4401.10 B129 (6-12") 4/8/1999	4401.12 B130 (6-12") 4/8/1999	4401.14 B131 (6-12") 4/8/1999	4401.16 B132 (6-12") 4/8/1999	4401.18 B133 (6-12") 4/8/1999	4401.20 B134 (6-12") 4/8/1999	4401.22 B135 (6-12") 4/8/1999	4401.24 B136 (6-12") 4/8/1999	4401.26 B137 (6-12") 4/8/1999	4401.28 B138 (6-12") 4/8/1999	4401.30 B139 (6-12") 4/8/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.275	0.071	0.093	0.041	0.011	0.017	0.078	**0.697**	0.010	0.402	0.061	0.113
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.184	0.096	0.038	0.025	ND	ND	0.060	**3.857**	ND	**1.179**	0.067	0.194
4,4'-DDT	0.0035	**0.394**	**0.040**	ND	ND	ND	**0.025**	**0.091**	**1.261**	ND	**1.381**	**0.027**	**0.045**
gamma-Chlordane	0.224	0.027	0.031	ND	0.089	ND	ND	0.018	**0.296**	ND	0.075	ND	ND
alpha-Chlordane	0.224	0.022	0.016	ND	0.087	ND	ND	0.014	0.200	ND	0.055	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**7380**	**11900**	**16100**	**12600**	**8370**	**14300**	**12100**	**8960**	**5180**	**11800**	**5850**	**7720**
Antimony	0.27	ND	ND	**0.804**	ND	ND	ND	ND	**46.9**	ND	**23.5**	**0.464**	**2.22**
Arsenic	9.9	7.68	**12.6**	**21.7**	**14.0**	4.56	8.66	**11.1**	**10.1**	4.38	**15.7**	8.31	**11.3**
Barium	283	47.2	53.0	41.4	50.6	28.3	19.0	60.5	**783**	11.2	208	27.8	46.9
Beryllium	10	0.724	1.21	1.24	0.861	0.699	1.62	1.19	1.02	0.51	1.26	0.579	0.75
Cadmium	0.36	ND	ND	ND	**1.78**	ND	ND	ND	**2.67**	ND	**0.499**	0.207	ND
Calcium	NAV	811	1570	2200	1700	334	111	829	8310	589	3470	1110	686
Chromium	0.4	**66.0**	**132**	**109**	**76.0**	**69.1**	**141**	**137**	**84.8**	**45.2**	**127**	**67.0**	**87.0**
Cobalt	13	2.11	2.05	6.01	2.42	1.25	1.46	1.50	5.71	0.938	3.93	1.15	1.20
Copper	28	10.8	25.0	5.07	4.94	ND	4.13	18.8	**81.2**	ND	**36.8**	18.1	24.6
Iron	NAV	20100	36400	84400	19700	15200	43800	34700	25100	12500	43100	23500	27500
Lead	11	**43.1**	**54.7**	**58.4**	**128**	6.89	5.61	**56.8**	**4000**	4.94	**808**	**33.6**	**91.5**
Magnesium	NAV	1830	4070	2220	2170	1690	4630	3910	2950	964	3920	1310	1980
Manganese	220	40.9	44.9	**233**	81.6	13.8	20.3	23.7	**255**	13.7	143	25.5	20.1
Mercury	0.00051	**0.105**	**0.122**	**0.064**	**0.085**	ND	ND	**0.105**	**0.37**	ND	**0.371**	**0.068**	**0.149**
Nickel	30	6.01	7.11	14.4	6.47	4.39	5.85	6.50	22.4	4.83	10.9	4.59	5.57
Potassium	NAV	4640	10400	4880	4580	4380	12900	9980	4940	2680	8880	3380	5320
Selenium	0.21	ND	**0.924**	**1.09**	ND	ND	ND	**1.24**	**1.26**	ND	**1.86**	ND	**1.13**
Silver	2	**5.91**	1.84	ND	ND	ND	ND	**6.67**	ND	ND	ND	0.978	**2.89**
Sodium	NAV	74.1	248	216	139	197	99.5	178	198	109	207	79.1	216
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**35.1**	**49.7**	**165**	**41.6**	**37.1**	**70.8**	**43.8**	**42.9**	**23.6**	**52.3**	**46.2**	**36.4**
Zinc	8.5	**52.8**	**71.5**	**96.1**	**54.2**	**27.0**	**47.8**	**67.7**	**1020**	**20.3**	**478**	**94.0**	**46.9**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4401.32 B140 (6-12") 4/8/1999	4401.34 B141 (6-12") 4/8/1999	4401.36 B142 (6-12") 4/8/1999	4401.42 B143 (6-12") 4/8/1999	4401.44 B144 (6-12") 4/8/1999	4401.46 B145 (6-12") 4/8/1999	4405.02 B146 (6-12") 4/9/1999	4405.04 B147 (6-12") 4/9/1999	4405.06 B148 (6-12") 4/9/1999	4405.08 B149 (6-12") 4/9/1999	4405.10 B150 (6-12") 4/9/1999	4405.12 B151 (6-12") 4/9/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	8.8 J	ND	ND	13 J	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	**8.9 J**	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	**720**	ND	ND	**950**	ND	ND	ND	**0.13 J**	ND	ND	**0.33 J**
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	**230**	ND	ND	**380**	ND	ND	ND	ND	ND	ND	0.13 J
Acenaphthylene	682	0.27 J	ND	ND	ND	6 J	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	**1300**	ND	ND	**1700**	5.8 J	ND	ND	0.35 J	ND	ND	0.79 J
Dibenzofuran	NAV	ND	600	ND	ND	910	ND	ND	ND	0.12J	ND	ND	0.38 J
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	**970**	ND	ND	**1500**	ND	ND	ND	0.24 J	ND	ND	0.67 J
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.44 J	**4900**	0.51 J	ND	**8000**	37 J	ND	0.75 J	2.6	1.2	0.34 J	7.4
Anthracene	1480	0.14 J	**2000**	0.13 J	ND	**4000**	9.8 J	ND	0.18 J	0.60 J	ND	ND	1.4
Di-n-butylphthalate	200	0.27 J	ND	0.26 J	0.22 J	ND	ND	0.63 J	0.59 J	0.47 J	0.80 J	0.22 J	0.90 J
Fluoranthene	122	0.88 J	**4500**	0.52 J	ND	**7200**	39 J	0.14 J	1.2 J	4.0	2.1	0.48 J	7.9
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	1.2 J	**2900**	0.49 J	ND	**7400**	47 J	0.21 J	1.6	3.9	2.0	0.52 J	8.6
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.57 J	**1900**	0.25 J	ND	**2500 J**	**22 J**	ND	0.70 J	1.7	0.66 J	0.26 J	2.9
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	1.1 J	**2400**	0.41 J	0.12 J	**3800 J**	**31 J**	0.19 J	1.1 J	2.8	1.4	0.45 J	**4.8**
bis(2-Ethylhexyl)phthalate	0.925	0.16 J	ND	ND	ND	ND	ND	ND	0.36 J	ND	0.14 J	0.26 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.57 J	**2500**	0.27 J	ND	**5400**	15 J	ND	0.79 J	1.4	0.52 J	0.18J	2.6
Benzo[k]fluoranthene	148	0.76 J	**2200**	0.20 J	ND	**3100**	18 J	ND	0.79 J	1.3	0.65 J	0.25 J	2.7
Benzo[a]pyrene	1.52	0.59 J	**2500**	0.23 J	ND	**4500**	**18 J**	0.12 J	0.75 J	**1.6**	0.49 J	0.23 J	**2.7**
Indeno[1,2,3-cd]pyrene	109	ND	**670**	ND	ND	**1200**	8.2 J	ND	ND	0.57 J	0.30 J	0.13 J	0.80 J
Dibenz[a,h]anthracene	18.4	ND	**410**	ND	ND	**850**	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	**520**	ND	ND	**940**	ND	0.16 J	ND	0.53 J	0.33 J	0.15 J	0.77 J

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4401.32 B140 (6-12") 4/8/1999	4401.34 B141 (6-12") 4/8/1999	4401.36 B142 (6-12") 4/8/1999	4401.42 B143 (6-12") 4/8/1999	4401.44 B144 (6-12") 4/8/1999	4401.46 B145 (6-12") 4/8/1999	4405.02 B146 (6-12") 4/9/1999	4405.04 B147 (6-12") 4/9/1999	4405.06 B148 (6-12") 4/9/1999	4405.08 B149 (6-12") 4/9/1999	4405.10 B150 (6-12") 4/9/1999	4405.12 B151 (6-12") 4/9/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.064	ND	0.061	0.020	0.287	0.032	0.052	0.481	0.039	0.273	0.202	0.039
Dieldrin	0.0049	ND	ND	ND	**0.017**	ND	ND	ND	ND	**0.025**	**0.019**	**0.015**	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	ND	0.066	0.021	ND	0.054	0.031	0.616	0.035	0.267	0.135	0.091
4,4'-DDT	0.0035	**0.341**	ND	**0.056**	ND	ND	**0.102**	**0.136**	**0.343**	**0.097**	**0.219**	**0.390**	**0.038**
gamma-Chlordane	0.224	ND	ND	0.038	0.044	ND	0.018	ND	ND	0.018	0.042	0.029	0.018
alpha-Chlordane	0.224	ND	ND	0.027	0.038	ND	0.024	ND	ND	0.018	0.046	0.036	0.016
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	**1.416**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**8850**	**18900**	**13100**	**5890**	**9190**	**5200**	**13700**	**8750**	**14000**	**9920**	**9490**	**7670**
Antimony	0.27	**5.93**	**1.07**	ND	ND	ND	ND	ND	**62.3**	**0.86**	ND	ND	**0.572**
Arsenic	9.9	9.38	7.03	9.69	6.27	8.11	5.03	8.30	7.49	**13.4**	**13.2**	6.97	2.21
Barium	283	58.5	**984**	74.6	17.9	37.3	13.9	53.8	112	39.8	51.5	43.1	50.3
Beryllium	10	0.706	**2.40**	0.815	0.573	0.677	0.405	1.16	0.672	0.903	0.918	0.766	0.325
Cadmium	0.36	0.131	**3.27**	ND	ND	ND	ND	ND	**0.484**	ND	**0.371**	ND	ND
Calcium	NAV	2730	57700	5320	522	949	536	21400	4210	2460	1270	1340	50500
Chromium	0.4	**62.6**	**24.9**	**81.3**	**53.1**	**74.0**	**65.0**	**325**	**107**	**81.2**	**78.8**	**71.9**	**23.4**
Cobalt	13	3.12	3.92	1.62	1.24	1.86	0.758	5.64	4.07	2.22	2.54	2.22	2.29
Copper	28	19.6	25.5	4.59	8.95	6.96	1.36	**692**	**129**	11.1	23.0	11.4	15.9
Iron	NAV	25300	5060	22100	15900	19900	15900	25600	19900	30700	27700	22100	9540
Lead	11	**521**	**64.3**	**63.3**	**15.1**	**35.3**	**12.5**	**35.8**	**645**	**65.7**	**59.9**	**41.7**	**12.1**
Magnesium	NAV	2190	17100	2930	1190	1670	969	4170	2000	3210	2150	1960	2660
Manganese	220	74.1	**1910**	42.2	18.5	49.7	14.5	94.1	78.4	46.2	55.7	53.2	81.1
Mercury	0.00051	**0.211**	**0.078**	**0.059**	**0.034**	**0.259**	**0.058**	**0.11**	**0.488**	**0.082**	**0.229**	**0.144**	**0.065**
Nickel	30	6.99	7.61	5.53	5.91	5.32	3.02	15.6	10.9	6.44	8.36	7.53	4.30
Potassium	NAV	4210	2060	5210	2980	4250	2830	5120	4180	7050	5240	4810	1660
Selenium	0.21	**0.879**	**2.36**	**0.695**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	1.26	ND	ND	1.45	ND	ND	**2.06**	ND
Sodium	NAV	103	16700	108	96.7	248	79.3	231	192	177	157	146	123
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**43.8**	**18.4**	**46.5**	**33.0**	**59.0**	**70.9**	**63.5**	**51.5**	**52.2**	**47.9**	**42.8**	**15.3**
Zinc	8.5	**509**	**385**	**59.3**	**33.9**	**46.4**	**24.9**	**432**	**412**	**58.4**	**90.0**	**60.3**	**41.3**

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4405.14 B152 (6-12") 4/9/1999	4405.16 B153 (6-12") 4/9/1999	4405.18 B154 (6-12") 4/9/1999	4405.20 B155 (6-12") 4/9/1999	4405.22 B156 (6-12") 4/9/1999	4405.24 B157 (6-12") 4/9/1999	4413.02 B158 (6-12") 4/13/1999	4413.04 B159 (6-12") 4/13/1999	4413.06 B160 (6-12") 4/13/1999	4413.08 B161 (6-12") 4/13/1999	4413.10 B162 (6-12") 4/13/1999	4413.12 B163 (6-12") 4/13/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	0.73 J	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	0.21 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	0.30 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.59 J	0.17 J	1.4	0.68 J	0.39 J	0.25 J	ND	0.35 J	0.22 J	ND	ND	ND
Anthracene	1480	0.15J	ND	0.38 J	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.69 J	0.46 J	0.60 J	0.39 J	0.44 J	1.3	0.24 J	0.95 J	0.54 J	0.29 J	0.72 J	0.41 J
Fluoranthene	122	0.82 J	0.30 J	2.1	1.1 J	0.75 J	0.60 J	ND	0.63 J	0.41 J	0.35 J	0.29 J	0.35 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	1.2	0.32 J	2.7	1.2	0.84 J	0.54 J	0.13 J	0.77 J	0.45 J	0.32 J	0.26 J	0.28 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.45 J	0.19 J	0.48 J	0.53 J	0.41 J	0.33 J	ND	0.40 J	0.21 J	0.18 J	0.16 J	0.20 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.70 J	0.31 J	0.80 J	0.78 J	0.65 J	0.59 J	ND	0.74 J	0.40 J	0.34 J	0.29 J	0.34 J
bis(2-Ethylhexyl)phthalate	0.925	0.31 J	ND	ND	ND	ND	0.19 J	0.13 J	0.13 J	0.17 J	ND	ND	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.50 J	0.14 J	0.37 J	0.45 J	0.45 J	0.33 J	ND	0.35 J	0.20 J	0.20 J	0.15 J	0.18 J
Benzo[k]fluoranthene	148	0.52 J	0.16 J	0.41 J	0.50 J	0.42 J	0.37 J	ND	0.36 J	0.20 J	0.18 J	0.15 J	0.19 J
Benzo[a]pyrene	1.52	0.50 J	0.16 J	0.39 J	0.47 J	0.45 J	0.38 J	ND	0.39 J	0.20 J	0.19 J	0.17 J	0.20 J
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	0.26 J	ND	0.28 J	0.14 J	0.16 J	ND	0.14 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.12 J	ND	ND	ND	0.26 J	ND	0.33 J	0.17 J	0.17 J	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4405.14 B152 (6-12") 4/9/1999	4405.16 B153 (6-12") 4/9/1999	4405.18 B154 (6-12") 4/9/1999	4405.20 B155 (6-12") 4/9/1999	4405.22 B156 (6-12") 4/9/1999	4405.24 B157 (6-12") 4/9/1999	4413.02 B158 (6-12") 4/13/1999	4413.04 B159 (6-12") 4/13/1999	4413.06 B160 (6-12") 4/13/1999	4413.08 B161 (6-12") 4/13/1999	4413.10 B162 (6-12") 4/13/1999	4413.12 B163 (6-12") 4/13/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.012	ND	0.077	0.063	0.057	0.137	ND	0.077	0.034	0.025	0.032	0.033
Dieldrin	0.0049	**0.016**	ND	**0.014**	**0.016**	ND	ND	ND	**0.021**	ND	ND	**0.018**	**0.055**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	ND	0.181	0.028	0.032	0.153	0.099	0.147	0.082	0.031	0.049	0.085
4,4'-DDT	0.0035	**0.040**	ND	**0.028**	**0.154**	**0.193**	**0.057**	ND	**0.073**	ND	**0.048**	ND	ND
gamma-Chlordane	0.224	ND	ND	0.014	0.012	ND	0.083	ND	0.088	0.015	ND	0.051	0.014
alpha-Chlordane	0.224	ND	ND	0.013	0.013	ND	0.068	ND	0.046	ND	ND	0.032	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	**4.634**	**6.71**	ND	ND	ND	ND
Aroclor 1260	0.371	ND	**20.06**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**8010**	**13800**	**11900**	**5400**	**15400**	**10400**	**12100**	**13400**	**15200**	**15600**	**13900**	**10200**
Antimony	0.27	ND	ND	ND	ND	ND	ND	**1.12**	**1.16**	**0.668**	ND	ND	**0.546**
Arsenic	9.9	2.74	**10.4**	**11.2**	4.10	**11.8**	**14.3**	**15.3**	**15.4**	**16.0**	9.79	**11.8**	**16.7**
Barium	283	17.1	57.5	89.0	12.8	56.9	87.4	87.7	50.2	86.1	16.9	88.4	129
Beryllium	10	0.261	0.895	1.86	0.413	0.985	1.31	1.06	1.35	1.44	2.09	1.97	1.26
Cadmium	0.36	0.152	ND	**1.69**	ND	**0.428**	ND	0.225	**1.24**	**0.655**	ND	ND	**0.995**
Calcium	NAV	23500	2380	6570	312	1460	2720	2770	1290	1480	175	1720	1710
Chromium	0.4	**28.1**	**88.6**	**196**	**49.5**	**87.8**	**136**	**116**	**146**	**177**	**160**	**204**	**117**
Cobalt	13	4.00	2.46	1.47	1.04	3.25	2.26	2.20	2.38	1.92	2.73	0.874	1.23
Copper	28	16.8	19.7	5.33	ND	21.0	22.1	**44.7**	**49.3**	**52.9**	18.1	17.5	**33.9**
Iron	NAV	13600	24000	42800	13300	27800	33400	31000	43600	48700	56900	45600	28000
Lead	11	9.11	**47.8**	**12.8**	**15.5**	**93.3**	**31.8**	**111**	**75.2**	**95.0**	10.9	**15.5**	**38.9**
Magnesium	NAV	5280	3270	6360	1130	2900	4210	3380	4510	5420	7450	7090	3710
Manganese	220	95.1	62.4	34.4	24.5	95.5	24.9	148	43.5	67.7	18.9	23.1	29.7
Mercury	0.00051	**0.062**	**0.144**	**0.107**	**0.046**	**0.116**	**0.461**	**1.17**	**0.355**	**0.463**	**0.088**	**0.378**	**0.859**
Nickel	30	14.1	7.70	8.06	3.28	12.0	10.8	8.57	8.17	10.8	9.52	7.56	9.04
Potassium	NAV	1620	6560	16900	3080	6730	10900	7150	10400	13600	20300	17600	9440
Selenium	0.21	ND	**0.759**	**1.32**	ND	**0.841**	**1.56**	**0.813**	**0.886**	**1.36**	ND	**1.60**	**2.62**
Silver	2	ND	ND	ND	ND	ND	**5.80**	**3.64**	**2.40**	**2.58**	ND	**4.23**	ND
Sodium	NAV	365	258	357	103	228	197	158	305	283	129	119	124
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**92.8**	**52.8**	**75.6**	**37.9**	**73.1**	**51.4**	**55.9**	**63.8**	**67.5**	**62.0**	**63.5**	**35.8**
Zinc	8.5	**96.5**	**59.5**	**64.9**	**255**	**205**	**169**	**152**	**98.5**	**117**	**76.0**	**88.0**	**140**

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4413.14 B164 (6-12") 4/13/1999	4413.16 B165 (6-12") 4/13/1999	4413.18 B166 (6-12") 4/13/1999	4413.20 B167 (6-12") 4/13/1999	4413.22 B168 (6-12") 4/13/1999	4413.24 B169 (6-12") 4/13/1999	4413.26 B170 (6-12") 4/13/1999	4469.02 B171 (6-12") 5/7/1999	4469.04 B172 (6-12") 5/7/1999	4469.06 B173 (6-12") 5/7/1999	4469.08 B174 (6-12") 5/7/1999	4469.10 B175 (6-12") 5/7/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	0.65 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	**2.6**	ND	**21 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	**4.3**	ND	**9.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.22 J	0.22 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	3.8	ND	**34**	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND
Dibenzofuran	NAV	0.85 J	ND	14 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	1.3	ND	28 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14 J	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.71 J	**230**	0.22 J	ND	0.35 J	ND	ND	ND	ND	1.5	0.36 J
Anthracene	1480	1.6	ND	58	ND	ND	ND	ND	ND	ND	ND	0.24 J	ND
Di-n-butylphthalate	200	ND	0.86 J	0.85 J	1.2	0.36 J	0.69 J	0.64 J	0.55 J	0.43 J	0.15 J	ND	0.81 J
Fluoranthene	122	ND	1.4 J	**190**	0.43 J	ND	0.60 J	ND	ND	ND	ND	2.4	0.84 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	4.3	1.5 J	**210**	0.38 J	ND	0.55 J	0.13 J	ND	0.12 J	ND	2.5	0.68 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	1.9	0.70 J	**80**	0.22 J	ND	0.29 J	ND	ND	ND	ND	0.93 J	0.32 J
3,3'-Dichlorobenzidine	0.646	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	2.8	1.5 J	**130**	0.39 J	ND	0.57 J	ND	ND	0.12 J	ND	1.6	0.64 J
bis(2-Ethylhexyl)phthalate	0.925	0.81 J	0.27 J	2.3	ND	ND	ND	ND	ND	ND	ND	0.11 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	1.1 J	0.74 J	44	0.17 J	ND	0.29 J	ND	ND	ND	ND	0.83 J	0.35 J
Benzo[k]fluoranthene	148	1.2	0.92 J	50	0.21 J	ND	0.27 J	ND	ND	ND	ND	0.89 J	0.32 J
Benzo[a]pyrene	1.52	1.4	0.74 J	**65**	0.21 J	ND	0.33 J	ND	ND	ND	ND	0.93 J	0.37 J
Indeno[1,2,3-cd]pyrene	109	0.53 J	0.39 J	35	ND	ND	0.22 J	ND	ND	ND	ND	0.35 J	0.26 J
Dibenz[a,h]anthracene	18.4	0.18 J	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.51 J	0.46 J	37	ND	ND	0.25 J	ND	ND	ND	ND	0.37 J	0.27 J

See Notes at End of Table

Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4413.14 B164 (6-12") 4/13/1999	4413.16 B165 (6-12") 4/13/1999	4413.18 B166 (6-12") 4/13/1999	4413.20 B167 (6-12") 4/13/1999	4413.22 B168 (6-12") 4/13/1999	4413.24 B169 (6-12") 4/13/1999	4413.26 B170 (6-12") 4/13/1999	4469.02 B171 (6-12") 5/7/1999	4469.04 B172 (6-12") 5/7/1999	4469.06 B173 (6-12") 5/7/1999	4469.08 B174 (6-12") 5/7/1999	4469.10 B175 (6-12") 5/7/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	ND	0.118	0.049	0.072	0.035	0.035	0.028	0.017	0.079	0.011	ND	ND
Dieldrin	0.0049	ND	**0.027**	**0.031**	ND	ND	0.027	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	0.201	0.134	0.078	0.026	0.055	0.027	0.016	0.060	0.022	ND	ND
4,4'-DDT	0.0035	ND	**0.063**	**0.069**	ND	ND	ND	ND	ND	**0.245**	ND	**0.103**	ND
gamma-Chlordane	0.224	ND	0.045	0.040	ND	ND	ND	ND	ND	0.021	ND	ND	ND
alpha-Chlordane	0.224	ND	0.026	0.025	ND	ND	ND	ND	ND	0.025	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	**5654.281**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**10600**	**17900**	**8800**	**11300**	**12500**	**8590**	**13400**	**7570**	**10100**	**17500**	**5890**	**9640**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	**4.07**	**5.14**	**0.969**	**0.983**	**0.753**
Arsenic	9.9	**12.6**	**18.9**	7.72	**28.0**	**19.4**	**11.9**	**13.4**	7.71	6.62	**16.4**	2.89	6.62
Barium	283	39.2	53.3	40.8	78.3	60.2	68.8	70.6	30.3	51.3	61.2	21.5	15.0
Beryllium	10	1.56	1.70	0.766	1.36	1.79	1.19	1.99	0.499	0.578	1.66	0.526	0.49
Cadmium	0.36	0.251	**0.69**	**0.606**	ND	ND	ND	ND	ND	**0.600**	ND	**0.974**	ND
Calcium	NAV	2460	1160	469	1280	2080	4680	4250	1390	3200	769	1910	852
Chromium	0.4	**120**	**150**	**89.1**	**160**	**142**	**104**	**180**	**52.2**	**54.8**	**198**	**30.9**	**53.4**
Cobalt	13	2.21	2.60	1.66	0.906	2.71	1.11	1.98	1.76	2.21	1.37	3.32	1.20
Copper	28	9.45	**91.4**	**35.1**	6.96	6.20	7.83	6.91	14.8	14.1	23.9	**43.5**	7.17
Iron	NAV	36200	43600	25800	39400	43800	27600	40100	18400	18000	46600	12100	20800
Lead	11	**14.8**	**91.6**	**44.6**	**16.8**	**12.9**	**16.0**	**12.5**	**71.2**	**81.0**	**41.1**	**57.7**	**8.47**
Magnesium	NAV	4110	4410	2450	5200	5890	3500	6110	1080	1440	5090	1300	1160
Manganese	220	24.9	40.6	22.5	18.8	16.7	16.4	25.5	32.8	57.1	22.8	56.4	26.6
Mercury	0.00051	**0.148**	**0.766**	**2.36**	**0.15**	**0.042**	**0.065**	**0.068**	**0.124**	**0.201**	**0.093**	**0.05**	**0.061**
Nickel	30	15.1	13.0	7.73	5.15	11.2	6.33	17.5	5.90	8.26	8.00	11.5	4.78
Potassium	NAV	10300	10800	6220	13400	17100	9040	15500	2240	3090	14800	1670	3000
Selenium	0.21	**1.55**	ND	**0.638**	**1.61**	**1.02**	**1.83**	**1.45**	**0.743**	**1.03**	**1.44**	ND	ND
Silver	2	ND	ND	0.877	**3.86**	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	341	347	120	129	192	199	165	131	216	200	143	67.4
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**43.3**	**81.7**	**44.8**	**55.9**	**42.6**	**32.4**	**60.8**	**42.9**	**37.5**	**74.0**	**27.3**	**46.0**
Zinc	8.5	**83.4**	**135**	**73.1**	**47.4**	**64.3**	**51.3**	**84.5**	**169**	**118**	**88.9**	**71.7**	**30.3**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4473.02 B176 (6-12") 5/10/1999	4473.04 B177 (6-12") 5/10/1999	4473.06 B178 (6-12") 5/10/1999	4473.08 B179 (6-12") 5/10/1999	4473.10 B180 (6-12") 5/10/1999	4473.14 B181 (6-12") 5/10/1999	4473.16 B182 (6-12") 5/10/1999	4473.18 B183 (6-12") 5/10/1999	4473.20 B184 (6-12") 5/10/1999	4474.02 B185 (6-12") 5/11/1999	4474.04 B186 (6-12") 5/11/1999	4474.06 B187 (6-12") 5/11/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	**0.21 J**	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	0.28 J	ND	0.11 J	ND	ND	ND
Acenaphthene	20	ND	0.16 J	ND	ND	ND	ND	ND	ND	0.40 J	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	0.15 J	ND	ND	ND	ND	ND	ND	0.54 J	ND	ND	ND
Azobenzene	NAV	ND	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.11 J	1.4	0.14 J	ND	0.12 J	0.22 J	0.79 J	0.31 J	6.9	0.21 J	0.12 J	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	0.18 J	ND	1.8	ND	ND	ND
Di-n-butylphthalate	200	0.12 J	0.39 J	0.39 J	0.35 J	0.57 J	0.61 J	0.66 J	0.56 J	0.16 J	0.35 J	0.43 J	0.83 J
Fluoranthene	122	0.19 J	1.8 J	0.22 J	ND	0.16 J	0.4 J	1.1 J	0.54 J	9.5	0.27 J	0.20 J	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.20 J	1.4	0.21 J	ND	0.14 J	0.39 J	1.3 J	0.39 J	6.9	0.32 J	0.18 J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	0.20 J	ND	ND	ND	ND	0.17 J	ND	ND	ND
Benzo[a]anthracene	5.21	0.11 J	0.74 J	0.12 J	ND	ND	0.21 J	0.53 J	0.28 J	3.9	0.15 J	ND	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.24 J	1.2	0.23 J	ND	0.19 J	0.41 J	1.3 J	0.55 J	**5.7**	0.33 J	0.20 J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.14 J	0.12 J	0.24 J	0.26 J	0.17 J	0.13 J	0.30 J	0.18 J	0.17 J	0.26 J	0.15 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.60 J	ND	ND	ND	0.28 J	0.48 J	0.33 J	3.7	0.12 J	ND	ND
Benzo[k]fluoranthene	148	ND	0.53 J	ND	ND	ND	0.22 J	0.43 J	0.27 J	3.3	0.11 J	ND	ND
Benzo[a]pyrene	1.52	ND	0.69 J	0.11 J	ND	ND	0.26 J	0.50 J	0.28 J	**3.2**	0.14 J	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.39 J	ND	ND	ND	ND	0.36 J	0.15 J	1.1	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	0.64 J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.39 J	ND	ND	ND	ND	0.40 J	0.14 J	0.88 J	ND	ND	ND

See Notes at End of Table

Table A-5
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4473.02 B176 (6-12") 5/10/1999	4473.04 B177 (6-12") 5/10/1999	4473.06 B178 (6-12") 5/10/1999	4473.08 B179 (6-12") 5/10/1999	4473.10 B180 (6-12") 5/10/1999	4473.14 B181 (6-12") 5/10/1999	4473.16 B182 (6-12") 5/10/1999	4473.18 B183 (6-12") 5/10/1999	4473.20 B184 (6-12") 5/10/1999	4474.02 B185 (6-12") 5/11/1999	4474.04 B186 (6-12") 5/11/1999	4474.06 B187 (6-12") 5/11/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.137	0.141	0.134	0.105	0.091	0.533	0.419	0.077	ND	0.160	0.113	0.042
Dieldrin	0.0049	ND	ND	ND	ND	ND	**0.027**	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.115	0.212	0.178	0.084	0.04	**1.833**	**1.171**	0.039	ND	0.102	0.347	0.043
4,4'-DDT	0.0035	**0.289**	**0.075**	**0.351**	**0.232**	**0.239**	**0.787**	**0.691**	**0.124**	**0.032**	**0.293**	**0.117**	**0.035**
gamma-Chlordane	0.224	0.015	0.034	0.02	0.016	0.013	0.023	0.044	ND	ND	0.040	ND	ND
alpha-Chlordane	0.224	0.016	0.027	0.016	0.015	0.012	0.022	0.039	ND	ND	0.031	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**10300**	**8820**	**10500**	**9270**	**12500**	**9240**	**13100**	**13500**	**12900**	**8850**	**8550**	**11300**
Antimony	0.27	**3.78**	**1.17**	**0.809**	**13.7**	**3.01**	**2.41**	**1.13**	**5.23**	**0.573**	**0.796**	**0.791**	ND
Arsenic	9.9	7.48	8.18	7.44	7.35	8.83	7.27	**10.4**	7.44	8.02	**9580**	6.53	5.91
Barium	283	79.3	54.9	66.4	84.8	**286**	53.3	80.1	46.0	37.0	9.88	41.1	30.1
Beryllium	10	0.652	0.818	0.925	0.638	0.925	0.744	1.01	0.773	0.898	**44.6**	0.574	0.571
Cadmium	0.36	**0.768**	**0.656**	**1.28**	**0.792**	**0.809**	**1.01**	**0.791**	**0.803**	**0.489**	**0.599**	**0.600**	**0.38**
Calcium	NAV	2670	3690	2290	11200	11200	3790	1690	3900	1580	1500	4630	434
Chromium	0.4	**60.0**	**82.0**	**85.0**	**62.8**	**92.5**	**73.3**	**102**	**88.6**	**90.1**	**87.9**	**98.0**	**49.9**
Cobalt	13	2.72	2.38	2.77	3.41	3.25	2.76	2.74	2.15	2.67	2.52	2.80	2.50
Copper	28	23.8	18.5	18.2	**38.7**	11.7	17.7	23.1	15.9	11.0	12.4	**97.5**	7.67
Iron	NAV	21100	20800	22400	19500	28500	21500	23400	27400	28800	23100	17000	21800
Lead	11	**164**	**88.5**	**50.3**	**191**	**1210**	**106**	**40.5**	**87.1**	**48.2**	**36.1**	**40.7**	**14.6**
Magnesium	NAV	2170	2250	2300	2700	2940	2250	2390	2100	3170	2560	2220	1460
Manganese	220	71.4	39.1	73.2	91.1	61.7	61.1	79.4	48.8	71.2	61.1	57.8	60.8
Mercury	0.00051	**0.354**	**0.521**	**0.42**	**0.981**	**0.475**	**0.565**	**1.12**	**0.314**	**0.102**	**0.416**	**0.274**	**0.347**
Nickel	30	7.43	8.00	8.73	9.00	10.2	7.39	9.23	8.53	8.57	8.12	6.94	6.27
Potassium	NAV	3510	4620	4480	3650	5810	4710	4460	4630	6890	5340	3340	3050
Selenium	0.21	ND	ND	**0.929**	ND	**0.667**	ND	**1.19**	ND	**0.643**	**0.687**	**0.614**	ND
Silver	2	ND	1.88	1.32	ND	ND	**2.83**	**24.2**	ND	ND	**2.80**	ND	ND
Sodium	NAV	136	133	276	175	131	156	157	155	236	161	207	128
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**47.1**	**47.3**	**50.2**	**42.9**	**59.3**	**43.8**	**52.2**	**79.3**	**81.8**	**47.1**	**42.1**	**46.5**
Zinc	8.5	**220**	**101**	**72.8**	**198**	**1280**	**135**	**153**	**187**	**51.6**	**65.0**	**53.5**	**27.8**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4474.08 B188 (6-12") 5/11/1999	4474.10 B189 (6-12") 5/11/1999	4474.14 B190 (6-12") 5/11/1999	4474.16 B191 (6-12") 5/11/1999	4474.18 B192 (6-12") 5/11/1999	4474.20 B193 (6-12") 5/11/1999	4474.22 B194 (6-12") 5/11/1999	4474.24 B195 (6-12") 5/11/1999	4481.02 B196 (6-12") 5/13/1999	4481.04 B197 (6-12") 5/13/1999	4481.06 B198 (6-12") 5/13/1999	4481.08 B199 (6-12") 5/13/1999
Semi-Volatiles (mg/kg)													
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.21 J**
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.76 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22 J
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	0.095 J	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.24 J	ND	ND	ND	ND	ND	ND	0.19 J	5.9
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4
Di-n-butylphthalate	200	0.43 J	0.88 J	0.39 J	0.45 J	0.61 J	0.90 J	0.61 J	0.55 J	0.24 J	ND	0.10 J	0.16 J
Fluoranthene	122	0.18 J	ND	0.19 J	0.34 J	ND	ND	ND	ND	ND	ND	0.27 J	9.3
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.17 J	ND	0.18 J	0.35 J	ND	ND	ND	ND	ND	ND	0.23 J	7.3
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.11 J	0.18 J	ND	ND	ND	ND	ND	ND	0.13 J	3.9
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.20 J	ND	0.22 J	0.37 J	ND	ND	ND	ND	ND	ND	0.25 J	**6.9**
bis(2-Ethylhexyl)phthalate	0.925	0.14 J	0.13 J	0.12 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.12 J	0.15 J	ND	ND	ND	ND	ND	ND	0.12 J	3.9
Benzo[k]fluoranthene	148	ND	ND	ND	0.15 J	ND	ND	ND	ND	ND	ND	0.10 J	2.2
Benzo[a]pyrene	1.52	ND	ND	0.14 J	0.17 J	ND	ND	ND	ND	ND	ND	0.11 J	**3.9**
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND	2.1
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
Benzo[g,h,I]perylene	119	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND	1.9

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4474.08 B188 (6-12") 5/11/1999	4474.10 B189 (6-12") 5/11/1999	4474.14 B190 (6-12") 5/11/1999	4474.16 B191 (6-12") 5/11/1999	4474.18 B192 (6-12") 5/11/1999	4474.20 B193 (6-12") 5/11/1999	4474.22 B194 (6-12") 5/11/1999	4474.24 B195 (6-12") 5/11/1999	4481.02 B196 (6-12") 5/13/1999	4481.04 B197 (6-12") 5/13/1999	4481.06 B198 (6-12") 5/13/1999	4481.08 B199 (6-12") 5/13/1999
Pesticides/PCBs (mg/kg)													
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.409	ND	0.173	0.200	0.023	ND	ND	ND	0.019	ND	0.088	0.128
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.651	ND	0.208	0.228	0.055	ND	ND	ND	0.021	ND	0.066	0.094
4,4'-DDT	0.0035	**0.229**	ND	**0.186**	**0.185**	**0.272**	ND	ND	ND	**0.056**	ND	**0.129**	**0.047**
gamma-Chlordane	0.224	0.045	ND	0.028	0.023	ND	ND	ND	ND	ND	ND	0.014	ND
alpha-Chlordane	0.224	0.032	ND	0.024	0.022	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Aluminum	50	**7930**	**10900**	**10300**	**9870**	**10100**	**9160**	**8210**	**14900**	**6890**	**10700**	**22200**	**8390**
Antimony	0.27	**0.787**	**0.518**	**1.89**	**1.41**	**1.16**	**0.462**	**0.561**	**0.794**	**1.23**	**1.08**	**0.553**	**0.867**
Arsenic	9.9	6.97	5.86	8.19	7.76	9.50	5.49	4.87	7.61	6.18	6.06	**25.6**	4.61
Barium	283	77.0	19.7	53.8	43.8	34.0	16.5	12.1	29.8	86.1	23.9	49.6	40.8
Beryllium	10	0.682	0.584	0.817	0.754	0.806	0.511	0.533	0.801	0.541	0.802	1.91	0.733
Cadmium	0.36	**0.829**	0.343	**0.798**	**0.606**	**1.57**	0.36	**0.382**	**0.405**	**1.14**	**0.592**	**2.33**	**1.34**
Calcium	NAV	1480	206	2550	3230	1470	210	493	893	2590	1840	923	2920
Chromium	0.4	**66.1**	**62.6**	**84.0**	**93.5**	**78.3**	**47.7**	**51.6**	**70.9**	**52.7**	**86.0**	**132**	**76.0**
Cobalt	13	2.86	3.04	2.79	3.15	2.51	1.87	2.66	3.92	2.75	1.34	4.01	2.27
Copper	28	13.2	8.61	22.4	**66.4**	24.7	10.9	5.20	7.97	21.2	10.9	19.3	16.7
Iron	NAV	20400	20800	23000	23700	26800	18900	19800	28900	18100	22700	121000	19400
Lead	11	**77.1**	5.49	**77.0**	**51.0**	**47.5**	8.31	4.88	7.71	**107**	8.16	**22.3**	**153**
Magnesium	NAV	1650	1490	2250	2530	2630	1300	1320	2150	1650	2960	2640	2270
Manganese	220	110	81.3	59.6	68.1	69.1	35.1	108	147	59.1	31.4	105	48.3
Mercury	0.00051	**0.355**	**0.254**	**0.392**	**0.35**	**0.297**	**0.192**	**0.293**	**0.219**	**1.75**	**16.6**	**216**	**4.84**
Nickel	30	6.890	10.3	11.5	9.81	7.57	5.24	4.34	8.73	9.29	5.07	19.7	7.46
Potassium	NAV	3260	3470	4460	4210	5030	2720	3190	4270	2950	4960	4830	4130
Selenium	0.21	**0.795**	ND	**1.33**	**0.68**	**1.12**	**0.978**	**1.07**	**0.925**	**1.16**	**1.07**	**3.17**	**1.10**
Silver	2	**2.32**	ND	1.74	1.52	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	110	122	237	251	139	79	104	168	137	128	165	155
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**38.5**	**52.4**	**54**	**49.3**	**54.4**	**46.4**	**49.0**	**63.9**	**38.8**	**41.9**	**222**	**40.5**
Zinc	8.5	**87.3**	**28.0**	**99.5**	**65.5**	**76.8**	**15.9**	**17.1**	**31.1**	**167**	**34.3**	**133**	**172**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No available value
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4481.10 B200 (6-12") 5/13/1999	4481.14 B201 (6-12") 5/13/1999	4481.16 B202 (6-12") 5/13/1999	4481.18 B203 (6-12") 5/13/1999	4481.20 B204 (6-12") 5/13/1999	4481.22 B205 (6-12") 5/13/1999	4481.24 B206 (6-12") 5/13/1999	4481.26 B207 (6-12") 5/13/1999	4484.02 B208 (6-12") 5/14/1999	4484.04 B209 (6-12") 5/14/1999	4484.06 B210 (6-12") 5/14/1999
Semi-Volatiles (mg/kg)												
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	**2.0**	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.36 J	0.77 J	0.52 J	0.21 J	ND	0.49 J	1.2 J	0.12 J	ND
Anthracene	1480	ND	ND	ND	0.19 J	0.12 J	ND	ND	0.13 J	0.48 J	ND	ND
Di-n-butylphthalate	200	0.26 J	0.17 J	0.63 J	0.18 J	0.43 J	0.12 J	0.39 J	0.37 J	0.34 J	0.23 J	0.11 J
Fluoranthene	122	ND	0.32 J	0.53 J	1.5	0.80 J	0.45 J	0.12 J	1.2	3.0	0.32 J	ND
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	0.27 J	0.43 J	1.2	0.72 J	0.39 J	0.13 J	1. J	2.3	0.34 J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.19 J	0.24 J	0.68 J	0.41 J	0.23 J	ND	0.49 J	1.4	0.20 J	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.35 J	0.43 J	1.3	0.75 J	0.46 J	ND	0.94 J	2.2	0.40 J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.12 J	ND	0.18 J	ND	0.12 J	ND	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.22 J	0.19 J	0.50 J	0.36 J	0.24 J	ND	0.42 J	1.6	0.32 J	ND
Benzo[k]fluoranthene	148	ND	0.15 J	0.19 J	0.51 J	0.33 J	0.20 J	ND	0.43 J	1.2	0.31 J	ND
Benzo[a]pyrene	1.52	ND	0.20 J	0.20 J	0.58 J	0.41 J	0.23 J	ND	0.45 J	1.5	0.33 J	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.12 J	0.14 J	0.41 J	0.18 J	0.17 J	ND	0.26 J	0.65 J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	0.14 J	0.43 J	0.18 J	0.19 J	ND	0.27 J	0.59 J	ND	ND

See Notes at End of Table

Table A-5
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4481.10 B200 (6-12") 5/13/1999	4481.14 B201 (6-12") 5/13/1999	4481.16 B202 (6-12") 5/13/1999	4481.18 B203 (6-12") 5/13/1999	4481.20 B204 (6-12") 5/13/1999	4481.22 B205 (6-12") 5/13/1999	4481.24 B206 (6-12") 5/13/1999	4481.26 B207 (6-12") 5/13/1999	4484.02 B208 (6-12") 5/14/1999	4484.04 B209 (6-12") 5/14/1999	4484.06 B210 (6-12") 5/14/1999
Pesticides/PCBs (mg/kg)												
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	**2.108**	0.035	0.459	0.066	0.143	0.049	0.033	0.070	0.028	0.037	ND
Dieldrin	0.00238	ND	ND	ND	ND	ND	ND	ND	ND	**0.012**	**0.021**	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	**2.548**	0.053	0.316	0.134	0.399	0.130	0.082	0.184	0.035	0.050	ND
4,4'-DDT	0.0035	**3.771**	**0.119**	**0.188**	**0.033**	**0.326**	**0.088**	ND	**0.028**	**0.037**	**0.067**	ND
gamma-Chlordane	0.224	0.036	ND	0.015	ND	0.072	0.022	ND	0.021	ND	0.015	ND
alpha-Chlordane	0.224	ND	0.011	0.014	ND	0.064	0.018	ND	ND	ND	0.013	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**11500**	**10400**	**14100**	**10900**	**19400**	**14100**	**5720**	**13500**	**9700**	**6940**	**11700**
Antimony	0.27	**2.21**	**1.64**	**0.741**	**1.25**	**0.967**	**1.64**	ND	**1.10**	**0.892**	**2.07**	**0.740**
Arsenic	9.9	3.55	8.68	6.78	6.08	6.65	**11.6**	3.76	**10.3**	7.01	6.48	**17.7**
Barium	283	47.3	35.0	82.6	35.6	116	53.2	33.7	52.8	29.0	27.5	37.6
Beryllium	10	2.64	0.774	0.878	1.25	1.48	1.25	0.672	1.04	0.751	0.663	0.916
Cadmium	0.36	**26.6**	**1.98**	**0.873**	**0.719**	**2.41**	**1.91**	**2.31**	**3.64**	**0.625**	**0.567**	**0.800**
Calcium	NAV	2980	1540	1480	352	4340	2660	7480	4670	2760	1540	432
Chromium	0.4	**33.0**	**79.5**	**77.2**	**101**	**109**	**106**	**56.8**	**67.7**	**68.9**	**59.9**	**84.2**
Cobalt	13	4.25	2.28	2.13	1.24	4.20	4.74	1.40	5.82	2.19	1.61	1.52
Copper	28	**45.0**	15.5	4.87	**120**	11.3	**41.2**	**40.4**	19.1	14.5	11.7	12.0
Iron	NAV	9340	28000	21200	24700	26000	35000	24500	33400	24300	20800	30700
Lead	11	**42.0**	**54.4**	**15.8**	**28.5**	**26.3**	**66**	**75.3**	**280**	**40.6**	**49.8**	**11.3**
Magnesium	NAV	1820	2110	2150	3070	2950	3700	1250	2970	2910	1970	3070
Manganese	220	41.5	48.8	24.8	16.4	**312**	84.9	31.6	105	64.0	28.0	28.0
Mercury	0.00051	**0.526**	**0.938**	**1.68**	**0.381**	**0.587**	**1.47**	**0.297**	**0.225**	**0.069**	**0.069**	ND
Nickel	30	19.0	10.2	7.01	5.55	12.4	12.6	5.03	16.0	6.12	5.73	5.34
Potassium	NAV	1730	4430	3770	6700	4200	7720	2090	5120	5590	4430	6230
Selenium	0.21	ND	ND	**1.04**	**1.17**	**0.848**	**1.17**	**0.75**	**1.05**	**1.24**	**1.26**	**1.46**
Silver	2	ND	ND	0.864	ND	ND	ND	ND	0.79	ND	ND	ND
Sodium	NAV	123	129	160	120	230	374	313	349	224	222	186
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**25.3**	**68.2**	**47.0**	**48.2**	**60.3**	**60.8**	**23.5**	**43.3**	**42.1**	**38.1**	**48.3**
Zinc	8.5	**332**	**123**	**70.7**	**43.8**	**167**	**105**	**138**	**374**	**101**	**87.4**	**49.3**

See Notes at End of Table

Table A-5
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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4484.08 B211 (6-12") 5/14/1999	4484.10 B212 (6-12") 5/14/1999	4490.02 B213 (6-12") 5/17/1999	4490.04 B214 (6-12") 5/17/1999	4490.06 B215 (6-12") 5/17/1999	4490.08 B216 (6-12") 5/17/1999	4490.10 B217 (6-12") 5/17/1999	4490.14 B218 (6-12") 5/17/1999	4490.16 B219 (6-12") 5/17/1999	4490.18 B220 (6-12") 5/17/1999	4490.20 B221 (6-12") 5/17/1999
Semi-Volatiles (mg/kg)												
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.17 J	0.49 J	0.14 J	ND	ND	ND	0.12 J	ND	0.40 J	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.14 J	0.15 J	0.15 J	ND	0.15 J	0.15 J	0.57 J	0.29 J	0.90 J	ND	0.96 J
Fluoranthene	122	0.47 J	0.46 J	0.27 J	ND	0.017 J	0.12 J	0.28 J	ND	0.54 J	ND	0.21 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.43 J	0.44 J	0.25 J	ND	0.19 J	0.12 J	0.28 J	ND	0.65 J	ND	0.23 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.25 J	0.20 J	0.14 J	ND	0.11 J	ND	0.18 J	ND	0.32 J	ND	0.14 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.51 J	0.40 J	0.31 J	ND	0.25 J	ND	0.40 J	ND	0.73 J	ND	0.25 J
bis(2-Ethylhexyl)phthalate	0.925	0.11 J	0.12 J	0.21 J	ND	0.14 J	0.13 J	0.16 J	ND	0.12 J	ND	0.76 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.32 J	0.15 J	0.14 J	ND	ND	0.11 J	0.26 J	ND	0.29 J	ND	ND
Benzo[k]fluoranthene	148	0.29 J	0.13 J	0.12 J	ND	ND	ND	0.17 J	ND	0.22 J	ND	ND
Benzo[a]pyrene	1.52	0.30 J	0.16 J	ND	ND	ND	ND	0.21 J	ND	0.28 J	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	0.24 J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	0.28 J	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4484.08 B211 (6-12") 5/14/1999	4484.10 B212 (6-12") 5/14/1999	4490.02 B213 (6-12") 5/17/1999	4490.04 B214 (6-12") 5/17/1999	4490.06 B215 (6-12") 5/17/1999	4490.08 B216 (6-12") 5/17/1999	4490.10 B217 (6-12") 5/17/1999	4490.14 B218 (6-12") 5/17/1999	4490.16 B219 (6-12") 5/17/1999	4490.18 B220 (6-12") 5/17/1999	4490.20 B221 (6-12") 5/17/1999
Pesticides/PCBs (mg/kg)												
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.055	0.018	0.087	0.070	0.058	0.091	0.175	ND	0.138	0.475	0.246
Dieldrin	0.00238	ND	ND	ND	ND	ND	ND	**0.037**	ND	ND	**0.029**	**0.037**
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.078	0.037	0.130	0.132	0.047	0.023	0.344	ND	0.096	**9.331**	0.464
4,4'-DDT	0.0035	**0.237**	ND	**0.054**	**0.235**	**0.306**	**0.049**	**0.493**	ND	**0.232**	**0.492**	**0.354**
gamma-Chlordane	0.224	0.014	ND	0.069	0.037	ND	ND	0.038	ND	ND	0.066	0.043
alpha-Chlordane	0.224	0.012	ND	0.063	0.034	ND	ND	0.029	ND	ND	0.052	0.049
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	**3.268**	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**5310**	**9390**	**6990**	**11400**	**4710**	**7750**	**11200**	**7980**	**10000**	**8180**	**7640**
Antimony	0.27	ND	ND	**0.952**	**63.9**	**0.856**	**0.894**	**2.27**	**0.399**	**0.778**	**5.68**	**3.59**
Arsenic	9.9	7.21	7.54	7.99	6.25	3.43	6.51	8.43	3.31	6.38	5.20	5.27
Barium	283	66.7	34.9	54.2	70.3	16.5	20.3	93.0	14.5	50.4	**569**	103
Beryllium	10	0.557	0.51	0.694	0.753	0.389	0.624	0.916	0.378	0.773	0.807	0.489
Cadmium	0.36	**0.886**	**0.512**	0.327	**0.765**	0.261	**0.854**	**1.38**	0.305	**0.533**	**4.25**	**1.10**
Calcium	NAV	1480	1640	424	5430	517	2010	2620	2430	1080	15700	3890
Chromium	0.4	**45.8**	**41.9**	**73.1**	**73.5**	**31.8**	**56.6**	**96.0**	**45.7**	**80.7**	**44.3**	**41.6**
Cobalt	13	1.89	1.99	1.38	2.96	1.41	2.80	2.83	4.80	2.73	4.72	2.74
Copper	28	**29.7**	13.9	21.6	14.4	17.5	**30.1**	**32.5**	**50**	13.9	**30.0**	19.7
Iron	NAV	17100	17200	21700	23300	12000	18500	29000	16300	20800	15000	16700
Lead	11	**105**	**53.1**	**53.0**	**179**	**83.3**	**38.7**	**312**	**24.7**	**38.2**	**5050**	**786**
Magnesium	NAV	1000	1140	2140	2600	1260	2160	3540	3010	2080	2100	1630
Manganese	220	33.8	109	14.7	61.0	33.0	67.1	68.7	79.5	51.2	83.3	60.3
Mercury	0.00051	**0.445**	**0.108**	**0.96**	**0.583**	**0.216**	**1.521**	**0.709**	**0.211**	**2.36**	**0.51**	**0.56**
Nickel	30	5.95	5.26	4.50	9.42	4.22	8.56	8.74	11.2	7.32	13.3	7.57
Potassium	NAV	1820	1860	5030	4880	2600	3660	6790	2620	4410	2070	2480
Selenium	0.21	**0.795**	**1.18**	**1.55**	**0.924**	ND	**1.02**	**1.42**	**0.618**	**1.17**	**1.31**	**1.12**
Silver	2	0.715	ND	ND	ND	ND	ND	ND	ND	**11.1**	ND	ND
Sodium	NAV	141	226	159	334	156	219	263	347	186	184	113
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**26.9**	**20.5**	**37.5**	**47.7**	**25.5**	**40**	**56.6**	**62.5**	**47.6**	**32.1**	**29.9**
Zinc	8.5	**128**	**99.4**	**40.1**	**270**	**41.5**	**74.8**	**133**	**36.8**	**73.3**	**1190**	**530**

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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4490.22 B222 (6-12") 5/17/1999	4490.24 B223 (6-12") 5/17/1999	4490.26 B224 (6-12") 5/17/1999	4533.02 B225 (6-12") 6/3/1999	4533.04 B226 (6-12") 6/3/1999	4533.06 B227 (6-12") 6/3/1999	4533.08 B228 (6-12") 6/3/1999	4533.10 B229 (6-12") 6/3/1999	4533.14 B230 (6-12") 6/3/1999	4533.16 B231 (6-12") 6/3/1999	4533.18 B232 (6-12") 6/3/1999
Semi-Volatiles (mg/kg)												
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	0.19 J	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.12 J	ND	0.21 J	ND	0.17 J	ND	ND	ND	0.12 J	ND	0.29 J
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.6	ND	13.0	0.18 J	0.42 J	0.51 J	0.96 J	0.22 J	0.51 J	0.93 J	0.15 J
Fluoranthene	122	0.15 J	ND	0.54 J	0.13 J	0.36 J	ND	ND	ND	0.23 J	ND	0.43 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.20 J	ND	0.50 J	0.11 J	0.31 J	ND	ND	ND	0.22 J	ND	0.41 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.28 J	ND	0.17 J	ND	ND	ND	0.13 J	ND	0.23 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.21 J	ND	0.57 J	0.13 J	0.37 J	ND	ND	ND	0.27 J	ND	0.46 J
bis(2-Ethylhexyl)phthalate	0.925	0.19 J	ND	0.14 J	ND	0.14 J	0.12 J	0.14 J	ND	0.16 J	0.15 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.31 J	ND	0.20 J	ND	ND	ND	0.13 J	ND	0.20 J
Benzo[k]fluoranthene	148	ND	ND	0.19 J	ND	0.16 J	ND	ND	ND	0.13 J	ND	0.18 J
Benzo[a]pyrene	1.52	ND	ND	0.26 J	ND	0.16 J	ND	ND	ND	0.13 J	ND	0.21 J
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.14 J	ND	ND	ND	ND	ND	0.11 J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	0.15 J	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4490.22 B222 (6-12") 5/17/1999	4490.24 B223 (6-12") 5/17/1999	4490.26 B224 (6-12") 5/17/1999	4533.02 B225 (6-12") 6/3/1999	4533.04 B226 (6-12") 6/3/1999	4533.06 B227 (6-12") 6/3/1999	4533.08 B228 (6-12") 6/3/1999	4533.10 B229 (6-12") 6/3/1999	4533.14 B230 (6-12") 6/3/1999	4533.16 B231 (6-12") 6/3/1999	4533.18 B232 (6-12") 6/3/1999
Pesticides/PCBs (mg/kg)												
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.065	0.208	0.075	ND	0.023	0.020	0.027	0.024	0.104	0.030	0.137
Dieldrin	0.00238	ND	**0.031**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.201	**3.632**	0.176	ND	0.031	0.020	ND	0.016	0.222	0.041	0.170
4,4'-DDT	0.0035	**0.074**	**0.327**	**0.089**	ND	ND	**0.032**	ND	**0.032**	**0.264**	**0.117**	**0.206**
gamma-Chlordane	0.224	ND	**0.314**	0.024	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	**0.241**	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	50	**6220**	**6760**	**7340**	**5090**	**10300**	**4370**	**5910**	**7070**	**9220**	**7580**	**5910**
Antimony	0.27	**0.931**	**0.938**	**2.90**	**0.655**	**0.848**	ND	**1.30**	**0.959**	**1.03**	**0.512**	**1.16**
Arsenic	9.9	6.04	6.42	6.96	9.84	**13.4**	5.84	9.57	7.27	9.70	9.81	8.21
Barium	283	16.9	40.9	27.5	45.4	50.4	26.0	31.9	26.6	48.1	37.1	33.4
Beryllium	10	0.666	0.622	0.665	0.539	1.04	0.531	0.849	0.937	0.843	0.956	0.635
Cadmium	0.36	**0.442**	**1.04**	**0.407**	**1.37**	**1.55**	**0.643**	**2.20**	**0.789**	**1.31**	**1.15**	**1.38**
Calcium	NAV	319	1190	787	371	370	754	448	660	1120	545	250
Chromium	0.4	**78.0**	**62.9**	**69.7**	**80.9**	**127**	**49.3**	**61.0**	**96.4**	**99.5**	**85.5**	**78.3**
Cobalt	13	0.751	2.22	1.05	0.902	1.55	0.886	3.72	0.859	2.50	1.43	1.06
Copper	28	**31.1**	**38.6**	24.6	10.5	**30.4**	3.16	5.01	2.02	**31.9**	3.78	**32.5**
Iron	NAV	20700	17400	21300	28000	35500	14800	14700	23200	30800	26700	22200
Lead	11	**25.9**	**59.3**	**42.7**	**25.1**	**82.3**	4.38	**13.8**	**18.3**	**78.6**	**17.2**	**45.9**
Magnesium	NAV	2260	1390	2010	1650	3370	1130	1700	2910	3110	2510	2010
Manganese	220	12.0	47.1	18.7	11.2	25.9	9.64	18.4	15.0	94.2	21.7	18.7
Mercury	0.00051	**0.232**	**0.339**	**0.362**	**0.071**	**0.197**	**0.05**	**1.027**	**0.09**	**0.246**	**0.044**	**0.117**
Nickel	30	3.09	7.98	4.30	4.04	6.88	4.31	9.40	4.34	13.5	8.30	5.89
Potassium	NAV	5670	2580	4600	4730	8230	2910	3910	7040	7350	6020	4720
Selenium	0.21	**1.15**	**0.813**	**1.52**	**2.84**	**2.31**	**1.34**	**1.08**	**1.12**	**1.63**	**1.52**	**1.21**
Silver	2	0.58	**3.04**	ND	0.662	**2.28**	ND	ND	ND	ND	ND	0.978
Sodium	NAV	238	106	165	108	326	108	81.9	113	324	133	266
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**33.9**	**41.4**	**34.6**	**39.4**	**58.2**	**28.5**	**34.0**	**45.5**	**49.7**	**44.7**	**34.0**
Zinc	8.5	**34.5**	**62.9**	**42.9**	**49.2**	**66.3**	**41.4**	**201**	**40.3**	**114**	**53.8**	**36.2**

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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4533.20 B233 (6-12") 6/3/1999	4533.22 B234 (6-12") 6/3/1999	4533.24 B235 (6-12") 6/3/1999	4533.26 B236 (6-12") 6/3/1999	4533.28 B237 (6-12") 6/3/1999	4533.30 B238 (6-12") 6/3/1999	4533.32 B239 (6-12") 6/3/1999	4533.34 B240 (6-12") 6/3/1999	4533.36 B241 (6-12") 6/3/1999	4533.38 B242 (6-12") 6/3/1999
Semi-Volatiles (mg/kg)											
Aniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53 J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.43 J	ND	ND	ND	ND	ND	0.24 J	0.21 J	ND
Anthracene	1480	ND	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.77 J	0.86 J	0.69 J	0.34 J	0.23 J	1.1	0.55 J	0.70 J	0.80 J	0.16 J
Fluoranthene	122	0.19 J	0.77 J	0.18 J	0.12 J	ND	ND	0.11 J	0.31 J	0.36 J	0.11 J
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.17 J	0.63 J	0.16 J	ND	ND	ND	0.11 J	0.31 J	0.28 J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.37 J	ND	ND	ND	ND	ND	0.17 J	0.16 J	ND
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.28 J	0.73 J	0.19 J	0.11 J	ND	ND	0.12 J	0.40 J	0.34 J	0.10 J
bis(2-Ethylhexyl)phthalate	0.925	0.16 J	0.17 J	0.12 J	ND	ND	0.11 J	0.14 J	0.17 J	0.15 J	ND
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.43 J	ND	ND	ND	ND	ND	0.17 J	0.17 J	ND
Benzo[k]fluoranthene	148	ND	0.34 J	ND	ND	ND	ND	ND	0.16 J	0.16 J	ND
Benzo[a]pyrene	1.52	ND	0.39 J	ND	ND	ND	ND	ND	0.15 J	0.16 J	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.23 J	ND	ND	ND	ND	ND	0.12 J	0.12 J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	119	ND	0.22 J	ND	ND	ND	ND	ND	0.13 J	0.13 J	ND

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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4533.20 B233 (6-12") 6/3/1999	4533.22 B234 (6-12") 6/3/1999	4533.24 B235 (6-12") 6/3/1999	4533.26 B236 (6-12") 6/3/1999	4533.28 B237 (6-12") 6/3/1999	4533.30 B238 (6-12") 6/3/1999	4533.32 B239 (6-12") 6/3/1999	4533.34 B240 (6-12") 6/3/1999	4533.36 B241 (6-12") 6/3/1999	4533.38 B242 (6-12") 6/3/1999
Pesticides/PCBs (mg/kg)											
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.016	0.048	0.013	0.012	ND	0.036	0.059	0.104	0.014	0.012
Dieldrin	0.00238	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	0.032	0.081	ND	0.017	0.013	0.028	0.064	0.138	ND	ND
4,4'-DDT	0.0035	**0.070**	**0.177**	**0.033**	**0.050**	ND	**0.048**	**0.124**	**0.166**	**0.054**	**0.022**
gamma-Chlordane	0.224	ND	0.039	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	0.031	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)											
Aluminum	50	**11900**	**10900**	**3130**	**7560**	**20800**	**4700**	**9300**	**9010**	**19500**	**8190**
Antimony	0.27	**1.09**	**1.10**	**0.736**	**0.616**	**1.46**	ND	**1.69**	**0.938**	**2.32**	**0.755**
Arsenic	9.9	8.9	**13.5**	7.97	**11.2**	**15.6**	7.03	7.62	8.59	**12**	7.40
Barium	283	80.6	46.5	11.0	103	104	38.3	38.5	39.7	60.5	35.6
Beryllium	10	1.43	1.05	0.400	0.874	2.49	0.752	0.79	0.848	2.18	0.864
Cadmium	0.36	**1.73**	**1.62**	**1.15**	**1.74**	**3.04**	**0.837**	**0.828**	**1.11**	**2.79**	**0.746**
Calcium	NAV	1110	716	153	952	1450	437	1650	335	422	215
Chromium	0.4	**152**	**129**	**68.4**	**108**	**328**	**63.1**	**64.8**	**105**	**276**	**89.3**
Cobalt	13	2.07	2.12	0.669	2.05	2.31	0.823	2.69	1.46	1.46	1.28
Copper	28	13.9	24.5	9.02	12.9	**99.6**	3.33	10.6	23.5	14.9	4.73
Iron	NAV	38700	36300	25700	29600	68000	16900	21600	29100	64000	21900
Lead	11	**18.2**	**87.8**	**17.7**	**19.3**	**19.2**	10.9	**53.9**	**39.0**	**25.6**	**11.8**
Magnesium	NAV	5050	3470	762	2640	10200	1650	2350	3130	8800	2360
Manganese	220	25.9	31.5	7.11	14.0	22.7	12.4	64.3	23.8	22.7	18.6
Mercury	0.00051	**0.073**	**0.215**	**0.050**	**0.072**	**0.051**	**0.047**	**0.145**	**0.115**	**0.091**	**0.135**
Nickel	30	9.41	9.79	3.05	6.61	11.3	4.34	7.24	6.23	8.48	6.29
Potassium	NAV	13000	8240	2230	7730	25500	4200	4840	7400	22500	5810
Selenium	0.21	**2.31**	**1.96**	**2.38**	**4.76**	**3.87**	**1.33**	**1.01**	**1.12**	**2.64**	**1.33**
Silver	2	ND	**2.18**	ND	ND	0.839	ND	ND	ND	ND	ND
Sodium	NAV	153	342	49.8	67.5	112	84.9	72.4	264	233	112
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**46.3**	**76.7**	**72.3**	**30.4**	**98.2**	**30.2**	**40.9**	**51.7**	**109**	**50.5**
Zinc	8.5	**97.6**	**62.1**	**54.8**	**93.4**	**128**	**36.1**	**80.5**	**36.6**	**96.5**	**33.9**

See Notes at End of Table

Table A-5
Soil Sampling Results
M-8 Landfill Site
November 1998 - June 1999
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4533.40 B243 (6-12") 6/3/1999	4533.42 B244 (6-12") 6/3/1999	4533.44 B245 (6-12") 6/3/1999	4533.46 B246 (6-12") 6/3/1999	4533.48 B247 (6-12") 6/3/1999	4533.50 B248 (6-12") 6/3/1999	4533.52 B249 (6-12") 6/3/1999	4533.54 B250 (6-12") 6/3/1999
Semi-Volatiles (mg/kg)									
Aniline	NAV	ND	ND	ND	ND	ND	ND	0.30 J	ND
1,4-Dichlorobenzene	20	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	NAV	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.31	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.18 J	ND	ND	ND	ND	ND	0.25 J
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	0.44 J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	0.13 J
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	0.44 J
Azobenzene	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.199	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.35 J	ND	0.14 J	ND	0.25 J	0.37 J	5.1
Anthracene	1480	ND	0.27 J	ND	ND	ND	ND	ND	2.2
Di-n-butylphthalate	200	0.21 J	0.19 J	0.33 J	0.44 J	0.38 J	1.0 J	0.69 J	0.31 J
Fluoranthene	122	ND	0.81 J	0.23 J	0.29 J	ND	0.74 J	0.70 J	16
Benzidine	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	0.68 J	0.20 J	0.26 J	ND	0.59 J	0.69 J	0.01 J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.69 J	0.12 J	0.15 J	ND	0.37 J	0.34 J	0.01 J
3,3'-Dichlorobenzidine	0.646	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	1.7 J	0.25 J	0.37 J	ND	0.60 J	0.50 J	0.01 J
bis(2-Ethylhexyl)phthalate	0.925	ND	0.17 J	ND	0.40 J	0.15 J	0.12 J	0.12 J	0.12 J
Di-n-octylphthalate	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.90 J	0.15 J	0.31 J	ND	0.32 J	0.41 J	0.01 J
Benzo[k]fluoranthene	148	ND	0.65 J	0.12 J	0.28 J	ND	0.28 J	0.33 J	4.9 J
Benzo[a]pyrene	1.52	ND	0.59 J	0.15 J	0.22 J	ND	0.36 J	0.36 J	**7.3**
Indeno[1,2,3-cd]pyrene	109	ND	0.39 J	0.12 J	0.14 J	ND	0.23 J	0.15 J	3.1 J
Dibenz[a,h]anthracene	18.4	ND	0.15 J	ND	ND	ND	ND	ND	1.4 J
Benzo[g,h,I]perylene	119	ND	0.33 J	0.14 J	0.17 J	ND	0.23 J	0.13 J	2.6 J

See Notes at End of Table

Table A-5
Soil Sampling Results
M-8 Landfill Site
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Lab Sample ID Field Sample Location Sample Date	Eco-SSL (mg/kg)	4533.40 B243 (6-12") 6/3/1999	4533.42 B244 (6-12") 6/3/1999	4533.44 B245 (6-12") 6/3/1999	4533.46 B246 (6-12") 6/3/1999	4533.48 B247 (6-12") 6/3/1999	4533.50 B248 (6-12") 6/3/1999	4533.52 B249 (6-12") 6/3/1999	4533.54 B250 (6-12") 6/3/1999
Pesticides/PCBs (mg/kg)									
gamma-BHC	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.152	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.023	0.211	0.019	0.122	0.039	0.051	0.021	0.128
Dieldrin	0.00238	ND	ND	ND	ND	ND	ND	**0.019**	ND
Endrin	0.0101	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.758	ND	0.089	0.017	0.060	0.025	0.060	0.031	0.084
4,4'-DDT	0.0035	**0.093**	**0.060**	ND	**0.277**	**0.041**	**0.192**	**0.074**	**0.189**
gamma-Chlordane	0.224	ND	0.017	0.017	0.037	ND	ND	0.019	ND
alpha-Chlordane	0.224	ND	0.016	0.017	0.033	ND	ND	0.016	ND
Aroclor 1016	0.371	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	0.371	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)									
Aluminum	50	**15800**	**9810**	**7900**	**17600**	**8830**	**10800**	**9290**	**11600**
Antimony	0.27	**0.639**	**1.53**	**12.0**	**1.58**	**0.804**	**1.84**	**1.65**	**2.20**
Arsenic	9.9	**15.4**	8.59	6.25	**10.0**	9.70	**10.5**	9.13	**14.0**
Barium	283	44.5	49.8	32.8	81.9	57.0	84.7	103	67.9
Beryllium	10	1.28	0.878	0.41	1.36	1.19	1.44	0.966	1.21
Cadmium	0.36	**1.21**	**1.76**	**7.10**	**3.06**	**1.16**	**3.79**	**1.61**	**1.95**
Calcium	NAV	745	3950	4840	2440	913	2610	1630	11100
Chromium	0.4	**67.4**	**89.8**	**1560**	**83.0**	**136**	**94.0**	**72.2**	**103**
Cobalt	13	3.80	5.53	5.55	5.45	1.26	7.53	2.69	4.51
Copper	28	17.5	**32.2**	**131**	**36.2**	**133**	**332**	17.6	18.8
Iron	NAV	32000	29500	21500	29800	31100	27200	25100	34700
Lead	11	**29.0**	**174**	**47.6**	**225**	**19**	**274**	**477**	**234**
Magnesium	NAV	3180	5360	2920	3260	4110	4150	2980	10900
Manganese	220	103	121	88.2	157	21.8	133	49.6	123
Mercury	0.00051	**0.141**	**0.821**	**7.682**	**0.271**	**0.083**	**1.317**	**0.250**	**0.587**
Nickel	30	9.85	13.9	**7330**	25.7	6.28	17.9	10.3	**36.8**
Potassium	NAV	6990	6050	4150	6860	10300	7440	6280	8390
Selenium	0.21	**1.19**	**1.67**	ND	**1.09**	**1.50**	**0.97**	**1.08**	**0.741**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	132	181	117	278	77.6	130	64.6	96.4
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**49.2**	**53.5**	**58.0**	**59.4**	**58.7**	**49.2**	**43.8**	**101**
Zinc	8.5	**68.7**	**167**	**146**	**256**	**96.5**	**461**	**321**	**197**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No available value

Table A-6
Soil Sampling Results
M-12 Landfill
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3420.01 B01 (6-12") 3/19/1998	3420.03 B02 (6-12") 3/19/1998	3420.05 B03 (6-12") 3/19/1998	3420.07 B04 (6-12") 3/19/1998	3420.09 B05 (6-12") 3/19/1998	3420.11 B06 (4-10") 3/19/1998	3420.13 B07 (6-12") 3/19/1998	3420.15 B08 (6-12") 3/19/1998	3420.17 B09 (6-12") 3/19/1998	3424.02 B10 (6-12") 3/20/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	0.083J	ND	ND	ND	ND	0.077J	1.1D	0.074J	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	0.61D	0.093J	ND
Acenaphthylene	682	ND	0.087J	0.11J	ND	ND	ND	0.21	0.32D	0.081J	ND
Anthracene	1,480	ND	ND	0.094J	ND	ND	ND	0.12J	1.2D	0.19	ND
Benzo[a]anthracene	5.21	0.19	0.27	0.39	ND	0.11J	0.21JD	0.47	3.D	0.64	0.13
Benzo[a]pyrene	1.52	0.21	0.29	0.46	ND	0.12	0.23JD	0.56	**2.6D**	0.74	0.23
Benzo[b]fluoranthene	59.8	0.1J	0.17	0.32	ND	0.066J	0.18JD	0.45	1.5D	0.91	0.16
Benzo[g,h,I]perylene	119	0.095J	0.19	0.25	ND	0.078J	0.13JD	0.29	1.3D	0.34	0.18
Benzo[k]fluoranthene	148	0.2	0.28	0.29	ND	0.14	0.21JD	0.38	2.8D	0.65	0.3
bis(2-Ethylhexyl)phthalate	0.925	0.17B	0.2B	0.088JB	ND	0.13JB	0.14JBD	0.088JB	0.14JBD	0.15JB	0.098JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.28	0.5	0.8	ND	0.18	0.34D	1.1	4.3D	1.1	0.26
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	0.56D	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	4.3B	6.5B	2.3B	7.3BD	3.4B	11.BD	3.B	1.9BD	0.5JB	0.17JB
Fluoranthene	122	0.42	0.46	0.73	ND	0.21	0.32D	0.99	6.4D	1.6	0.16
Fluorene	122	ND	ND	0.072J	ND	ND	ND	0.096J	1.8D	0.098J	ND
Indeno[1,2,3-cd]pyrene	109	0.12	0.19	0.25	ND	ND	0.13JD	0.31	1.2D	0.37	0.16
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	**0.14J**	**1.2D**	**0.11J**	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.2	0.46	0.65	ND	0.14	0.19JD	0.85	9.D	1.1	0.15
Pyrene	78.5	0.3	0.5	0.75	ND	0.14	0.29D	1.0	5.9D	1.1	0.16
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.004	0.09	0.115	0.008	0.055	0.088	0.311	0.736	0.364	0.255
4,4'-DDE	0.596	0.009	0.069	0.074	0.014	0.028	0.07	0.075	0.541	0.307	0.265
4,4'-DDT	0.0035	**0.035**	**0.223**	**0.202**	**0.081**	**0.084**	**0.306**	**0.113**	**0.5**	**0.271**	**0.203**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table A-6
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3420.01 B01 (6-12") 3/19/1998	3420.03 B02 (6-12") 3/19/1998	3420.05 B03 (6-12") 3/19/1998	3420.07 B04 (6-12") 3/19/1998	3420.09 B05 (6-12") 3/19/1998	3420.11 B06 (4-10") 3/19/1998	3420.13 B07 (6-12") 3/19/1998	3420.15 B08 (6-12") 3/19/1998	3420.17 B09 (6-12") 3/19/1998	3424.02 B10 (6-12") 3/20/1998
Metals (mg/kg)											
Aluminum	50	**5642**	**6919**	**12820**	**9691**	**5612**	**6598**	**8075**	**5616**	**12110**	**4508**
Antimony	0.27	**0.71**	**1.051**	**2.367**	**1.731**	**1.483**	**1.046**	**1.001**	**1.034**	**3.401**	**0.58**
Arsenic	9.9	5.558	**10.87**	**12.76**	**10.61**	**11.11**	**9.919**	**17.43**	6.688	**38.02**	7.287
Barium	283	26.94	35.36	49.88	60.55	85.09	44.48	74.22	**289.3**	60.36	54.95
Beryllium	10	0.535	0.461	1.18	0.555	0.664	0.4763	0.5101	0.6405	1.304	0.7108
Cadmium	0.36	**1.307**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NAV	172.2	251.3	320.3	383.6	488.9	338.2	223.3	453	594.4	376.9
Chromium	0.4	**39.64**	**64.16**	**135.6**	**80.22**	**75.81**	**61.98**	**83.75**	**42.5**	**133.9**	**37.92**
Cobalt	13	1.599	1.463	1.435	1.243	1.208	1.372	1.415	1.515	1.896	5.776
Copper	28	6.895	**40.21**	18.34	**45.3**	**50.19**	**46.45**	**45.52**	**197.1**	**141.7**	**112**
Iron	NAV	14940	18570	37620	45290	23110	19700	27560	13090	41770	13640
Lead	11	**52.03**	**53.54**	**65.37**	**33.97**	**32.95**	**67.67**	**77.75**	**84.35**	**123.5**	**95.11**
Magnesium	NAV	1257	1477	4207	2117	2073	1905	1914	1314	3514	745.9
Manganese	220	51.87	17.21	21.31	25.55	16.93	22.75	22.02	35.4	32.09	24.13
Mercury	0.00051	**29.909**	**0.39**	**0.21**	**0.051**	**0.05**	**0.118**	**0.234**	**0.012**	**1.461**	**0.501**
Nickel	30	4.266	5.328	6.129	5.36	4.669	5.057	5.464	4.738	8.985	13.03
Potassium	NAV	3509	3656	8666	5885	6901	5405	5755	4024	7195	1989
Selenium	0.21	ND	**0.885**	ND	**0.429**	**1.159**	**0.709**	**1.033**	**0.394**	**1.374**	**0.589**
Silver	2	ND	1.571	1.699	ND	ND	ND	0.581	1.013	1.493	0.548
Sodium	NAV	24.61	207.6	91.26	574.1	411.4	376.3	646.7	229.5	139	196.5
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**22.45**	**32.82**	**65.1**	**58.32**	**29.18**	**31.03**	**40.81**	**30.22**	**54.67**	**21.2**
Zinc	8.5	**48.29**	**29.07**	**51.51**	**42.63**	**24.21**	**36.88**	**36.02**	**49.93**	**112.4**	**416.3**

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID		3424.04	3424.06	3424.08	3424.10	3424.12	3424.14	3424.16	3424.18	3424.20	3425.02
Field Sample Location	ESC (mg/kg)	B11 (5-11")	B12 (6-12")	B13 (6-12")	B14 (3-9")	B15 (2-8")	B16 (2-8")	B17 (6-12")	B18 (3-9")	B19 (2-8")	B20 (6-12")
Sample Date		3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	0.21	ND	ND	ND	0.060J	ND	ND	ND	ND	ND
Acenaphthene	20	ND	0.073J	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.018J	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.11J	ND	ND	0.017J	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.22	ND	ND	0.063J	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	0.25	ND	ND	0.072J	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.19	ND	ND	0.16	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	0.19	ND	0.065J	0.18	ND	0.062J	ND	ND	0.057J
bis(2-Ethylhexyl)phthalate	0.925	0.067JB	0.090JB	0.085JB	0.073JB	0.23B	0.26B	0.35B	0.22B	0.31B	0.39B
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	0.065J	ND	ND	ND
Chrysene	4.73	0.095J	0.38	ND	0.096J	0.16	ND	0.074J	0.069J	ND	0.068J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	0.021J	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.018J	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.34JB	0.39JB	0.37JB	0.32JB	0.61B	0.45JB	0.51JB	0.56B	0.33JB	0.34JB
Fluoranthene	122	0.096J	0.7	ND	0.11	0.14	0.084J	ND	ND	ND	0.072J
Fluorene	122	ND	0.058J	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	**0.28**	ND	ND	ND	0.051J	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	0.056J	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.12	0.54	ND	0.057J	0.12	ND	ND	ND	ND	ND
Pyrene	78.5	0.079J	0.43	ND	0.080J	0.12	0.073J	ND	0.085J	0.064J	0.080J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.028	0.052	0.397	0.024	0.139	0.012	0.003	0.044	0.015	0.072
4,4'-DDE	0.596	0.042	0.065	0.35	0.044	0.559	0.039	0.002	0.033	0.048	0.098
4,4'-DDT	0.0035	**0.078**	**0.154**	**0.504**	**0.067**	**0.481**	**0.035**	**0.006**	**0.011**	**0.036**	**0.194**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3424.04 B11 (5-11") 3/20/1998	3424.06 B12 (6-12") 3/20/1998	3424.08 B13 (6-12") 3/20/1998	3424.10 B14 (3-9") 3/20/1998	3424.12 B15 (2-8") 3/20/1998	3424.14 B16 (2-8") 3/20/1998	3424.16 B17 (6-12") 3/20/1998	3424.18 B18 (3-9") 3/20/1998	3424.20 B19 (2-8") 3/20/1998	3425.02 B20 (6-12") 3/23/1998
Metals (mg/kg)											
Aluminum	50	**10700**	**5997**	**7942**	**2469**	**2620**	**4328**	**5798**	**1336**	**3624**	**4607**
Antimony	0.27	**2.641**	**1.738**	**2.273**	**0.467**	**0.345**	**1.02**	**1.526**	**0.319**	**1.34**	**0.947**
Arsenic	9.9	**12.19**	7.383	**13.66**	1.655	2.987	3.42	7.245	1.479	6.735	5.143
Barium	283	42.85	50.36	65.44	10.62	28.31	72.64	138.7	59.2	71.49	13.94
Beryllium	10	1.462	0.7754	0.9925	0.2271	0.2784	0.8532	0.512	0.1552	1.148	0.492
Cadmium	0.36	ND	ND	ND	0.0659	ND	**0.6784**	0.1049	0.1673	**0.7389**	ND
Calcium	NAV	333.2	205.5	360	81.68	650.6	2110	3422	1379	1033	494.4
Chromium	0.4	**168.8**	**90.86**	**124.6**	**24.03**	**7.636**	**31.38**	**7.333**	**2.01**	**32.18**	**60.39**
Cobalt	13	0.7841	0.5523	0.8438	0.3294	1.586	3.902	2.603	1.813	6.331	0.368
Copper	28	12.21	13.34	6.003	4.121	**81.92**	**31.96**	22.16	12.58	**182**	7.432
Iron	NAV	31460	16200	21030	4887	4008	6384	13410	1710	11100	11940
Lead	11	**11.72**	**16.93**	3.55	4.462	**21.63**	**75.93**	**83.68**	4.709	**149.2**	9.944
Magnesium	NAV	4609	2133	2946	456.8	286.1	326.9	311.6	165.3	832.9	1600
Manganese	220	10.6	9.861	7.919	5.807	13.92	29.19	36.44	10.51	37.97	5.166
Mercury	0.00051	**0.061**	**0.085**	**0.015**	**0.021**	**0.045**	**0.258**	**0.021**	**0.017**	**0.138**	**0.058**
Nickel	30	4.273	2.672	3.231	1.82	4.973	11.59	10.22	5.396	17.57	2.437
Potassium	NAV	10140	4544	6153	1171	530.5	595	464.3	176.6	1968	2931
Selenium	0.21	**0.505**	ND	ND	ND	**0.383**	**0.528**	**0.453**	**0.521**	**0.818**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	124.1	71.27	72.53	30.94	136.2	228.9	249.3	170.6	141	36.77
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.502
Vanadium	2	**48**	**16.35**	**13.61**	**12.98**	**12.17**	**14.33**	**16.03**	**7.215**	**18.92**	**22.07**
Zinc	8.5	**48.45**	**34.98**	**54.28**	**12.55**	**15.35**	**55.18**	**70.97**	**59.54**	**619.7**	**35.67**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3425.04 B21 (3-9") 3/23/1998	3425.06 B22 (3-9") 3/23/1998	3425.08 B23 (3-9") 3/23/1998	3425.10 B24 (3-9") 3/23/1998	3425.12 B25 (6-12") 3/23/1998	3425.14 B26 (2-8") 3/23/1998	3425.16 B27 (4-10") 3/23/1998	3425.18 B28 (4-10") 3/23/1998	3425.20 B29 (6-12") 3/23/1998	3425.22 B30 (2-8") 3/23/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	0.097J	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.48	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	0.12	ND	0.54	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.088J	0.54	0.065J	1.9	ND	ND	ND	ND	0.097J
Benzo[a]pyrene	1.52	0.79J	0.080J	0.55	0.060J	**1.9**	ND	ND	ND	ND	0.11J
Benzo[b]fluoranthene	59.8	ND	0.060J	0.49	0.068J	1.1	ND	ND	ND	ND	0.091J
Benzo[g,h,I]perylene	119	ND	0.063J	0.34	ND	1.0	ND	ND	ND	ND	0.085J
Benzo[k]fluoranthene	148	ND	0.1J	0.42	0.081J	1.9	ND	ND	ND	ND	0.16
bis(2-Ethylhexyl)phthalate	0.925	0.77JB	0.11JB	0.19B	0.2B	0.055JB	0.089JB	0.093JB	0.11JB	0.15JB	0.11JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.74J	0.16	0.95	0.15J	3.2	0.099J	0.066J	ND	ND	0.33
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	0.62	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.1JB	0.3JB	0.14JB	0.13JB	0.099JB	0.12JB	0.14JB	0.13JB	0.14JB	1.6B
Fluoranthene	122	ND	0.17	1.2	0.12	3.7	0.067J	0.064J	ND	ND	0.21
Fluorene	122	ND	ND	0.068J	ND	0.25	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.33	ND	0.89	ND	ND	ND	ND	0.075J
Naphthalene	0.0994	ND	ND	ND	ND	0.082J	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.12	0.85	0.080J	2.1	0.070J	ND	ND	ND	0.15
Pyrene	78.5	0.75J	0.2	1.2	0.12	3.8	0.096J	0.068J	ND	ND	0.24
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.207	0.158	0.113	0.063	0.037	0.066	0.113	ND	ND	0.051
4,4'-DDE	0.596	0.232	0.317	0.109	0.066	0.041	0.171	0.044	ND	ND	0.273
4,4'-DDT	0.0035	**0.116**	**0.326**	**0.304**	**0.045**	**0.043**	**0.309**	**0.057**	ND	ND	**0.231**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3425.04 B21 (3-9") 3/23/1998	3425.06 B22 (3-9") 3/23/1998	3425.08 B23 (3-9") 3/23/1998	3425.10 B24 (3-9") 3/23/1998	3425.12 B25 (6-12") 3/23/1998	3425.14 B26 (2-8") 3/23/1998	3425.16 B27 (4-10") 3/23/1998	3425.18 B28 (4-10") 3/23/1998	3425.20 B29 (6-12") 3/23/1998	3425.22 B30 (2-8") 3/23/1998
Metals (mg/kg)											
Aluminum	50	**3855**	**5241**	**8348**	**3407**	**4485**	**2628**	**8444**	**8185**	**7810**	**5413**
Antimony	0.27	**1.281**	**0.458**	**0.653**	**0.458**	**0.787**	**0.371**	**2.104**	**1.951**	**1.98**	**1.448**
Arsenic	9.9	4.345	4.688	5.923	2.446	6.348	1.722	**21.54**	**19.35**	**24.33**	**14.68**
Barium	283	29.9	15.92	42.62	18.26	31.35	7.015	14.1	13.03	9.416	70.55
Beryllium	10	0.3599	0.4215	0.8002	0.2194	0.3329	0.1691	0.9307	0.9068	0.9298	0.6609
Cadmium	0.36	**0.9103**	**1.677**	**0.549**	0.2835	**1.219**	ND	ND	ND	ND	0.1488
Calcium	NAV	320.3	3112	556	445.1	530.7	273.4	1138	2421	832.5	1231
Chromium	0.4	**59.63**	**12.92**	**41.83**	**19.37**	**31.53**	**17.93**	**125.1**	**131.8**	**123.9**	**67.89**
Cobalt	13	1.067	2.251	4.349	0.5124	0.9139	0.6978	0.7505	0.6415	0.8132	1.317
Copper	28	**502.4**	**35.26**	**80.43**	7.057	13.97	5.848	21.01	5.498	5.66	**47.89**
Iron	NAV	12300	6758	11120	4743	8822	4258	20310	21280	18960	16300
Lead	11	**404.4**	**22.43**	**149**	**13.96**	**33.86**	6.379	**18.9**	4.03	4.268	**56.31**
Magnesium	NAV	654	322.6	1102	555.1	689.6	440.2	2896	3065	3019	1883
Manganese	220	36.35	126.3	64.37	14.35	9.481	10.97	20.8	17.65	14.72	46.26
Mercury	0.00051	**0.493**	**0.683**	**0.092**	**0.031**	**0.16**	**0.02**	**0.013**	**0.013**	ND	**0.108**
Nickel	30	11.76	5.666	16.19	2.344	4.075	1.512	3.944	3.926	3.968	4.6
Potassium	NAV	1611	621.1	3165	1315	1472	711.2	5945	6312	6000	5250
Selenium	0.21	ND	ND	**0.952**	ND	**0.341**	ND	ND	ND	ND	ND
Silver	2	1.18	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	54.23	110.2	25.22	61.06	50.03	24.8	86.46	65.74	65.74	135
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**16.46**	**11.38**	**29.96**	**13.33**	**22.48**	**11.77**	**16.77**	**19.77**	**16.38**	**18.24**
Zinc	8.5	**753.8**	**910.2**	**195.6**	**38.34**	**120.4**	**26.73**	**45.95**	**27.66**	**28.3**	**65.28**

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Lab Sample ID		3428.02	3428.04	3428.06	3428.08	3428.10	3428.12	3428.14	3428.16	3428.18	3428.20
Field Sample Location	ESC (mg/kg)	B31 (2-8")	B32 (3-9")	B33 (3-9")	B34 (4-10")	B35 (3-9")	B36 (3-9")	B37 (3-9")	B38 (3-9")	B39 (3-9")	B40 (6-12")
Sample Date		3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.32	0.28	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.17J	0.16J	0.19J	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.69	0.70	0.45	0.2J	ND	ND	ND	ND	0.22
Benzo[a]pyrene	1.52	ND	0.83	0.84	0.51	0.25	ND	ND	ND	ND	0.30
Benzo[b]fluoranthene	59.8	ND	0.47	0.38	0.34	0.15J	ND	ND	ND	ND	0.21J
Benzo[g,h,I]perylene	119	ND	0.55	0.60	0.35	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.18J	0.58	0.75	0.59	0.25	ND	ND	0.17J	ND	0.33
bis(2-Ethylhexyl)phthalate	0.925	0.26JB	0.63B	0.36B	0.3JB	0.51B	0.26JB	0.32JB	0.41B	0.66B	0.34B
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.23J	1.3	1.4	0.91	0.45	ND	ND	0.23J	0.11J	0.53
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	0.12J	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.4B	4.3B	0.79JB	1.2B	1.6B	0.59JB	0.72JB	2.2B	0.66JB	1.5B
Fluoranthene	122	0.17J	0.72	0.80	1.1	0.32	ND	ND	0.16J	ND	0.39
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.39	0.47	0.32	0.16J	ND	ND	ND	ND	0.19J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.12J	0.70	0.58	0.80	0.17J	ND	ND	0.13J	ND	0.22
Pyrene	78.5	0.22J	1.3	1.5	1.1	0.44	ND	ND	0.18J	ND	0.47
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.039	0.019	0.03	0.026	0.076	0.005	ND	0.069	0.009	0.142
4,4'-DDE	0.596	0.136	0.107	0.141	0.066	0.166	0.059	0.014	0.164	0.044	0.211
4,4'-DDT	0.0035	**0.208**	**0.188**	**0.146**	**0.122**	**0.299**	**0.063**	**0.008**	**0.25**	**0.117**	**0.112**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3428.02 B31 (2-8") 3/24/1998	3428.04 B32 (3-9") 3/24/1998	3428.06 B33 (3-9") 3/24/1998	3428.08 B34 (4-10") 3/24/1998	3428.10 B35 (3-9") 3/24/1998	3428.12 B36 (3-9") 3/24/1998	3428.14 B37 (3-9") 3/24/1998	3428.16 B38 (3-9") 3/24/1998	3428.18 B39 (3-9") 3/24/1998	3428.20 B40 (6-12") 3/24/1998
Metals (mg/kg)											
Aluminum	50	**4364**	**5564**	**11890**	**8151**	**6575**	**1855**	**3235**	**3410**	**3162**	**5132**
Antimony	0.27	**1.06**	**0.687**	**2.65**	**2.078**	**1.272**	**0.426**	**0.474**	**0.801**	**1.016**	**1.075**
Arsenic	9.9	**11.32**	8.863	**14.73**	**11.1**	**11.02**	1.315	3.544	**12.05**	9.484	**11.61**
Barium	283	61.24	46.39	45.66	48.79	40.17	5.639	45.59	128.7	17.24	71.02
Beryllium	10	0.5325	0.5311	1.329	0.8959	0.7196	0.127	0.8634	0.4662	0.3693	0.6631
Cadmium	0.36	0.1458	0.2347	0.1126	0.1174	0.3434	ND	**0.5593**	0.2638	**0.4148**	0.1471
Calcium	NAV	1396	1394	1671	2981	960.9	996.7	1143	1109	931.5	1317
Chromium	0.4	**54.13**	**43.96**	**142.8**	**127.6**	**72.95**	**23.75**	**5.249**	**29.69**	**27.07**	**63.37**
Cobalt	13	1.087	1.799	1.703	1.563	1.172	0.2485	4.283	2.585	3.301	1.679
Copper	28	20.64	**35.33**	25.16	**89.97**	23.25	24.37	26.39	**44.16**	**37.37**	23.91
Iron	NAV	13620	12970	31800	20940	18550	3564	1569	13290	16380	15810
Lead	11	**32.83**	**45.47**	**45.28**	**37.17**	**33.38**	3.324	**18.56**	**129.4**	**40.67**	**35.42**
Magnesium	NAV	1631	1474	4675	2802	2070	314.8	96.27	820.2	460.3	1663
Manganese	220	37.65	64.16	55.22	34.04	25.04	5.719	38.8	66.82	46.57	34.75
Mercury	0.00051	**0.076**	**0.073**	**0.102**	**0.077**	**0.082**	**0.031**	**0.084**	**0.212**	**0.054**	**0.1**
Nickel	30	3.909	7.046	7.272	5.997	5.129	1.095	11.74	6.638	10.18	5.603
Potassium	NAV	4738	3611	9811	5084	6139	424.6	265.2	2133	997.4	5385
Selenium	0.21	**0.45**	**0.683**	ND	ND	**0.49**	ND	ND	**1.126**	**1.046**	**1.198**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	81.76	174	158.7	147.4	153.7	88.89	115.3	130.1	50.75	319.1
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**16.48**	**21.78**	**47.65**	**33.17**	**24.74**	**11.45**	**10.93**	**13.96**	**19.15**	**16.68**
Zinc	8.5	**54.9**	**57.21**	**79.91**	**59.09**	**58.7**	**9.468**	**181.7**	**84.81**	**157.7**	**58.14**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3428.22 B41 (6-12") 3/24/1998	3432.02 B42 (6-12") 3/25/1998	3432.04 B43 (6-12") 3/25/1998	3432.06 B44 (2-8") 3/25/1998	3432.08 B45 (3-9") 3/25/1998	3432.10 B46 (6-12") 3/25/1998	3432.12 B47 (5-11") 3/25/1998	3432.14 B48 (6-12") 3/25/1998	3432.16 B49 (3-9") 3/25/1998	3432.18 B50 (4-10") 3/25/1998
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.12J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.13J	0.69	0.33	0.24	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	0.13J	1.0	0.35	**3.0**	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.11J	0.84	0.47	0.16J	ND	ND	0.12J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.21	0.99	0.67	0.35	0.16J	ND	0.14J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.35B	0.26JB	0.42B	0.14JB	0.17JB	0.22JB	0.15JB	0.17JB	ND	0.19JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.38	1.8	0.82	0.53	ND	ND	ND	0.15J	ND	0.18J
Dibenz[a,h]anthracene	18.4	ND	0.39	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	0.14J	ND	ND
Di-n-butylphthalate	200	0.67JB	0.56JB	1.4B	1.2B	1.2B	1.1B	2.1B	2.0B	0.4JB	0.96JB
Fluoranthene	122	0.23	1.6	0.29	0.58	0.18J	ND	0.21J	0.14J	ND	0.16J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.56	ND	0.19J	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.22	0.72	ND	0.32	0.2J	ND	0.17J	ND	ND	ND
Pyrene	78.5	0.30	1.5	0.29	0.53	0.26J	ND	0.23J	0.14J	ND	0.16J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.133	0.05	0.059	0.022	0.041	0.035	0.033	0.035	0.073	0.089
4,4'-DDE	0.596	0.456	0.111	0.098	0.186	0.275	0.09	0.128	0.086	0.14	0.234
4,4'-DDT	0.0035	**0.176**	**0.176**	**0.312**	**0.225**	**0.467**	**0.18**	**0.138**	**0.27**	**0.461**	**0.485**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	3428.22 B41 (6-12") 3/24/1998	3432.02 B42 (6-12") 3/25/1998	3432.04 B43 (6-12") 3/25/1998	3432.06 B44 (2-8") 3/25/1998	3432.08 B45 (3-9") 3/25/1998	3432.10 B46 (6-12") 3/25/1998	3432.12 B47 (5-11") 3/25/1998	3432.14 B48 (6-12") 3/25/1998	3432.16 B49 (3-9") 3/25/1998	3432.18 B50 (4-10") 3/25/1998
Metals (mg/kg)											
Aluminum	50	**6090**	**5180**	**10420**	**8551**	**1757**	**4696**	**3458**	**8286**	**3854**	**5679**
Antimony	0.27	**1.38**	**0.69**	**2.23**	**0.696**	**5.67**	**0.979**	**0.451**	**0.969**	**0.565**	**0.618**
Arsenic	9.9	**9.922**	**11.23**	**16.21**	**10**	4.379	8.333	4.976	8.409	8.337	7.217
Barium	283	84.03	49.63	54.09	49.56	28.44	82.1	34.5	26.35	35.95	21.4
Beryllium	10	0.6972	1.5599	1.267	0.5654	0.18	0.6231	0.3267	0.7705	0.4051	0.5608
Cadmium	0.36	**0.8425**	0.1605	ND	0.2881	0.1212	0.1333	0.2149	ND	0.0833	ND
Calcium	NAV	1478	1111	1687	1054	475.2	810.8	529.5	753.4	1062	640.5
Chromium	0.4	**56.51**	**46.02**	**134**	**37.94**	**10.56**	**43.98**	**18.74**	**61.33**	**37.89**	**35.65**
Cobalt	13	1.863	1.767	1.629	2.152	0.9717	2.176	1.182	1.755	0.9757	2.081
Copper	28	**58.75**	**61.41**	25.73	**39.89**	9.757	**41.31**	19.19	12.98	8.154	10.21
Iron	NAV	16560	16950	29340	14440	3999	12530	7228	18920	11470	14250
Lead	11	**82.95**	**49.1**	**37.93**	**54.89**	**28.98**	**28.24**	**56.02**	**36.42**	**18.73**	**27.98**
Magnesium	NAV	1584	1388	4127	1113	286.6	1346	619.9	2045	1166	1031
Manganese	220	50.74	49.29	41.07	60.75	17.01	27.42	26.87	37.7	21.86	49.01
Mercury	0.00051	**0.136**	**0.113**	**0.078**	**0.095**	**0.113**	**0.102**	**0.14**	**0.166**	**0.087**	**0.057**
Nickel	30	10.42	6.326	6.554	6.718	4.667	6.517	3.272	5.857	3.606	4.805
Potassium	NAV	4839	3470	9093	2890	307.1	3777	1120	6228	3119	2451
Selenium	0.21	ND	ND	ND	**0.334**	ND	**0.777**	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	105.6	61.41	162.2	94.87	52.82	123.6	67.61	124.6	43.61	32.32
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**25.89**	**19.26**	**43.12**	**16.99**	**8.171**	**18.76**	**11.81**	**33.25**	**12.98**	**21.22**
Zinc	8.5	**129.7**	**68.39**	**78.77**	**87.89**	**35.31**	**40.08**	**44.42**	**50.77**	**42.09**	**45.21**

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Lab Sample ID		3432.20	4748.02	4748.04	4748.06	4748.08	4748.10	4748.12	4748.14	4748.16	4748.18
Field Sample Location	ESC (mg/kg)	B51 (3-9")	B52 (6-12")	B53 (4-10")	B54 (2-8")	B55 (6-12")	B56 (6-12")	B57 (6-12")	B58 (4-11")	B59 (3-9")	B60 (6-12")
Sample Date		3/25/1998	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.12J	ND	0.39J	ND	0.2J	ND	ND	0.15J	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.32J	ND	0.25J	ND	ND	0.13J	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.5J	ND	0.35J	ND	ND	0.2J	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.22J	ND	0.17J	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.38J	ND	0.25J	ND	ND	0.15J	ND
bis(2-Ethylhexyl)phthalate	0.925	0.44B	0.21JB	0.19JB	0.22JB	0.23JB	0.13JB	0.19JB	0.19JB	0.25JB	0.19JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.12J	0.13J	ND	0.59J	0.12J	0.3J	ND	ND	0.23J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.36JB	0.49JB	1.1JB	1.1JB	1.1JB	0.32JB	1.1JB	1.6B	0.51JB	0.8JB
Fluoranthene	122	ND	0.28J	0.12J	0.92J	0.18J	0.33J	ND	ND	0.26J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.22J	ND	0.15J	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.15J	ND	0.33J	ND	0.14J	ND	ND	0.12J	ND
Pyrene	78.5	ND	0.23J	ND	0.79J	0.16J	0.32J	ND	ND	0.24J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.008	ND	0.05	**0.781**	0.026	0.714	ND	0.003	0.028	ND
4,4'-DDE	0.596	0.044	0.005	0.037	0.264	0.05	0.56	0.002	0.006	0.252	0.004
4,4'-DDT	0.0035	**0.055**	**0.011**	**0.112**	**0.28**	**0.046**	**0.097**	**0.004**	**0.023**	**0.499**	0.003
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID		3432.20	4748.02	4748.04	4748.06	4748.08	4748.10	4748.12	4748.14	4748.16	4748.18
Field Sample Location	ESC (mg/kg)	B51 (3-9")	B52 (6-12")	B53 (4-10")	B54 (2-8")	B55 (6-12")	B56 (6-12")	B57 (6-12")	B58 (4-11")	B59 (3-9")	B60 (6-12")
Sample Date		3/25/1998	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999	8/26/1999
Metals (mg/kg)											
Aluminum	50	**6382**	**20800**	**15300**	**19000**	**11500**	**7960**	**11600**	**13500**	**8210**	**14000**
Antimony	0.27	**0.707**	ND	ND	**1.12**	ND	**3.53**	ND	ND	ND	ND
Arsenic	9.9	9.589	**27.2**	**19.1**	**46.9**	**19.5**	7.64	**20.5**	**22.6**	**12.7**	5.53
Barium	283	29.13	26.9	35.2	27.6	39.4	38.6	7.42	5.25	40.9	21.8
Beryllium	10	0.6929	2.65	2.14	2.35	0.753	0.623	1.55	1.76	0.513	0.379
Cadmium	0.36	ND	**2.43**	**1.96**	**2.7**	**0.868**	**0.94**	**1.19**	**1.22**	**0.816**	0.242
Calcium	NAV	1341	1130	2270	1020	598	1200	260	931	364	190
Chromium	0.4	**48.86**	**333**	**237**	**293**	**84.3**	**60.4**	**187**	**200**	**48.5**	**21.9**
Cobalt	13	1.857	1.17	1.08	1.2	1.53	2.23	0.641	0.493	3.32	2.5
Copper	28	**30.46**	23.3	20.5	24.2	**33.6**	13.6	4.81	5.68	7.01	1.39
Iron	NAV	17640	68500	53200	67000	26000	20200	37500	37700	24100	14300
Lead	11	**28.4**	**38.8**	**16**	**61.5**	**41.7**	**34.6**	6.53	5.24	**23.1**	7.33
Magnesium	NAV	1523	10800	7670	9040	2510	1330	4420	5510	703	855
Manganese	220	45.29	35.1	28.6	28	26.4	24.5	21.4	15	55.3	38.6
Mercury	0.00051	**0.102**	**0.077**	**0.132**	**0.051**	**0.151**	**0.226**	ND	ND	**0.117**	**0.023**
Nickel	30	5.213	7.81	7.18	9.4	7.84	7.38	6.28	4.51	9.49	7.05
Potassium	NAV	4066	24100	18400	21100	4420	2980	10200	12600	1480	618
Selenium	0.21	ND	1.42	**1.74**	**2.23**	**1.77**	ND	**2.46**	**1.33**	**1.9**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	37.33	165	325	154	187	97.1	76.3	180	83.2	94.3
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**23.79**	**125**	**83.5**	**120**	**55.1**	**55.2**	**72.5**	**81.6**	**65.5**	**29.2**
Zinc	8.5	**69.75**	**87.7**	**82.3**	**114**	**48.7**	**103**	**43.5**	**38.5**	**41.6**	**33.1**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4748.20 B61 (4-10") 8/26/1999	4754.02 B63 (5-11") 8/27/1999	4754.04 B64 (6-12") 8/27/1999	4754.06 B65 (5-11") 8/27/1999	4754.08 B66 (5-11") 8/27/1999	4754.10 B67 (6-12") 8/27/1999	4754.12 B68 (5-11") 8/27/1999	4754.14 B69 (5-11") 8/27/1999	4754.16 B70 (0-6") 8/27/1999	4754.18 B71 (5-11") 8/27/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52J
Benzo[a]anthracene	5.21	ND	0.15J	0.58J	ND	ND	ND	ND	ND	ND	1.4
Benzo[a]pyrene	1.52	ND	0.13J	0.49J	ND	ND	ND	ND	ND	ND	1.3
Benzo[b]fluoranthene	59.8	ND	0.13J	0.51J	ND	ND	ND	ND	ND	ND	1.2
Benzo[g,h,I]perylene	119	ND	ND	0.24J	ND	ND	ND	ND	ND	ND	0.61J
Benzo[k]fluoranthene	148	ND	0.12J	0.39J	ND	ND	ND	ND	ND	ND	1.1
bis(2-Ethylhexyl)phthalate	0.925	0.26JB	0.4JB	0.14JB	0.24JB	0.12JB	0.15JB	0.2JB	0.12JB	0.19JB	0.29JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.16J	0.78J	ND	ND	ND	0.12J	ND	ND	1.4
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18J
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.2J	0.14J	ND	ND	ND	ND
Di-n-butylphthalate	200	1.8B	2.2B	0.97JB	1.1JB	0.28JB	0.29JB	0.72JB	0.84JB	1.3B	0.46JB
Fluoranthene	122	ND	0.31J	0.72J	ND	ND	ND	0.13J	ND	ND	3.4
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.21J	ND	ND	ND	ND	ND	ND	0.62J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8
Pyrene	78.5	ND	0.26J	1.0J	ND	ND	ND	0.14J	ND	ND	2.5
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.001	0.024	ND	0.003	0.009	**0.961**	ND	ND	0.025	ND
4,4'-DDE	0.596	0.002	0.048	ND	0.013	0.009	0.21	ND	0.003	0.064	0.005
4,4'-DDT	0.0035	ND	**0.015**	0.003	**0.174**	**0.011**	**0.08**	ND	0.002	**0.33**	**0.008**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4748.20 B61 (4-10") 8/26/1999	4754.02 B63 (5-11") 8/27/1999	4754.04 B64 (6-12") 8/27/1999	4754.06 B65 (5-11") 8/27/1999	4754.08 B66 (5-11") 8/27/1999	4754.10 B67 (6-12") 8/27/1999	4754.12 B68 (5-11") 8/27/1999	4754.14 B69 (5-11") 8/27/1999	4754.16 B70 (0-6") 8/27/1999	4754.18 B71 (5-11") 8/27/1999
Metals (mg/kg)											
Aluminum	50	**4480**	**13600**	**18700**	**15700**	**19100**	**11700**	**11700**	**4900**	**17400**	**20200**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	4.05	**12.6**	**51.3**	**29.4**	**24.4**	**14.1**	6.95	4.79	**22.3**	**24.2**
Barium	283	6.32	74	25.3	6.35	15	38.2	17.7	9.32	29.3	22.9
Beryllium	10	0.33	1.95	2.14	2.18	2.19	0.962	1.23	0.361	2.13	1.91
Cadmium	0.36	**0.564**	**1.36**	0.339	**0.385**	**0.42**	0.36	0.308	0.281	**0.557**	0.257
Calcium	NAV	88.7	5780	555	290	447	2590	840	105	997	694
Chromium	0.4	**39.1**	**215**	**251**	**256**	**266**	**91.4**	**114**	**40.4**	**258**	**239**
Cobalt	13	1.27	2.03	1.3	0.874	1.36	2.38	1.87	1.32	1.4	1.14
Copper	28	ND	15.9	24.4	12.2	12	14.9	4.94	4.48	12.8	14.7
Iron	NAV	12400	48800	50900	49900	54000	28600	38200	14200	58200	48000
Lead	11	2.97	7.58	**16.1**	4.73	7.94	7.56	4.98	2.86	**17.5**	**45.5**
Magnesium	NAV	785	6900	7490	7580	8040	3340	4400	839	8190	7280
Manganese	220	28.6	52.5	37.6	19.6	36.7	55.7	41.7	27.2	27.6	41.3
Mercury	0.00051	**0.021**	ND	**0.084**	ND	ND	**0.028**	ND	ND	**0.026**	ND
Nickel	30	2.71	17.6	6.65	6.47	5.95	6.75	5.61	2.58	7.59	5.77
Potassium	NAV	1520	16200	16700	17300	18000	6420	10600	1900	18800	16100
Selenium	0.21	ND	**1.53**	**0.886**	ND	**0.848**	**0.882**	ND	ND	**0.766**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	56	279	228	191	367	151	150	174	171	166
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**36.3**	**71.6**	**118**	**112**	**123**	**57.2**	**64.2**	**37.3**	**106**	**112**
Zinc	8.5	**16.8**	**77.3**	**59.8**	**48.9**	**83.4**	**49.3**	**35**	**16.4**	**77**	**69.5**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4754.20 B72 (7-13") 8/27/1999	4754.22 B73 (6-12") 8/27/1999	4760.02 B74 (6-12") 8/30/1999	4760.04 B75 (6-12") 8/30/1999	4760.06 B76 (3-9") 8/30/1999	4760.08 B77 (6-12") 8/30/1999	4760.10 B78 (6-12") 8/30/1999	4760.12 B79 (3-9") 8/30/1999	4760.14 B80 (6-12") 8/30/1999	4760.16 B81 (6-12") 8/30/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.4J	0.23J	ND	ND	0.14J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.39J	0.3J	ND	ND	0.14J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.42J	0.32J	ND	ND	0.14J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.23J	0.17J	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.43J	0.32J	ND	ND	0.13J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.16JB	0.11JB	0.23JB	0.26JB	0.22JB	0.18JB	0.23JB	0.23JB	0.19JB	0.22JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	0.5J	0.3J	ND	ND	0.21J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	0.12J	ND	0.14J	ND	0.15J
Di-n-butylphthalate	200	0.94JB	0.67JB	0.34JB	1.3B	0.24JB	0.23JB	1.JB	0.26JB	0.44JB	1.JB
Fluoranthene	122	ND	0.12J	ND	0.82J	0.23J	ND	ND	0.31J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.23J	0.17J	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.45J	ND	ND	ND	0.21J	ND	ND
Pyrene	78.5	ND	0.12J	ND	0.71J	0.26J	ND	ND	0.3J	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	**1.766**	0.012	0.689	0.115	ND	ND	0.23	ND	0.414
4,4'-DDE	0.596	ND	0.166	0.039	0.491	0.137	ND	0.001	0.097	ND	**0.751**
4,4'-DDT	0.0035	ND	**0.2**	**0.085**	**0.156**	**0.246**	0.003	0.003	**0.054**	ND	**1.98**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4754.20 B72 (7-13") 8/27/1999	4754.22 B73 (6-12") 8/27/1999	4760.02 B74 (6-12") 8/30/1999	4760.04 B75 (6-12") 8/30/1999	4760.06 B76 (3-9") 8/30/1999	4760.08 B77 (6-12") 8/30/1999	4760.10 B78 (6-12") 8/30/1999	4760.12 B79 (3-9") 8/30/1999	4760.14 B80 (6-12") 8/30/1999	4760.16 B81 (6-12") 8/30/1999
Metals (mg/kg)											
Aluminum	50	**20100**	**10400**	**15100**	**16400**	**11600**	**21600**	**13700**	**14300**	**9650**	**11700**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	**43.3**	**10**	**16**	**21.8**	9.59	**28.6**	**27.1**	**13.4**	**16.4**	**16.8**
Barium	283	11.3	66.1	29.1	32	47.4	18.2	17.1	41.7	17.7	16.7
Beryllium	10	2.71	0.738	1.42	1.85	1.15	2.63	1.86	1.47	0.64	1.41
Cadmium	0.36	**0.612**	0.272	0.336	**0.42**	0.33	**0.831**	**0.458**	**0.385**	0.257	**0.612**
Calcium	NAV	481	439	752	599	750	702	482	629	941	635
Chromium	0.4	**314**	**55.6**	**171**	**221**	**134**	**330**	**208**	**143**	**74.8**	**149**
Cobalt	13	1.17	3.33	1.61	1.3	1.47	1.25	0.697	2.33	1.55	1.4
Copper	28	5.72	22	4.34	14.9	12.4	24.5	15.1	1.92	21.8	**30.9**
Iron	NAV	67600	24900	36800	52000	35300	71100	44200	42000	17800	35100
Lead	11	**13.2**	**34.3**	**16**	**25**	**15.1**	**32.3**	**15**	7.38	**33.8**	**41.3**
Magnesium	NAV	9930	1490	5110	6960	3980	9920	5670	4990	2270	4300
Manganese	220	24	22.8	39.8	27.7	25.1	28	23.7	28.1	30.1	29.3
Mercury	0.00051	**0.037**	**0.286**	ND	ND	**0.036**	ND	ND	ND	ND	ND
Nickel	30	7.06	10.4	5.19	6.37	5.19	7.82	5.54	6.01	7.09	6.91
Potassium	NAV	23200	3900	10800	16000	9700	23400	13500	11500	3820	9980
Selenium	0.21	ND	**1.43**	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	156	199	471	126	127	662	86.3	218	109	116
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**125**	**42.3**	**84**	**98**	**64.5**	**125**	**69.8**	**77.5**	**34**	**59.2**
Zinc	8.5	**61.4**	**61.7**	**49.9**	**54.4**	**42.3**	**84.1**	**51.3**	**43.6**	**76**	**85.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4760.18 B82 (6-12") 8/30/1999	4760.20 B83 (6-12") 8/30/1999	4760.22 B84 (6-12") 8/30/1999	4760.24 B85 (4-10") 8/30/1999	4760.26 B86 (6-12") 8/30/1999	4760.28 B87 (5-11") 8/30/1999	4760.30 B88 (5-11") 8/30/1999	4762.02 B89 (3-9") 8/31/1999	4762.04 B90 (6-12") 8/31/1999	4762.06 B91 (4-10") 8/31/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	0.12J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	0.13J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	0.16J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	0.13J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.2JB	3.1B	0.26JB	0.2JB	0.19JB	0.25JB	0.15JB	0.24JB	0.59JB	0.21JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	0.19J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	0.24J	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.86JB	1.2B	2.2B	1.3B	1.6B	0.31JB	0.68JB	0.35JB	0.25JB	0.36JB
Fluoranthene	122	0.13J	ND	ND	ND	ND	ND	0.28J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	0.2J	ND	ND	ND
Pyrene	78.5	0.13J	ND	ND	ND	ND	ND	0.27J	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.28	ND	0.005	0.1	ND	ND	0.659	0.111	0.022	0.048
4,4'-DDE	0.596	0.181	0.003	0.017	0.061	ND	ND	0.28	0.103	0.004	0.016
4,4'-DDT	0.0035	**0.124**	**0.01**	**0.076**	**0.043**	ND	ND	**0.077**	**0.125**	0.003	**0.015**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4760.18 B82 (6-12") 8/30/1999	4760.20 B83 (6-12") 8/30/1999	4760.22 B84 (6-12") 8/30/1999	4760.24 B85 (4-10") 8/30/1999	4760.26 B86 (6-12") 8/30/1999	4760.28 B87 (5-11") 8/30/1999	4760.30 B88 (5-11") 8/30/1999	4762.02 B89 (3-9") 8/31/1999	4762.04 B90 (6-12") 8/31/1999	4762.06 B91 (4-10") 8/31/1999
Metals (mg/kg)											
Aluminum	50	**9940**	**17900**	**18600**	**12500**	**17800**	**17000**	**15100**	**14100**	**8780**	**12400**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	**13.1**	**40.4**	**21.7**	**8.21**	**21.2**	**40.7**	**18.8**	**25.3**	**7.51**	9.26
Barium	283	84.2	10.5	15	57.3	15.1	83	32.5	53	22.8	47.9
Beryllium	10	1.38	2.36	2.15	1.19	2.02	2.05	1.74	1.06	0.632	0.931
Cadmium	0.36	**0.483**	**0.646**	**0.667**	0.242	**0.378**	**0.527**	**0.52**	**0.608**	**0.538**	0.192
Calcium	NAV	1690	624	735	655	484	1050	1180	2050	612	349
Chromium	0.4	**152**	**274**	**259**	**66.6**	**240**	**242**	**191**	**94.8**	**69.7**	**95.8**
Cobalt	13	1.1	1.02	1.14	7.25	1.09	1.89	1.34	2.66	2.25	1.83
Copper	28	8.95	16.3	24.5	**35.2**	13.1	24.5	15.3	16.1	8.91	21.4
Iron	NAV	37600	57700	53900	19100	46200	52700	44600	32100	21200	26400
Lead	11	**14.7**	8.58	**18.6**	**58.8**	6.57	**35.7**	**32.1**	**56.9**	**35.7**	**37.6**
Magnesium	NAV	4260	8130	7620	1610	6920	6780	5790	2850	1730	2920
Manganese	220	22.9	21.5	30.4	39.4	31	49.2	71.6	40.9	38.8	24.4
Mercury	0.00051	**0.034**	ND	**0.051**	**0.09**	ND	**0.059**	**0.084**	**0.261**	**0.062**	**0.05**
Nickel	30	5.03	6.26	7.73	21.3	5.26	7.88	6.31	8.46	5.58	5.75
Potassium	NAV	10500	19100	17800	3980	15800	15300	13400	6530	3840	6750
Selenium	0.21	**1**	ND	ND	**1.17**	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	1.09	ND	ND	ND
Sodium	NAV	130	96.5	145	242	142	185	117	167	126	215
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**66.7**	**115**	**113**	**44.3**	**113**	**105**	**80.5**	**57.5**	**44.4**	**50.7**
Zinc	8.5	**52.5**	**56.4**	**76.7**	**47**	**49**	**120**	**115**	**37.1**	**82.6**	**47.9**

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Lab Sample ID		4762.08	4762.10	4762.12	4762.14	4762.16	4762.18	4762.20	4762.22	4762.24	4762.26
Field Sample Location	ESC (mg/kg)	B92 (6-12")	B93 (2-8")	B94 (4-10")	B95 (6-12")	B96 (6-12")	B97 (6-12")	B98 (3-9")	B99 (4-10")	B100 (6-12")	B101 (6-12")
Sample Date		8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999	8/31/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	0.24J	ND	ND	ND	0.29J	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	0.36J	ND	ND	0.62J	0.21J	ND	0.11J	ND	ND
Benzo[a]pyrene	1.52	ND	0.38J	ND	ND	0.37J	0.26J	ND	0.12J	ND	ND
Benzo[b]fluoranthene	59.8	ND	0.34J	ND	ND	0.64J	0.31J	ND	0.25J	0.15J	ND
Benzo[g,h,I]perylene	119	ND	0.2J	ND	ND	0.16J	0.19J	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	0.29J	ND	ND	0.66J	0.23J	ND	0.16J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.27JB	0.22JB	0.2JB	0.2JB	0.28JB	0.26JB	0.19JB	0.25JB	0.23JB	0.23JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.47J	ND	ND	1.1J	0.27J	0.13J	0.23J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	0.13J	ND	0.32J	0.4J	0.23J	0.14J	0.23J	0.14J	0.12J
Di-n-butylphthalate	200	0.84JB	0.29JB	0.28JB	0.87JB	0.8JB	1.1JB	0.79JB	1.5B	0.26JB	1.1JB
Fluoranthene	122	ND	0.34J	ND	ND	1.3	0.29J	0.12J	0.17J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.16J	ND	ND	0.17J	0.19J	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	**0.17J**	ND	ND	ND	**0.23J**	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	0.35J	ND	ND	ND	0.14J	ND
Pyrene	78.5	ND	0.5J	ND	ND	1.1J	0.32J	0.19J	0.18J	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.002	ND	0.01	0.124	**1.165**	ND	0.069	0.006	0.011	ND
4,4'-DDE	0.596	0.003	ND	0.008	0.087	0.492	0.003	0.045	0.021	0.012	ND
4,4'-DDT	0.0035	**0.006**	ND	0.002	**0.157**	**0.699**	**0.014**	**0.148**	**0.006**	**0.007**	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4762.08 B92 (6-12") 8/31/1999	4762.10 B93 (2-8") 8/31/1999	4762.12 B94 (4-10") 8/31/1999	4762.14 B95 (6-12") 8/31/1999	4762.16 B96 (6-12") 8/31/1999	4762.18 B97 (6-12") 8/31/1999	4762.20 B98 (3-9") 8/31/1999	4762.22 B99 (4-10") 8/31/1999	4762.24 B100 (6-12") 8/31/1999	4762.26 B101 (6-12") 8/31/1999
Metals (mg/kg)											
Aluminum	50	**17400**	**19100**	**19700**	**15900**	**12900**	**15100**	**12900**	**14900**	**16800**	**21800**
Antimony	0.27	ND	ND	ND	ND	**1.88**	ND	ND	ND	ND	**0.455**
Arsenic	9.9	**31.0**	**26.5**	**21.5**	**20.1**	**14.5**	**15.5**	9.72	**11.3**	**20.6**	**21.7**
Barium	283	17.6	15.2	81.5	40.1	53.1	25.5	27.8	42.5	29.7	31.4
Beryllium	10	1.47	2.32	1.91	1.49	0.907	1.1	1.03	1.51	1.8	1.73
Cadmium	0.36	0.244	**0.784**	**0.693**	**0.965**	**0.648**	0.281	0.295	0.336	**0.522**	0.331
Calcium	NAV	525	1140	1590	1430	1120	647	583	762	842	736
Chromium	0.4	**187**	**273**	**221**	**170**	**101**	**124**	**129**	**84.7**	**206**	**210**
Cobalt	13	1.45	1.06	1.76	2.2	2.91	2.41	1.92	2.56	2.35	1.58
Copper	28	17.7	17.7	**138**	**88.6**	**181**	4.44	4.51	3.31	14.2	16.4
Iron	NAV	38500	54700	46200	39600	25600	39400	29000	35600	45500	39000
Lead	11	**17.3**	10.8	**209**	**50.4**	**79.5**	**11.3**	**18.3**	**11.6**	**22.9**	**28.3**
Magnesium	NAV	5100	8130	6580	5150	2950	2880	3060	3530	5950	5690
Manganese	220	47.2	22.8	80	53.5	123	31.9	31.7	80	25.5	55.6
Mercury	0.00051	**0.051**	**0.063**	**0.064**	**0.099**	**0.162**	**0.094**	**0.243**	**0.084**	**0.131**	**0.047**
Nickel	30	5.2	7.67	7.65	8.68	10.4	9.02	6.54	8.89	9.27	6.15
Potassium	NAV	10600	18700	14800	11400	6190	5850	6300	6720	13600	12000
Selenium	0.21	ND	ND	ND	ND	**0.698**	**0.706**	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	0.719	ND	ND	ND	ND	ND
Sodium	NAV	120	132	234	130	146	174	120	169	142	136
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**88.7**	**116**	**101**	**82**	**59.7**	**95.5**	**75.9**	**50.6**	**96.8**	**101**
Zinc	8.5	**57.4**	**82.8**	**316**	**94.5**	**402**	**47.2**	**62**	**92.3**	**50**	**65**

See Notes at end of Table

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Lab Sample ID		4762.28	4774.02	4774.04	4774.06	4774.08	4774.10	4774.12	4774.14	4774.16	4774.18
Field Sample Location	ESC (mg/kg)	B102 (6-12")	B103 (6-12")	B104 (3-9")	B105 (0-6")	B106 (0-6")	B107 (4-10")	B108 (5-11")	B109 (6-12")	B110 (9-15")	B111 (3-9")
Sample Date		8/31/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999	9/7/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	0.18J	ND	ND	ND	ND	ND	0.12J	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	0.88J	0.15J	0.14J	ND	ND	ND	0.65J	0.15J
Anthracene	1,480	ND	ND	0.4J	0.17J	ND	ND	ND	ND	0.35J	ND
Benzo[a]anthracene	5.21	ND	0.2J	2.3	0.50J	0.24J	ND	ND	ND	1.6	0.37J
Benzo[a]pyrene	1.52	ND	0.19J	**3.6**	0.52J	0.32J	ND	ND	ND	**2.6**	0.39J
Benzo[b]fluoranthene	59.8	ND	0.21J	3.5	0.51J	0.37J	ND	ND	ND	2.5	0.39J
Benzo[g,h,I]perylene	119	ND	0.13J	1.8	0.25J	ND	ND	ND	ND	0.92J	0.22J
Benzo[k]fluoranthene	148	ND	0.21J	3.0	0.45J	0.27J	ND	ND	ND	2.2	0.32J
bis(2-Ethylhexyl)phthalate	0.925	0.2JB	0.24JB	0.22JB	0.26JB	0.26JB	0.31JB	0.27JB	0.3JB	0.23JB	0.2JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	0.26J	2.6	0.66J	0.35J	ND	ND	ND	1.9	0.5J
Dibenz[a,h]anthracene	18.4	ND	ND	0.73J	ND	ND	ND	ND	ND	0.35J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	0.18J	ND	ND	ND
Di-n-butylphthalate	200	1.1JB	1.3B	1.5B	0.56JB	1.4B	0.66JB	1.7B	1.5B	1.2B	0.52JB
Fluoranthene	122	ND	0.43J	2.7	0.85J	0.35J	ND	ND	ND	2.1	0.63J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.12J	1.9	0.24J	ND	ND	ND	ND	0.96J	0.2J
Naphthalene	0.0994	ND	ND	**0.29J**	ND	ND	ND	ND	ND	**0.2J**	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	0.25J	0.59J	0.47J	0.16J	ND	ND	ND	0.76J	0.42J
Pyrene	78.5	ND	0.4J	3.1	0.92J	0.43J	ND	ND	ND	2.4	0.74J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.007	0.381	ND	0.081	0.05	0.003	ND	**1.031**	0.084	0.062
4,4'-DDE	0.596	0.01	0.316	0.01	0.06	0.076	0.007	ND	**0.81**	0.064	0.095
4,4'-DDT	0.0035	ND	**0.38**	**0.051**	**0.231**	**0.085**	**0.007**	ND	**0.03**	**0.061**	**0.065**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4762.28 B102 (6-12") 8/31/1999	4774.02 B103 (6-12") 9/7/1999	4774.04 B104 (3-9") 9/7/1999	4774.06 B105 (0-6") 9/7/1999	4774.08 B106 (0-6") 9/7/1999	4774.10 B107 (4-10") 9/7/1999	4774.12 B108 (5-11") 9/7/1999	4774.14 B109 (6-12") 9/7/1999	4774.16 B110 (9-15") 9/7/1999	4774.18 B111 (3-9") 9/7/1999
Metals (mg/kg)											
Aluminum	50	**24700**	**18200**	**12800**	**15700**	**17900**	**22700**	**17800**	**18900**	**10200**	**14900**
Antimony	0.27	ND	**0.461**	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	**32.1**	**23.6**	8.63	**13.5**	**13.9**	**26**	**28.9**	**30.3**	7.6	**11.5**
Barium	283	17.3	75.7	35.3	41.1	42.2	13.1	10.9	41.6	29.2	34.1
Beryllium	10	2.71	1.95	0.797	1.12	1.32	2.81	1.4	1.76	0.709	0.994
Cadmium	0.36	**0.924**	**1.43**	**0.411**	**0.44**	**0.443**	**0.84**	0.269	**0.835**	0.348	0.299
Calcium	NAV	964	1340	528	854	984	808	429	1230	574	722
Chromium	0.4	**338**	**211**	**68.6**	**96.8**	**132**	**333**	**178**	**213**	**61.7**	**92**
Cobalt	13	1.32	2.03	4.18	3.27	4.12	1.22	1.22	2.03	3.21	2.46
Copper	28	20.9	**34**	3.68	16.1	9.78	2.95	23.1	**33.4**	3.68	4.95
Iron	NAV	74100	45500	31800	33600	39500	66600	33800	43500	28800	29400
Lead	11	10.3	**60.1**	**13.4**	**28.3**	**39.9**	**11.2**	4.84	**83.1**	**15.7**	**19**
Magnesium	NAV	10500	6060	1210	3260	4200	9940	4880	6050	1260	3070
Manganese	220	42.7	44.1	89.5	64.6	123	33.7	31.7	63.5	71.1	59.7
Mercury	0.00051	ND	**0.378**	**0.047**	**0.141**	**0.051**	**0.046**	ND	**0.068**	ND	ND
Nickel	30	7.82	10.6	10.5	9.53	8.91	6.94	4.99	8.06	8.78	6.89
Potassium	NAV	24100	13500	2580	6920	9120	23200	9910	13500	2630	6430
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	**0.856**	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	181	117	131	243	143	138	100	93.3	75.9	107
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**134**	**98.7**	**75**	**63.2**	**71.9**	**140**	**85.3**	**104**	**67.6**	**54.5**
Zinc	8.5	**69.7**	**102**	**49**	**61.3**	**71.3**	**62.8**	**43**	**129**	**54.6**	**42.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4774.20 B112 (6-12") 9/7/1999	4774.22 B113 (6-12") 9/7/1999	4777.02 B114 (4-10") 9/8/1999	4777.04 B115 (6-12") 9/8/1999	4777.06 B116 (0-6") 9/8/1999	4777.08 B117 (4-10") 9/8/1999	4777.10 B118 (4-10") 9/8/1999	4777.12 B119 (0-6") 9/8/1999	4777.14 B120 (6-12") 9/8/1999	4777.16 B121 (0-6") 9/8/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	0.18J	0.24J
Acenaphthene	20	ND	ND	0.53J	ND	ND	ND	ND	ND	ND	0.19J
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	0.15J	ND	2.2	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.75J	ND	4.1	0.28J	0.31J	0.30J	ND	ND	0.22J	ND
Benzo[a]pyrene	1.52	0.83J	ND	**3.3**	0.3J	0.33J	0.3J	ND	ND	0.21J	ND
Benzo[b]fluoranthene	59.8	2.2	ND	3.1	0.27J	0.42J	0.31J	ND	ND	0.17J	ND
Benzo[g,h,I]perylene	119	0.42J	ND	1.7	0.17J	ND	0.12J	ND	ND	ND	ND
Benzo[k]fluoranthene	148	1.3	ND	2.8	0.29J	0.32J	0.27J	ND	ND	0.18J	ND
bis(2-Ethylhexyl)phthalate	0.925	0.18JB	0.24JB	0.3JB	0.19JB	0.31JB	0.3JB	0.15JB	1.5JBD	0.15JB	0.34JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	1.8	ND	3.9	0.4J	0.41J	0.37J	ND	ND	0.31J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	0.68J	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	0.33J	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.5B	2.3B	0.73JB	0.64JB	1.4B	0.45JB	0.6JB	0.51JBD	0.55JB	1.4B
Fluoranthene	122	0.45J	ND	9.3	0.58J	0.6J	0.59J	ND	ND	0.32J	ND
Fluorene	122	ND	ND	0.8J	ND	ND	ND	ND	ND	ND	0.26J
Indeno[1,2,3-cd]pyrene	109	0.45J	ND	1.7	0.16J	ND	0.13J	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	8.3	0.35J	0.34J	0.28J	ND	ND	0.25J	0.54J
Pyrene	78.5	1.0J	ND	7.1	0.72J	0.64J	0.59J	ND	0.73JD	0.44J	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.057	0.138	0.008	0.085	0.019	0.183	0.024	0.023	0.007	0.068
4,4'-DDE	0.596	0.022	0.069	0.062	0.012	0.013	0.131	0.015	0.052	ND	0.041
4,4'-DDT	0.0035	**0.013**	**0.06**	**0.016**	**0.019**	**0.029**	**0.027**	**0.013**	**0.103**	**0.006**	**0.02**
alpha-Chlordane	0.224	ND	ND	ND	ND	0.004	ND	ND	0.003	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	0.005	ND	ND	0.005	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4774.20 B112 (6-12") 9/7/1999	4774.22 B113 (6-12") 9/7/1999	4777.02 B114 (4-10") 9/8/1999	4777.04 B115 (6-12") 9/8/1999	4777.06 B116 (0-6") 9/8/1999	4777.08 B117 (4-10") 9/8/1999	4777.10 B118 (4-10") 9/8/1999	4777.12 B119 (0-6") 9/8/1999	4777.14 B120 (6-12") 9/8/1999	4777.16 B121 (0-6") 9/8/1999
Metals (mg/kg)											
Aluminum	50	**17400**	**12000**	**13600**	**11000**	**12500**	**10800**	**17200**	**7840**	**11100**	**10200**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	**0.571**	ND	ND
Arsenic	9.9	**17.6**	**16.8**	**24.9**	**12.2**	**16.2**	**11.8**	**24.7**	5.11	9.25	9.15
Barium	283	114	10.4	28.6	30.5	63.7	27.6	19.3	50.1	26.2	23.2
Beryllium	10	1.54	1.21	1.67	1.08	1.34	1.27	1.15	0.397	1.03	1.08
Cadmium	0.36	**0.563**	0.324	0.516	0.195	**0.493**	**2.26**	ND	0.229	0.181	0.255
Calcium	NAV	1330	592	850	1390	14200	1530	773	6010	957	936
Chromium	0.4	**133**	**149**	**186**	**92.4**	**189**	**124**	**159**	**41**	**81.7**	**84.7**
Cobalt	13	6.36	1.22	1.11	2.27	3.09	5.14	1.08	9.12	2.5	2.45
Copper	28	19.5	2.18	**53.6**	18.2	**30.6**	**38.6**	15.2	**60**	14.3	16.4
Iron	NAV	35100	30500	41800	30800	41200	33600	31100	17900	30800	32500
Lead	11	**30.2**	**14.8**	**66.7**	**16.4**	**38.3**	**47**	**15.9**	**57.1**	**18.7**	**14.2**
Magnesium	NAV	3670	3900	5730	3450	5480	3820	4600	4750	3240	3270
Manganese	220	51.9	29.6	50.6	62.1	**785**	89.8	34.2	162	68.5	63.6
Mercury	0.00051	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	30	15.3	3.9	6.55	7.13	10.2	14.1	4.83	18.3	7.84	7.94
Potassium	NAV	7940	8640	12300	7030	9190	7840	8370	1400	6470	6600
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	223	48.2	93.9	191	346	190	188	433	154	90.8
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**70.2**	**67.7**	**73**	**50.9**	**70.3**	**57.7**	**77.5**	**39.6**	**51.3**	**50.1**
Zinc	8.5	**99.6**	**35.8**	**99.8**	**73**	**126**	**226**	**77.4**	**144**	**53.5**	**46**

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Lab Sample ID		4777.18	4777.20	4777.22	4777.24	4777.26	4790.02	4790.04	4790.06	4790.08	4790.10
Field Sample Location	ESC (mg/kg)	B122 (0-6")	B123 (0-6")	B124 (0-6")	B125 (0-6")	B126 (0-6")	B127 (0-6")	B128 (0-6")	B129 (0-6")	B130 (0-6")	B131 (0-6")
Sample Date		9/8/1999	9/8/1999	9/8/1999	9/8/1999	9/8/1999	9/15/1999	9/15/1999	9/15/1999	9/15/1999	9/15/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	0.39J	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	0.84J	ND	ND	ND	0.66JD
Acenaphthylene	682	7.2JD	ND	ND	ND	3.2JD	1.6	ND	0.34J	ND	ND
Anthracene	1,480	3.5JD	ND	ND	ND	1.6JD	3.4	ND	0.31J	ND	1.7JD
Benzo[a]anthracene	5.21	**11.JD**	ND	0.12J	0.18J	**5.4JD**	**13**	ND	1.2J	ND	**7.5D**
Benzo[a]pyrene	1.52	**11.JD**	ND	0.14J	0.19J	**5.5JD**	**12**	ND	1.2J	ND	**8.6D**
Benzo[b]fluoranthene	59.8	7.7JD	ND	0.13J	0.21J	3.7JD	11	ND	0.9J	ND	9.5D
Benzo[g,h,I]perylene	119	3.1JD	ND	ND	ND	2.JD	3.7	ND	0.65J	ND	2.8JD
Benzo[k]fluoranthene	148	8.5JD	ND	0.1J	0.2J	3.3JD	9.1	ND	1.0J	ND	8.D
bis(2-Ethylhexyl)phthalate	0.925	ND	0.14JB	0.18JB	0.23JB	ND	0.19JB	ND	0.3JB	0.16JB	**2.JBD**
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	**14.D**	0.14J	0.18J	0.24J	**7.2D**	**11**	ND	1.4J	ND	**8.5D**
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	0.78JD	2.0	ND	0.16J	ND	0.92JD
Dibenzofuran	NAV	ND	ND	ND	ND	ND	0.46J	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.4JBD	1.9B	1.6B	1.8B	1.8JBD	0.55JB	0.85JBD	0.75JB	1.4B	1.3JBD
Fluoranthene	122	13.D	0.22J	0.19J	0.43J	6.3D	32.D	ND	2.1	ND	16.D
Fluorene	122	1.7JD	ND	ND	ND	1.JD	1.J	ND	0.17J	ND	0.57JD
Indeno[1,2,3-cd]pyrene	109	2.7JD	ND	ND	ND	1.8JD	4.4	ND	0.58J	ND	3.JD
Naphthalene	0.0994	ND	**0.12J**	ND	ND	ND	**0.67J**	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	15.D	0.47J	0.17J	0.22J	6.4D	9.8	ND	1.4J	ND	7.8D
Pyrene	78.5	28.D	0.21J	0.25J	0.38J	12.D	29.D	ND	2.2	ND	14.D
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.057	0.018	ND	0.005	0.036	0.013	0.004	0.022	ND	0.067
4,4'-DDE	0.596	0.059	0.015	ND	0.005	ND	0.019	0.007	0.01	ND	0.064
4,4'-DDT	0.0035	**0.057**	0.003	ND	**0.005**	**0.064**	**0.021**	**0.008**	**0.013**	ND	**0.313**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4777.18 B122 (0-6") 9/8/1999	4777.20 B123 (0-6") 9/8/1999	4777.22 B124 (0-6") 9/8/1999	4777.24 B125 (0-6") 9/8/1999	4777.26 B126 (0-6") 9/8/1999	4790.02 B127 (0-6") 9/15/1999	4790.04 B128 (0-6") 9/15/1999	4790.06 B129 (0-6") 9/15/1999	4790.08 B130 (0-6") 9/15/1999	4790.10 B131 (0-6") 9/15/1999
Metals (mg/kg)											
Aluminum	50	**19500**	**12000**	**10500**	**15100**	**7010**	**10500**	**13300**	**16000**	**16500**	**5600**
Antimony	0.27	ND	ND	ND	ND	ND	**16.7**	ND	ND	ND	**0.793**
Arsenic	9.9	**38.8**	**24**	**9.92**	**22.1**	9.23	**20.7**	**25.4**	**16.1**	**24.1**	6.7
Barium	283	35.5	28.3	24.3	24.5	24.8	122	22.8	47.9	32.4	45.9
Beryllium	10	2.31	1.69	1.02	2.03	0.691	1.62	1.17	1.59	1.85	0.574
Cadmium	0.36	**0.705**	**0.39**	0.201	**0.485**	0.283	**0.523**	**0.394**	**0.426**	0.288	**0.745**
Calcium	NAV	1800	1820	1610	2460	2690	13900	1480	6480	1190	2500
Chromium	0.4	**276**	**176**	**92.4**	**215**	**51.1**	**140**	**189**	**193**	**221**	**40.6**
Cobalt	13	1.45	2.32	2.16	1.47	2.5	**27.4**	0.802	3.38	1.03	4.55
Copper	28	**41.9**	**43.5**	14.1	14.4	20	**277**	21.3	17.2	21.6	**60.6**
Iron	NAV	63500	46100	30200	55200	22200	34000	44100	48600	46300	15100
Lead	11	**38.8**	**22**	**11.6**	**23.6**	**32**	**181**	**18.1**	**26.6**	**38.6**	**126**
Magnesium	NAV	8570	5590	3180	7120	2290	4760	5710	5420	6440	1440
Manganese	220	48.6	67.6	135	70.1	86.6	**1110**	38	**583**	38.9	136
Mercury	0.00051	ND	ND	**0.033**	ND	**0.029**	**0.047**	**0.032**	ND	ND	**0.094**
Nickel	30	9.67	6.8	6.8	7.39	6.93	29.9	5.64	10.1	5.28	9.94
Potassium	NAV	18400	12900	6250	15900	3920	4990	12900	10700	13800	1950
Selenium	0.21	ND	ND	ND	ND	ND	ND	**1.05**	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	160	416	367	104	126	268	251	155	121	120
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**116**	**44.6**	**50.5**	**65.1**	**39.5**	**52.3**	**69.4**	**83.4**	**102**	**32.3**
Zinc	8.5	**106**	**83.7**	**42.9**	**68.8**	**54.7**	**725**	**66.3**	**129**	**58**	**149**

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4790.12 B132 (0-6") 9/15/1999	4790.14 B133 (0-6") 9/15/1999	4790.16 B134 (0-6") 9/15/1999	4790.18 B135 (0-6") 9/15/1999	4790.20 B136 (0-6") 9/15/1999	4790.22 B137 (0-6") 9/15/1999	4790.24 B138 (0-6") 9/15/1999	4790.26 B139 (0-6") 9/15/1999	4793.02 B140 (0-6") 9/20/1999	4793.04 B141 (0-6") 9/20/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.12J	ND	ND	0.28J	ND	0.41J	0.2J	0.18J
Benzo[a]pyrene	1.52	0.12J	ND	0.15J	ND	ND	0.31J	ND	0.43J	0.19J	0.15J
Benzo[b]fluoranthene	59.8	ND	ND	0.14J	ND	ND	0.27J	ND	0.39J	0.2J	0.15J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	0.18J	ND	0.22J	ND	ND
Benzo[k]fluoranthene	148	ND	ND	0.12J	ND	ND	0.24J	ND	0.41J	0.16J	0.13J
bis(2-Ethylhexyl)phthalate	0.925	0.15JB	ND	0.14JB	0.26JB	0.2JB	0.24JB	0.25JB	0.23JB	0.21JB	0.15JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.14J	ND	0.18J	ND	ND	0.33J	ND	0.47J	0.24J	0.2J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	0.18J	ND	ND	ND	ND	ND	0.27J	ND	ND	ND
Di-n-butylphthalate	200	1.4B	2.7JBD	1.3B	1.7B	0.74JB	1.6B	2.7B	0.73JB	1.5B	0.52JB
Fluoranthene	122	0.18J	ND	0.18J	ND	0.12J	0.55J	ND	0.71J	0.41J	0.43J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	0.16J	ND	0.21J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	0.31J	ND	0.23J	0.28J	0.27J
Pyrene	78.5	0.19J	ND	0.23J	ND	0.12J	0.51J	ND	0.71J	0.38J	0.38J
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.007	0.009	0.014	ND	0.013	0.009	0.013	0.069	0.009	0.003
4,4'-DDE	0.596	0.008	0.011	0.017	ND	0.03	0.011	0.01	0.111	0.01	0.003
4,4'-DDT	0.0035	**0.004**	**0.021**	**0.012**	ND	**0.008**	**0.012**	**0.005**	**0.03**	**0.016**	0.003
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4790.12 B132 (0-6") 9/15/1999	4790.14 B133 (0-6") 9/15/1999	4790.16 B134 (0-6") 9/15/1999	4790.18 B135 (0-6") 9/15/1999	4790.20 B136 (0-6") 9/15/1999	4790.22 B137 (0-6") 9/15/1999	4790.24 B138 (0-6") 9/15/1999	4790.26 B139 (0-6") 9/15/1999	4793.02 B140 (0-6") 9/20/1999	4793.04 B141 (0-6") 9/20/1999
Metals (mg/kg)											
Aluminum	50	**17800**	**17400**	**15300**	**13100**	**13600**	**18100**	**12300**	**12400**	**12300**	**14100**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND	**1.68**	ND	ND
Arsenic	9.9	**28**	**26.9**	**20.6**	**21.1**	**17**	**22.2**	**15.4**	**38.6**	**17.7**	**22.3**
Barium	283	33.8	92.3	40.2	31.4	35.6	34.6	38	133	29	24.8
Beryllium	10	2.07	2.01	1.59	1.05	1.47	2.19	1.26	1.09	1.47	1.96
Cadmium	0.36	0.34	**0.837**	**0.626**	**0.558**	**0.46**	**0.453**	**0.627**	**25.2**	**0.379**	**0.54**
Calcium	NAV	1640	1880	1760	1250	1260	1420	2120	1530	998	1830
Chromium	0.4	**241**	**222**	**177**	**134**	**151**	**204**	**122**	**215**	**162**	**207**
Cobalt	13	1.37	1.66	2.13	2.87	2.86	1.6	3.43	4.2	1.6	1.29
Copper	28	20.5	**49.5**	**45.6**	**97.6**	**316**	21.4	27.2	**243**	23	10.2
Iron	NAV	52200	47600	41400	33700	36900	52500	35000	132000	36200	48500
Lead	11	**26.5**	**77.2**	**93.2**	**442**	**59.8**	**48.4**	**46**	**1090**	**28.6**	**30**
Magnesium	NAV	7370	6790	5810	3410	4550	7510	4410	4110	4960	6480
Manganese	220	67.4	149	97.6	175	54.8	50	79.4	**332**	35.6	43.7
Mercury	0.00051	ND	**0.156**	**0.031**	ND	**0.047**	**0.083**	**0.06**	**0.078**	**0.061**	ND
Nickel	30	6.64	7.49	8.27	10.4	8.54	6.92	9.93	13.1	6.22	6.64
Potassium	NAV	16000	15000	11500	6710	9740	17500	8520	8990	10700	14700
Selenium	0.21	**0.918**	ND	ND	**1.23**	ND	ND	ND	**1.27**	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	1.33	ND	ND
Sodium	NAV	123	153	138	88.7	181	134	166	348	264	122
Thallium	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**106**	**106**	**84.4**	**65.1**	**78**	**110**	**74.1**	**90.6**	**76**	**80**
Zinc	8.5	**78.6**	**250**	**125**	**283**	**74.5**	**79.6**	**94.8**	**6530**	**50.6**	**80.3**

See Notes at end of Table

Table A-6
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4793.06 B142 (0-6") 9/20/1999	4793.08 B143 (0-6") 9/20/1999	4793.10 B144 (0-6") 9/20/1999	4793.12 B145 (0-6") 9/20/1999	4793.14 B146 (0-6") 9/20/1999	4793.16 B147 (0-6") 9/20/1999	4793.18 B148 (0-6") 9/20/1999
Semi-Volatiles (mg/kg)								
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.17J	ND	ND	ND	0.35J	ND	ND
Benzo[a]pyrene	1.52	0.19J	ND	ND	ND	0.34J	ND	ND
Benzo[b]fluoranthene	59.8	0.19J	ND	ND	ND	0.29J	ND	ND
Benzo[g,h,I]perylene	119	0.13J	ND	ND	ND	0.18J	ND	ND
Benzo[k]fluoranthene	148	0.19J	ND	ND	ND	0.29J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.26JB	0.15JB	0.2JB	0.18JB	0.19JB	0.22JB	0.22JB
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.23J	ND	ND	ND	0.4J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.5B	0.52JB	2.4B	2.2B	1.7B	1.6B	1.1JB
Fluoranthene	122	0.4J	ND	ND	ND	0.63J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.16J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	0.545	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.25J	ND	ND	ND	0.41J	ND	ND
Pyrene	78.5	0.37J	ND	ND	ND	0.65J	ND	ND
Pesticides/PCBs (mg/kg)								
4,4'-DDD	0.758	0.03	0.006	ND	ND	ND	0.018	0.008
4,4'-DDE	0.596	0.029	0.032	ND	ND	ND	0.014	0.005
4,4'-DDT	0.0035	**0.023**	**0.036**	0.002	0.002	**0.057**	**0.079**	**0.026**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	**0.007**	ND	ND	ND	ND	**0.032**	**0.031**
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4793.06 B142 (0-6") 9/20/1999	4793.08 B143 (0-6") 9/20/1999	4793.10 B144 (0-6") 9/20/1999	4793.12 B145 (0-6") 9/20/1999	4793.14 B146 (0-6") 9/20/1999	4793.16 B147 (0-6") 9/20/1999	4793.18 B148 (0-6") 9/20/1999
Metals (mg/kg)								
Aluminum	50	**13900**	**13600**	**13200**	**16600**	**15600**	**14800**	**8510**
Antimony	0.27	ND	ND	ND	ND	ND	ND	ND
Arsenic	9.9	**20.3**	**20**	**16.2**	**24**	**22.5**	**15.5**	7.97
Barium	283	32.5	11.3	21.8	9.04	31.6	30.2	17.6
Beryllium	10	1.85	1.11	1.19	2.44	1.88	1.52	0.81
Cadmium	0.36	**0.555**	0.233	0.282	**0.514**	**0.526**	**0.562**	0.34
Calcium	NAV	1260	651	1570	515	1160	1540	2050
Chromium	0.4	**193**	**148**	**134**	**269**	**214**	**144**	**69.6**
Cobalt	13	1.31	0.77	1.2	0.664	1.43	2.42	2.2
Copper	28	28	12.4	13.6	6.31	17.5	4.5	7.79
Iron	NAV	42900	29900	29400	55000	46600	48200	27300
Lead	11	**17.9**	5.72	**17.1**	9.35	**25.1**	9.06	7.95
Magnesium	NAV	5480	3660	3830	7780	6440	4500	2250
Manganese	220	47.3	31.2	52.3	19.3	49.1	32.1	42.2
Mercury	0.00051	ND	ND	ND	ND	**0.061**	ND	ND
Nickel	30	5.77	3.74	4.62	5.7	6.05	8.02	6.32
Potassium	NAV	12500	7330	7650	18800	14700	10800	4940
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	103	130	67.4	102	87.8	120	59.9
Thallium	1	ND	ND	ND	ND	ND	ND	ND
Vanadium	2	**82.7**	**73**	**63.9**	**111**	**94.7**	**81.4**	**41.6**
Zinc	8.5	**98.3**	**42.2**	**59.5**	**57.5**	**67.4**	**54.1**	**36**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
Results reported in ug/kg presented in mg/kg.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
B = Detected in Blank; J = Estimated Result
D = Diluted Sample
J = Compound Identified Below Detection Limit
ND = Not Detected
NAV = No Available Value

Table A-7
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4156.02 B01 (6-12") 12/23/98	4156.04 B02 (6-12") 12/23/98	4156.06 B03 (6-12") 12/23/98	4156.08 B04 (6-12") 12/23/98	4156.10 B05 (6-12") 12/23/98	4156.12 B06 (6-12") 12/23/98	4159.02 B07 (6-12") 12/28/98	4159.04 B08 (6-12") 12/28/98	4159.06 B09 (6-12") 12/28/98
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	0.11J	0.12J	ND	ND	ND	ND	1.10	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	0.24J	ND
Acenaphthylene	682	ND	0.38J	0.89J	ND	ND	0.12J	ND	1.10	ND
Anthracene	1480	ND	0.30J	0.29J	ND	ND	ND	ND	1.00J	ND
Benzo[a]anthracene	5.21	ND	0.88J	0.66J	ND	ND	0.17J	ND	2.40	ND
Benzo[a]pyrene	1.52	ND	0.83J	1.0J	ND	ND	0.27J	ND	**2.00**	ND
Benzo[b]fluoranthene	59.8	ND	0.72J	0.62J	ND	ND	0.18J	ND	1.20	ND
Benzo[g,h,I]perylene	119	ND	0.34J	0.66J	ND	ND	0.21J	ND	0.99J	ND
Benzo[k]fluoranthene	148	ND	0.61J	0.73J	ND	ND	0.20J	ND	1.60	ND
bis(2-Ethylhexyl)phthalate	0.925	0.23J	0.11J	0.16J	0.13J	ND	0.17J	0.11J	0.13J	0.12J
Chrysene	4.73	ND	1.20	0.99J	ND	ND	0.24J	0.13J	3.60	ND
Dibenz[a,h]anthracene	18.4	ND	0.11J	0.14J	ND	ND	ND	ND	0.27J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	0.11J	ND
Diethylphthalate	100	ND	ND	ND	0.11J	ND	0.14J	ND	ND	0.12J
Di-n-butylphthalate	200	0.66J	0.37J	0.83J	1.4	0.40J	1.6	2.7	1.7	31
Fluoranthene	122	ND	1.60	0.79J	0.15J	0.13J	0.22J	0.12J	4.30	ND
Fluorene	122	ND	0.27J	ND	ND	ND	ND	ND	1.00J	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.27J	0.38J	ND	ND	0.13J	ND	0.63J	ND
Naphthalene	0.0994	ND	ND	**0.13J**	ND	ND	ND	ND	**1.10**	ND
Phenanthrene	45.7	ND	1.90	0.68J	ND	ND	ND	ND	8.40	ND
Pyrene	78.5	ND	2.20	1.30	0.15J	0.13J	0.30J	0.15J	6.60	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.017	0.054	0.022	0.031	0.051	0.013	0.028	0.048	0.014
4,4'-DDE	0.596	0.237	0.054	0.027	0.253	0.031	0.01	0.021	0.026	0.012
4,4'-DDT	0.0035	**0.113**	**0.106**	**0.109**	**0.273**	**0.028**	**0.017**	**0.069**	**0.046**	**0.014**
alpha-Chlordane	0.224	ND	0.001	0.001	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	0.001	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	0.002	0.003	0.002	ND	ND	ND	ND	ND

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4156.02 B01 (6-12") 12/23/98	4156.04 B02 (6-12") 12/23/98	4156.06 B03 (6-12") 12/23/98	4156.08 B04 (6-12") 12/23/98	4156.10 B05 (6-12") 12/23/98	4156.12 B06 (6-12") 12/23/98	4159.02 B07 (6-12") 12/28/98	4159.04 B08 (6-12") 12/28/98	4159.06 B09 (6-12") 12/28/98
Metals (mg/kg)										
Aluminum	50	**10200**	**10600**	**7420**	**11500**	**11700**	**11900**	**11700**	**10800**	**10200**
Antimony	0.27	**1.03**	**1.17**	**0.633**	**0.395**	**0.798**	**0.569**	**0.57**	**0.482**	**0.623**
Arsenic	9.9	**9.97**	9.39	6.70	**18.2**	**14.5**	**13.7**	**12.5**	**9.96**	**12.3**
Barium	283	34.9	52.3	30.1	30.5	71.9	87.6	83.3	65.4	85.1
Beryllium	10	1.07	1.37	1.11	1.04	1.65	1.89	1.90	1.36	1.76
Cadmium	0.36	**0.632**	**1.22**	**0.47**	**0.625**	**0.711**	**0.873**	**0.778**	**0.74**	**0.983**
Calcium	NAV	518	1640	1590	697	1320	8190	5240	3890	4520
Chromium	0.4	**94.2**	**95.0**	**99.2**	**89.3**	**169**	**179**	**211**	**140**	**190**
Cobalt	13	4.74	3.25	2.62	1.99	1.98	2.58	1.59	1.94	1.45
Copper	28	3.53	15.5	14.2	5.58	7.72	7.43	6.79	14.0	8.04
Iron	NAV	48200	30900	24100	30900	39800	38400	45100	31500	40500
Lead	11	11.0	**45.8**	**39.3**	**16.9**	**21.1**	**11.7**	10.0	**40.3**	7.23
Magnesium	NAV	1200	3190	3150	3160	4950	5370	6280	3940	5670
Manganese	220	150	61.0	48.7	51.8	27.8	54.5	28.9	29.5	33.6
Mercury	0.00051	**0.05**	**0.11**	**0.11**	**0.12**	**0.12**	**0.07**	**0.06**	**0.10**	**0.06**
Nickel	30	15.8	11.3	6.74	6.91	8.58	13.2	7.55	8.55	8.06
Potassium	NAV	2180	6600	6620	6610	11100	16400	14700	8470	13300
Selenium	0.21	ND	**0.762**	**1.28**	ND	**2.19**	**2.18**	**1.39**	**1.49**	**1.88**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	310	155	228	96.7	157	360	167	229	496
Vanadium	2	**138**	**56.0**	**47.3**	**58.9**	**82.1**	**77.1**	**82.8**	**66.3**	**76.4**
Zinc	8.5	**84.2**	**103**	**58.0**	**71.9**	**68.9**	**78.5**	**75.9**	**60.1**	**61.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4159.08 B10 (6-12") 12/28/98	4159.10 B11 (6-12") 12/28/98	4159.12 B12 (6-12") 12/28/98	4159.14 B13 (6-12") 12/28/98	4159.16 B14 (6-12") 12/28/98	4159.18 B15 (6-12") 12/28/98	4159.20 B16 (6-12") 12/28/98	4159.22 B17 (6-12") 12/28/98	4159.24 B18 (6-12") 12/28/98
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	0.13J
Benzo[a]anthracene	5.21	0.13J	ND	0.15J	ND	ND	ND	0.17J	ND	ND
Benzo[a]pyrene	1.52	0.11J	0.24J	0.14J	ND	ND	ND	0.15J	ND	ND
Benzo[b]fluoranthene	59.8	0.12J	ND	ND	ND	ND	ND	0.15J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.18J	ND	0.17J	ND	ND	ND	0.17J	ND	0.11J
bis(2-Ethylhexyl)phthalate	0.925	0.13J	0.15J	0.14J	ND	0.12J	ND	ND	0.15J	0.14J
Chrysene	4.73	0.16J	ND	0.24J	ND	ND	ND	0.26J	ND	0.13J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	3.7	1.4	0.38J	0.47J	1.4	1.00J	2.3	0.89J	0.48J
Fluoranthene	122	0.29J	ND	0.25J	0.13J	ND	0.17J	0.29J	ND	0.16J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.22J	ND	0.30J	0.30J	ND	ND	0.43J	ND	0.13J
Pyrene	78.5	0.25J	ND	0.36J	0.22J	ND	0.18J	0.44J	ND	0.18J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.027	0.014	0.169	0.011	0.011	0.066	0.047	0.018	0.119
4,4'-DDE	0.596	0.024	0.013	0.06	0.009	0.008	0.025	0.039	0.014	0.067
4,4'-DDT	0.0035	**0.055**	**0.008**	**0.173**	**0.015**	**0.012**	**0.108**	**0.088**	**0.026**	**0.097**
alpha-Chlordane	0.224	ND	ND	0.001	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	0.001	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	0.003	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4159.08 B10 (6-12") 12/28/98	4159.10 B11 (6-12") 12/28/98	4159.12 B12 (6-12") 12/28/98	4159.14 B13 (6-12") 12/28/98	4159.16 B14 (6-12") 12/28/98	4159.18 B15 (6-12") 12/28/98	4159.20 B16 (6-12") 12/28/98	4159.22 B17 (6-12") 12/28/98	4159.24 B18 (6-12") 12/28/98
Metals (mg/kg)										
Aluminum	50	**10000**	**6820**	**8430**	**5870**	**9250**	**4610**	**5610**	**6090**	**11100**
Antimony	0.27	**0.661**	**0.675**	**0.863**	ND	**0.619**	**0.612**	**0.643**	**0.604**	**1.01**
Arsenic	9.9	**11.2**	**10.3**	**12.0**	**10.8**	**12.2**	7.57	9.56	6.30	8.28
Barium	283	78.3	58.4	77.3	66.3	68.6	48.9	64.1	49.9	60.8
Beryllium	10	1.50	1.36	1.17	0.952	1.24	0.825	1.02	1.02	1.32
Cadmium	0.36	**0.534**	**0.809**	**0.394**	**0.381**	**0.519**	0.332	**0.548**	**0.486**	**6.29**
Calcium	NAV	5320	3420	5300	4910	1070	3020	4580	2840	2170
Chromium	0.4	**165**	**107**	**129**	**99.6**	**142**	**63.2**	**95.5**	**100**	**87.9**
Cobalt	13	1.80	1.91	1.30	0.826	1.49	1.35	1.46	1.34	7.31
Copper	28	6.37	6.89	6.83	6.28	8.62	10.9	6.87	4.88	**78.0**
Iron	NAV	36600	24600	29300	23800	35700	16800	25100	22900	29600
Lead	11	**12.1**	**17.5**	**23.6**	10.7	**20.1**	**25.6**	**17.1**	8.62	**30.2**
Magnesium	NAV	4810	2930	3420	2800	3890	1450	2670	2620	3000
Manganese	220	27.6	21.5	26.9	17.1	27.2	13.8	19.5	21.2	**296**
Mercury	0.00051	**0.05**	**0.07**	**0.09**	**0.03**	**0.04**	**0.08**	**0.03**	**0.05**	**0.12**
Nickel	30	6.58	9.54	5.47	4.88	6.63	5.00	6.78	5.90	23.3
Potassium	NAV	11400	6680	7820	6240	9260	2920	7030	6140	5890
Selenium	0.21	**1.71**	**1.83**	**1.72**	**2.08**	**2.31**	**1.42**	**2.08**	**1.11**	**1.25**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	257	556	132	451	359	447	225	89.3	211
Vanadium	2	**71.2**	**44.7**	**58.7**	**38.1**	**66.2**	**28.8**	**30.7**	**43.0**	**68.8**
Zinc	8.5	**60.3**	**53.1**	**42.7**	**41.1**	**56.8**	**39.4**	**63.1**	**43.9**	**113**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4159.26 B19 (6-12") 12/28/98	4160.02 B20 (6-12") 12/29/98	4160.04 B21 (6-12") 12/29/98	4160.06 B22 (6-12") 12/29/98	4160.08 B23 (6-12") 12/29/98	4160.10 B24 (6-12") 12/29/98	4160.12 B25 (6-12") 12/29/98	4160.14 B26 (6-12") 12/29/98	4160.16 B27 (6-12") 12/29/98
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	0.23J	ND	ND	ND	0.12J	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	0.23J	ND	ND
Benzo[a]anthracene	5.21	0.14J	ND	0.44J	ND	ND	ND	1.00J	ND	0.14J
Benzo[a]pyrene	1.52	0.12J	ND	0.56J	ND	0.11J	ND	0.91J	ND	0.14J
Benzo[b]fluoranthene	59.8	ND	ND	0.38J	ND	ND	ND	1.20	ND	0.12J
Benzo[g,h,I]perylene	119	ND	ND	0.33J	ND	ND	ND	0.48J	ND	ND
Benzo[k]fluoranthene	148	0.14J	ND	0.51J	ND	0.11J	ND	1.30	ND	0.16J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	0.11J	ND	0.11J	ND	ND
Chrysene	4.73	0.21J	ND	0.92J	ND	0.20J	ND	1.80	ND	0.26J
Dibenz[a,h]anthracene	18.4	ND	ND	0.15J	ND	ND	ND	0.21J	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.25J	0.30J	0.37J	0.92J	1.2	0.98J	1.1	1.5	0.89J
Fluoranthene	122	0.26J	ND	0.43J	ND	0.18J	ND	0.63J	ND	0.27J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.28J	ND	ND	ND	0.55J	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.37J	ND	0.30J	ND	0.14J	ND	0.21J	ND	0.21J
Pyrene	78.5	0.37J	ND	0.63J	ND	0.23J	ND	0.84J	ND	0.32J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.088	0.031	0.07	0.03	0.041	0.016	0.012	0.044	0.055
4,4'-DDE	0.596	0.061	0.023	0.065	0.021	0.023	0.012	0.013	0.02	0.029
4,4'-DDT	0.0035	**0.065**	**0.072**	**0.157**	**0.03**	**0.026**	**0.025**	**0.034**	**0.079**	**0.033**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4159.26 B19 (6-12") 12/28/98	4160.02 B20 (6-12") 12/29/98	4160.04 B21 (6-12") 12/29/98	4160.06 B22 (6-12") 12/29/98	4160.08 B23 (6-12") 12/29/98	4160.10 B24 (6-12") 12/29/98	4160.12 B25 (6-12") 12/29/98	4160.14 B26 (6-12") 12/29/98	4160.16 B27 (6-12") 12/29/98
Metals (mg/kg)										
Aluminum	50	**7600**	**10000**	**7330**	**7110**	**9400**	**10000**	**6970**	**7970**	**5250**
Antimony	0.27	**1.67**	**0.755**	**0.895**	**0.728**	**0.929**	**0.801**	**1.24**	**0.854**	**0.763**
Arsenic	9.9	5.82	**12.9**	8.97	**11.8**	**13.4**	9.39	6.02	**11.2**	7.21
Barium	283	43.3	65.5	54.5	69.4	84.2	70.4	42.1	77.4	65.4
Beryllium	10	1.10	2.04	1.15	1.20	1.50	1.43	0.908	1.30	1.07
Cadmium	0.36	**0.453**	**0.799**	**0.448**	**0.672**	**0.782**	**1.11**	**0.474**	**0.518**	**0.739**
Calcium	NAV	1600	8010	999	5680	4670	3400	507	3660	5300
Chromium	0.4	**100**	**215**	**110**	**123**	**152**	**135**	**96.8**	**159**	**85.2**
Cobalt	13	1.29	1.68	1.47	1.58	1.78	2.44	1.51	1.08	3.05
Copper	28	6.07	4.00	9.58	5.49	6.31	8.92	12.0	5.78	3.93
Iron	NAV	20500	45100	28400	27900	34500	30900	23100	35100	19000
Lead	11	**17.9**	4.90	**19.3**	**12.6**	**22.8**	**16.4**	**17.6**	7.76	6.11
Magnesium	NAV	2310	5960	2660	3080	3950	3350	2110	3990	2160
Manganese	220	18.6	23.9	18.4	20.0	31.2	33.0	19.6	18.5	40.9
Mercury	0.00051	**0.06**	**0.034**	**0.08**	**0.043**	**0.045**	**0.057**	**0.077**	ND	ND
Nickel	30	6.13	7.25	5.97	7.53	9.38	9.89	5.36	4.58	10.2
Potassium	NAV	5250	15400	6430	7560	9830	8140	5000	10600	5200
Selenium	0.21	**1.06**	**2.19**	**1.55**	**2.05**	**1.88**	**1.49**	**1.35**	**2.14**	**1.13**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	105	99.8	159	165	336	373	121	138	135
Vanadium	2	**49.4**	**65.4**	**48.4**	**50.8**	**66.3**	**63.4**	**45.5**	**63.6**	**38.4**
Zinc	8.5	**42.5**	**94.1**	**66.8**	**60.4**	**59.7**	**68.2**	**46.3**	**55.2**	**56.5**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4160.18 B28 (6-12") 12/29/98	4160.20 B29 (6-12") 12/29/98	4162.02 B30 (6-12") 12/30/98	4162.04 B31 (6-12") 12/30/98	4162.06 B32 (6-12") 12/30/98	4162.08 B33 (6-12") 12/30/98	4162.10 B34 (6-12") 12/30/98	4162.12 B35 (6-12") 12/30/98	4162.14 B36 (6-12") 12/30/98
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.11J	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.32J	0.76J	0.75J	0.24J	0.31J	1.5	0.80J	0.30J	0.33J
Fluoranthene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.13J	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.13J	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.024	0.007	0.084	0.099	0.117	0.354	0.049	0.033	0.081
4,4'-DDE	0.596	0.015	0.006	0.045	0.053	0.062	0.068	0.044	0.025	0.054
4,4'-DDT	0.0035	**0.026**	**0.027**	**0.053**	**0.117**	**0.171**	**4.095**	**0.098**	**0.057**	**0.108**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4160.18 B28 (6-12") 12/29/98	4160.20 B29 (6-12") 12/29/98	4162.02 B30 (6-12") 12/30/98	4162.04 B31 (6-12") 12/30/98	4162.06 B32 (6-12") 12/30/98	4162.08 B33 (6-12") 12/30/98	4162.10 B34 (6-12") 12/30/98	4162.12 B35 (6-12") 12/30/98	4162.14 B36 (6-12") 12/30/98
Metals (mg/kg)										
Aluminum	50	**7640**	**7360**	**10400**	**9010**	**8600**	**9570**	**6450**	**9220**	**4630**
Antimony	0.27	**0.827**	**0.984**	**1.27**	**1.03**	**1.14**	**0.882**	**1.07**	**0.898**	**1.97**
Arsenic	9.9	**168**	9.69	**19.9**	**11.8**	9.51	**15.5**	**10.0**	**12.4**	8.87
Barium	283	73.2	55.0	70.7	82.8	58.1	68.1	44.7	86.4	64.5
Beryllium	10	1.23	1.32	1.43	1.59	1.31	1.51	1.25	1.51	1.28
Cadmium	0.36	**0.742**	**0.461**	**0.789**	**0.761**	**0.528**	**0.698**	**0.75**	**0.625**	**1.33**
Calcium	NAV	6360	1050	6460	5550	2300	943	983	4120	1910
Chromium	0.4	**143**	**149**	**184**	**177**	**144**	**172**	**103**	**176**	**67.9**
Cobalt	13	1.47	1.33	1.36	1.23	1.50	1.52	1.52	1.62	**15.0**
Copper	28	5.70	5.47	5.60	5.22	4.90	6.69	9.31	7.07	15.4
Iron	NAV	37900	31600	42100	38600	32700	38300	25600	38000	17900
Lead	11	**11.4**	7.14	**13.2**	**11.7**	10.9	**12.4**	**28.4**	**11.4**	**24.9**
Magnesium	NAV	3620	3480	4280	4580	3480	4170	2130	4170	1360
Manganese	220	24.6	19.0	26.1	23.8	22.3	26.7	26.5	23.9	171
Mercury	0.00051	ND	ND	**0.07**	**0.02**	**0.03**	**0.11**	**0.07**	**0.05**	**0.04**
Nickel	30	6.76	5.94	6.20	7.44	5.95	6.88	8.18	6.05	10.9
Potassium	NAV	10200	8740	11200	11800	9250	10900	5520	11300	3430
Selenium	0.21	**2.18**	**2.31**	**2.39**	**2.24**	**1.45**	**2.16**	**1.52**	**2.21**	**1.75**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	304	112	93.2	146	118	71.0	35.2	53.0	65.9
Vanadium	2	**61.9**	**59.3**	**74.6**	**72.1**	**59.7**	**71.5**	**47.3**	**70.7**	**30.2**
Zinc	8.5	**46.0**	**49.2**	**59.2**	**52.9**	**49.7**	**63.5**	**78.8**	**60.6**	**92.5**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4162.16 B37 (6-12") 12/30/98	4162.18 B38 (6-12") 12/30/98	4162.20 B39 (6-12") 12/30/98	4162.22 B40 (6-12") 12/30/98	4162.24 B41 (6-12") 12/30/98	4162.26 B42 (6-12") 12/30/98	4162.28 B43 (6-12") 12/30/98	4162.30 B44 (6-12") 12/30/98	4164.02 B45 (6-12") 12/31/98
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	0.14J	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	0.20J	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	0.14J	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	0.26J	ND	0.10J
Benzo[a]pyrene	1.52	ND	ND	0.13J	ND	ND	ND	0.24J	ND	0.12J
Benzo[b]fluoranthene	59.8	ND	ND	0.15J	ND	ND	ND	0.17J	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	0.14J	ND	ND
Benzo[k]fluoranthene	148	ND	ND	0.14J	ND	ND	ND	0.23J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	0.17J	ND	0.13J	ND	0.35J	ND	0.14J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.85J	0.90J	0.35J	0.82J	0.38J	0.44J	1.10J	1.6	1.00J
Fluoranthene	122	ND	0.12J	0.22J	ND	0.14J	ND	0.42J	ND	0.19J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	**0.16J**	ND	ND
Phenanthrene	45.7	ND	ND	0.15J	ND	0.14J	ND	0.64J	ND	0.14J
Pyrene	78.5	ND	0.13J	0.22J	ND	0.19J	ND	0.52J	ND	0.22J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.061	0.043	0.042	0.077	0.043	ND	0.04	0.068	0.038
4,4'-DDE	0.596	0.038	0.032	0.03	0.052	0.032	ND	0.028	0.055	0.037
4,4'-DDT	0.0035	**0.063**	**0.067**	**0.138**	**0.293**	**0.114**	**0.039**	**0.1**	**0.123**	**0.134**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4162.16 B37 (6-12") 12/30/98	4162.18 B38 (6-12") 12/30/98	4162.20 B39 (6-12") 12/30/98	4162.22 B40 (6-12") 12/30/98	4162.24 B41 (6-12") 12/30/98	4162.26 B42 (6-12") 12/30/98	4162.28 B43 (6-12") 12/30/98	4162.30 B44 (6-12") 12/30/98	4164.02 B45 (6-12") 12/31/98
Metals (mg/kg)										
Aluminum	50	**8380**	**4550**	**4090**	**8650**	**7360**	**9370**	**11000**	**9190**	**7900**
Antimony	0.27	**1.31**	**0.99**	**0.783**	**1.18**	**0.722**	**0.954**	**0.76**	**1.23**	**1.40**
Arsenic	9.9	**14.5**	**11.6**	9.61	**12.6**	**11.7**	9.31	**11.9**	**11.1**	**12.7**
Barium	283	90.4	60.9	72.5	70.3	70.2	56.8	120	77.4	57.3
Beryllium	10	1.56	0.872	0.831	1.33	1.17	1.41	1.89	1.39	1.26
Cadmium	0.36	**0.706**	0.351	**0.428**	**0.704**	**0.551**	**0.632**	**0.953**	**0.704**	**0.747**
Calcium	NAV	3490	914	4090	997	1010	3680	7320	1370	1350
Chromium	0.4	**166**	**84.9**	**68.8**	**153**	**133**	**179**	**235**	**145**	**140**
Cobalt	13	1.36	1.29	1.46	1.37	1.41	0.892	2.03	1.61	1.80
Copper	28	5.86	6.86	6.04	8.34	6.08	5.34	6.75	5.48	7.01
Iron	NAV	37800	23000	18800	34300	27800	38000	42400	32900	32100
Lead	11	**13.3**	**16.2**	**13.9**	**18.6**	**20.1**	7.66	8.59	**22.8**	**16.0**
Magnesium	NAV	3870	1800	1470	3380	2680	4080	5070	3090	2980
Manganese	220	21.9	15.2	17.9	23.8	19.3	23.3	42.6	28.2	44.3
Mercury	0.00051	**0.04**	**0.05**	**0.07**	**0.06**	**0.07**	**0.04**	**0.03**	**0.06**	**0.06**
Nickel	30	5.21	4.80	4.99	6.05	5.61	5.07	8.93	6.82	8.41
Potassium	NAV	10800	4960	4090	9200	7500	11700	14300	8680	8220
Selenium	0.21	**2.40**	**1.98**	**1.86**	**2.19**	**1.81**	**1.83**	**2.59**	**1.82**	**1.72**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	67.7	66.4	86.7	100	55.3	138	224	90.2	53.0
Vanadium	2	**54.7**	**29.6**	**25.5**	**62.3**	**46.2**	**64.0**	**81.3**	**61.9**	**57.8**
Zinc	8.5	**64.7**	**38.0**	**45.0**	**59.6**	**54.7**	**92.8**	**77.7**	**55.3**	**82.3**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4164.04 B46 (6-12") 12/31/98	4164.06 B47 (6-12") 12/31/98	4164.08 B48 (6-12") 12/31/98	4164.10 B49 (6-12") 12/31/98	4164.12 B50 (6-12") 12/31/98	4164.14 B51 (6-12") 12/31/98	4164.16 B52 (6-12") 12/31/98	4164.18 B53 (6-12") 12/31/98	4169.02 B54 (6-12") 1/5/99
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.15J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	0.16J	ND	ND	ND	ND	ND	ND	ND	0.13J
Benzo[b]fluoranthene	59.8	0.13J	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.16J	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.21J	ND	ND	ND	ND	ND	ND	ND	0.12J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.45J	0.39J	1.10J	1.2	2.2	1.00J	1.00J	0.72J	0.33J
Fluoranthene	122	0.28J	0.12J	ND	ND	ND	ND	ND	0.13J	0.22J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.21J	ND	0.12J	ND	ND	ND	ND	ND	0.13J
Pyrene	78.5	0.31J	0.15J	0.13J	ND	ND	ND	ND	ND	0.24J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.056	0.039	0.165	ND	0.034	ND	ND	ND	0.02
4,4'-DDE	0.596	0.03	0.036	0.034	0.01	0.028	ND	ND	0.038	0.023
4,4'-DDT	0.0035	**0.175**	**0.077**	**0.044**	**0.031**	**0.042**	ND	ND	**0.046**	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4164.04 B46 (6-12") 12/31/98	4164.06 B47 (6-12") 12/31/98	4164.08 B48 (6-12") 12/31/98	4164.10 B49 (6-12") 12/31/98	4164.12 B50 (6-12") 12/31/98	4164.14 B51 (6-12") 12/31/98	4164.16 B52 (6-12") 12/31/98	4164.18 B53 (6-12") 12/31/98	4169.02 B54 (6-12") 1/5/99
Metals (mg/kg)										
Aluminum	50	**10300**	**9520**	**5870**	**12000**	**8490**	**10300**	**11300**	**10400**	**13200**
Antimony	0.27	**1.19**	**0.932**	**1.86**	**1.07**	**0.961**	**0.977**	**0.953**	**1.31**	ND
Arsenic	9.9	**12.7**	**14.2**	8.06	**16.8**	**18.4**	**14.3**	**26.1**	**18.2**	**25.2**
Barium	283	77.4	83.1	71.4	57.7	69.4	36.1	15.9	106	70.5
Beryllium	10	1.91	1.61	0.808	0.91	1.41	1.05	0.808	0.935	2.12
Cadmium	0.36	**1.47**	**0.701**	**0.587**	**0.804**	**0.735**	**0.918**	**0.558**	**1.65**	**1.98**
Calcium	NAV	3880	7000	1210	950	7200	887	600	865	5110
Chromium	0.4	**198**	**197**	**20.3**	**110**	**173**	**102**	**86.4**	**138**	**215**
Cobalt	13	3.23	1.55	7.19	1.81	1.21	2.66	1.21	2.31	3.04
Copper	28	6.50	4.95	**44.1**	27.0	6.42	16.4	7.28	**141**	11.3
Iron	NAV	40900	40400	12700	27500	38900	26400	28600	50100	48900
Lead	11	**19.6**	7.92	**19.4**	**32.1**	10.6	**39.0**	6.43	**263**	**19.3**
Magnesium	NAV	4200	4210	263	2460	3580	2300	2060	2540	7020
Manganese	220	43.2	25.4	69.7	77.3	20.1	28.4	24.7	125	54.1
Mercury	0.00051	**0.049**	**0.044**	**0.048**	**0.048**	**0.047**	**0.042**	**0.033**	**0.104**	**0.034**
Nickel	30	27.7	6.53	22.8	5.80	5.18	9.22	4.87	10.7	17.3
Potassium	NAV	11900	12400	677	5390	11000	5580	3980	6200	16000
Selenium	0.21	**1.91**	**2.24**	**1.75**	**1.04**	**1.74**	**1.13**	**0.99**	**0.661**	**2.21**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	107	112	198	100	52.4	51.0	59.7	83.0	188
Vanadium	2	**67.0**	**61.2**	**27.1**	**57.9**	**52.0**	**53.3**	**50.3**	**58.6**	**86.2**
Zinc	8.5	**79.0**	**76.2**	**44.1**	**102**	**75.9**	**56.2**	**34.3**	**337**	**93.8**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.04 B55 (6-12") 1/5/99	4169.06 B56 (6-12") 1/5/99	4169.08 B57 (6-12") 1/5/99	4169.10 B58 (6-12") 1/5/99	4169.12 B59 (6-12") 1/5/99	4169.14 B60 (6-12") 1/5/99	4169.16 B61 (6-12") 1/5/99	4169.18 B62 (6-12") 1/5/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	0.48J	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	7.30	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	17.0J	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	**27**	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	**26**	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	23	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	18.0J	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	25	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.14J	ND	ND	0.13J	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	**29**	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	1.10J	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	4.20	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.9	1.10J	22	2	0.90J	0.23J	0.33J	0.34J
Fluoranthene	122	ND	ND	ND	0.18J	ND	89	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	8.10	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	13.0	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	**3.60**	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	**76**	ND	ND
Pyrene	78.5	ND	ND	ND	0.19J	ND	60	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	ND	ND	0.03	0.025	ND	ND	ND	0.018
4,4'-DDE	0.596	ND	ND	0.075	0.017	ND	ND	0.015	0.013
4,4'-DDT	0.0035	ND	ND	**0.155**	ND	ND	ND	**0.04**	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.04 B55 (6-12") 1/5/99	4169.06 B56 (6-12") 1/5/99	4169.08 B57 (6-12") 1/5/99	4169.10 B58 (6-12") 1/5/99	4169.12 B59 (6-12") 1/5/99	4169.14 B60 (6-12") 1/5/99	4169.16 B61 (6-12") 1/5/99	4169.18 B62 (6-12") 1/5/99
Metals (mg/kg)									
Aluminum	50	**14700**	**22300**	**13700**	**13500**	**16800**	**15300**	**18100**	**14200**
Antimony	0.27	**0.733**	ND	**1.34**	ND	**0.608**	ND	ND	**0.726**
Arsenic	9.9	**12.9**	**52.4**	**19.8**	**14.1**	**18.7**	**25.7**	**27.4**	**16.9**
Barium	283	9.40	42.4	42.1	73.6	42.1	25.0	25.1	18.7
Beryllium	10	1.28	0.993	1.32	2.37	1.03	1.81	2.37	0.91
Cadmium	0.36	**0.595**	**0.609**	**1.28**	**2.51**	**0.623**	**0.763**	**0.977**	**0.708**
Calcium	NAV	1330	463	1330	4410	1020	1070	1080	2160
Chromium	0.4	**172**	**135**	**172**	**198**	**114**	**211**	**277**	**98.7**
Cobalt	13	1.04	2.17	1.78	4.58	2.00	1.24	0.914	1.49
Copper	28	10.2	8.67	**45.5**	11.6	17.0	13.8	21.0	10.2
Iron	NAV	28600	33200	35100	43500	29300	50800	55600	32600
Lead	11	7.49	6.08	**58.7**	**26.2**	**30.6**	8.44	**32.4**	6.73
Magnesium	NAV	4840	3870	4980	6270	3790	6710	9020	3470
Manganese	220	35.4	60.0	177	52.3	50.2	56.6	28.8	66.5
Mercury	0.00051	ND	ND	**0.072**	**0.066**	ND	ND	ND	ND
Nickel	30	4.83	6.50	7.80	**35.3**	7.99	7.75	6.94	6.34
Potassium	NAV	9210	6320	9370	14200	6650	13900	19500	5070
Selenium	0.21	ND	**1.04**	**0.736**	**1.64**	**1.01**	**1.13**	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	211	165	109	161	213	154	183	168
Vanadium	2	**81.0**	**74.5**	**80.6**	**83.0**	**63.7**	**91.2**	**119**	**57.1**
Zinc	8.5	**97.9**	**41.2**	**207**	**110**	**53.7**	**71.2**	**70.7**	**39.8**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.20 B63 (6-12") 1/5/99	4169.22 B64 (6-12") 1/5/99	4169.24 B65 (6-12") 1/5/99	4169.26 B66 (6-12") 1/5/99	4169.28 B67 (6-12") 1/5/99	4169.30 B68 (6-12") 1/5/99	4169.32 B69 (6-12") 1/5/99	4169.34 B70 (6-12") 1/5/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.12J	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.13J	ND	0.14J	0.12J	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	0.15J	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.8	0.49J	1.2	1.1	1.10J	1.7	1.00J	2.7
Fluoranthene	122	0.13J	ND	ND	0.21J	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.19J	ND	ND	ND	ND
Pyrene	78.5	0.12J	ND	ND	0.23J	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	ND	ND	ND	0.282	0.033	ND	0.028	ND
4,4'-DDE	0.596	ND	ND	ND	**0.693**	0.015	ND	0.019	ND
4,4'-DDT	0.0035	ND	ND	ND	**2.59**	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.20 B63 (6-12") 1/5/99	4169.22 B64 (6-12") 1/5/99	4169.24 B65 (6-12") 1/5/99	4169.26 B66 (6-12") 1/5/99	4169.28 B67 (6-12") 1/5/99	4169.30 B68 (6-12") 1/5/99	4169.32 B69 (6-12") 1/5/99	4169.34 B70 (6-12") 1/5/99
Metals (mg/kg)									
Aluminum	50	**18900**	**20800**	**17300**	**17100**	**17900**	**20000**	**7700**	**14200**
Antimony	0.27	ND	ND	ND	ND	ND	**1.47**	**1.04**	**0.494**
Arsenic	9.9	**19.3**	**32.6**	**18.2**	**28.1**	**30.2**	**23.0**	**17.4**	**14.3**
Barium	283	16.6	18.7	53.6	10.3	13.0	51.2	44.8	22.6
Beryllium	10	2.92	3.24	1.40	2.84	2.49	2.52	1.03	0.795
Cadmium	0.36	**1.11**	**1.13**	**0.556**	**0.949**	**0.814**	**1.09**	**0.495**	**0.433**
Calcium	NAV	1030	529	581	453	1200	919	848	519
Chromium	0.4	**325**	**367**	**149**	**323**	**302**	**227**	**66.0**	**101**
Cobalt	13	0.937	1.36	1.87	0.482	1.13	4.37	10.5	1.36
Copper	28	9.68	14.2	21.7	11.1	7.46	**39.1**	**283**	19.1
Iron	NAV	63400	75300	38500	62000	60300	44300	19800	25900
Lead	11	9.96	**48.0**	**12.5**	7.33	4.28	**54.5**	**39.8**	**12.3**
Magnesium	NAV	10700	12500	4760	10300	9660	6630	1850	3250
Manganese	220	35.2	23.6	67.0	19.3	24.3	37.1	91.4	49.4
Mercury	0.00051	ND	ND	**0.027**	ND	ND	ND	ND	ND
Nickel	30	8.88	8.23	6.32	6.38	7.42	16.8	**88.0**	4.87
Potassium	NAV	24700	28900	10100	24100	22000	15200	4270	5040
Selenium	0.21	**0.989**	**0.771**	**0.99**	ND	ND	**2.76**	**0.942**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	155	159	211	115	475	212	216	92.8
Vanadium	2	**141**	**144**	**77.7**	**127**	**121**	**108**	**40.1**	**54.1**
Zinc	8.5	**71.7**	**72.0**	**48.2**	**65.2**	**59.1**	**65.6**	**93.6**	**48.1**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.36 B71 (6-12") 1/5/99	4173.02 B72 (6-12") 1/6/99	4173.04 B73 (6-12") 1/6/99	4173.06 B74 (6-12") 1/6/99	4173.08 B75 (6-12") 1/6/99	4173.10 B76 (6-12") 1/6/99	4173.12 B77 (6-12") 1/6/99	4173.14 B78 (6-12") 1/6/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	0.13J	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	1.40	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	6.40	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	**11.0**	ND	0.20J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	**10.0**	ND	0.15J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	11.0	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	4.60	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	6.60	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	0.13J	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	**11.0**	ND	0.26J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	1.20	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	0.72J	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.21J	ND	ND	ND
Di-n-butylphthalate	200	0.25J	0.66J	0.28J	1.3	1.2J	0.91J	0.34J	1.4
Fluoranthene	122	ND	ND	ND	ND	0.18J	25	ND	0.28J
Fluorene	122	ND	ND	ND	ND	ND	1.50	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	4.10	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	**0.16J**	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	16	ND	0.25J
Pyrene	78.5	ND	ND	ND	ND	0.14J	18	ND	0.43J
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	0.101	0.017	0.001	0.017	ND	ND	0.003	**1.132**
4,4'-DDE	0.596	0.131	0.018	0.002	ND	0.001	ND	0.014	0.292
4,4'-DDT	0.0035	**0.095**	**0.025**	ND	ND	0.002	ND	**0.03**	**0.349**
alpha-Chlordane	0.224	0.04	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.057	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4169.36 B71 (6-12") 1/5/99	4173.02 B72 (6-12") 1/6/99	4173.04 B73 (6-12") 1/6/99	4173.06 B74 (6-12") 1/6/99	4173.08 B75 (6-12") 1/6/99	4173.10 B76 (6-12") 1/6/99	4173.12 B77 (6-12") 1/6/99	4173.14 B78 (6-12") 1/6/99
Metals (mg/kg)									
Aluminum	50	**13500**	**13500**	**15100**	**12800**	**17900**	**16200**	**19300**	**16000**
Antimony	0.27	**2.09**	ND	**0.568**	ND	ND	ND	**1.18**	**0.822**
Arsenic	9.9	**15.5**	**29.7**	**18.4**	**12.7**	**29.5**	**27.8**	**21.7**	**21.0**
Barium	283	63.2	19.8	22.7	41.0	37.6	27.2	28.5	45.4
Beryllium	10	1.33	1.98	1.52	1.04	2.47	1.85	2.90	1.76
Cadmium	0.36	**1.91**	**0.823**	**0.572**	**0.478**	**1.20**	**1.00**	**1.49**	**1.18**
Calcium	NAV	796	2030	546	636	965	1020	745	1230
Chromium	0.4	**165**	**237**	**182**	**89.4**	**301**	**215**	**327**	**206**
Cobalt	13	1.40	1.43	1.14	3.78	1.11	1.25	2.26	1.62
Copper	28	**41.8**	9.26	9.69	5.03	**45.0**	**106**	**60.3**	**44.4**
Iron	NAV	35500	53700	38300	30400	63700	47900	69300	46200
Lead	11	**93.7**	8.01	9.17	6.67	**35.3**	**96.1**	**58.2**	**74.8**
Magnesium	NAV	4670	7460	5090	3070	8980	6230	10400	6060
Manganese	220	32.5	16.2	21.9	62.7	37.0	99.1	40.1	67.1
Mercury	0.00051	**3.61**	**0.115**	**0.036**	**0.028**	**0.075**	**0.066**	**0.176**	**0.055**
Nickel	30	6.93	8.87	6.70	6.71	7.77	6.64	9.43	8.03
Potassium	NAV	9960	18100	11600	7100	21100	14100	25600	14600
Selenium	0.21	**0.716**	**0.927**	**1.17**	**0.832**	**1.30**	**1.08**	**1.72**	**0.851**
Silver	2	**2.90**	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	164	291	123	164	188	99.9	94.8	302
Vanadium	2	**68.7**	**87.3**	**79.1**	**56.0**	**123**	**94.5**	**121**	**90.9**
Zinc	8.5	**106**	**62.0**	**49.9**	**61.6**	**141**	**203**	**168**	**133**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4173.16 B79 (6-12") 1/6/99	4173.18 B80 (6-12") 1/6/99	4173.20 B81 (6-12") 1/6/99	4173.22 B82 (6-12") 1/6/99	4173.24 B83 (6-12") 1/6/99	4173.26 B84 (6-12") 1/6/99	4173.28 B85 (6-12") 1/6/99	4173.30 B86 (6-12") 1/6/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	0.19J	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	0.19J	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	0.14J	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	0.14J	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	0.20J	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	0.22J	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	0.13J	ND	ND	ND	ND
Di-n-butylphthalate	200	1.00J	1.2	0.87J	2.2	0.30J	0.36J	1.9	1.3
Fluoranthene	122	ND	ND	0.43J	ND	ND	ND	0.14J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	0.17J	ND	ND	ND	ND	ND
Pyrene	78.5	ND	ND	0.34J	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	0.007	ND	0.001	0.001	0.013	0.05	0.002	0.001
4,4'-DDE	0.596	0.022	ND	0.004	0.004	0.125	0.046	0.015	0.004
4,4'-DDT	0.0035	**0.062**	ND	**0.006**	**0.007**	**0.224**	**0.047**	**0.021**	**0.007**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4173.16 B79 (6-12") 1/6/99	4173.18 B80 (6-12") 1/6/99	4173.20 B81 (6-12") 1/6/99	4173.22 B82 (6-12") 1/6/99	4173.24 B83 (6-12") 1/6/99	4173.26 B84 (6-12") 1/6/99	4173.28 B85 (6-12") 1/6/99	4173.30 B86 (6-12") 1/6/99
Metals (mg/kg)									
Aluminum	50	**12000**	**12100**	**16600**	**15300**	**15300**	**8640**	**19700**	**16000**
Antimony	0.27	**0.426**	**0.471**	**1.67**	**0.635**	**0.635**	ND	**0.495**	**0.512**
Arsenic	9.9	**22.7**	**19.4**	**20.7**	**21.0**	**21.0**	6.64	**27.5**	**24.8**
Barium	283	10.4	10.1	102	27.8	27.8	17.0	37.9	38.6
Beryllium	10	1.86	0.778	1.81	1.60	1.60	0.572	2.82	2.53
Cadmium	0.36	**0.759**	**0.444**	**1.65**	**1.05**	**1.05**	**0.719**	**1.79**	**1.15**
Calcium	NAV	1090	436	3110	447	447	427	1190	786
Chromium	0.4	**210**	**83.8**	**214**	**178**	**178**	**71.5**	**325**	**286**
Cobalt	13	0.564	0.953	2.23	1.01	1.01	1.32	2.09	0.935
Copper	28	24.7	8.25	**76.7**	**38.2**	**38.2**	9.02	**44.1**	**58.4**
Iron	NAV	39300	28300	44100	39900	39900	16500	76100	57700
Lead	11	**45.2**	5.47	**237**	**53.8**	**53.8**	9.32	**44.7**	**44.9**
Magnesium	NAV	5630	2510	6070	5100	5100	1710	10700	8550
Manganese	220	25.6	35.5	210	33.7	33.7	27.2	44.1	41.4
Mercury	0.00051	**0.031**	ND	**0.089**	**0.04**	**0.04**	**0.039**	**0.041**	**0.04**
Nickel	30	5.25	3.87	8.56	5.48	5.48	6.16	9.33	6.01
Potassium	NAV	13300	4370	13900	11700	11700	3620	26700	21300
Selenium	0.21	ND	ND	ND	ND	ND	ND	**1.97**	**3.33**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	90.6	106	850	83.2	83.2	67.6	159	111
Vanadium	2	**83.5**	**47.1**	**98.0**	**77.4**	**77.4**	**46.1**	**122**	**125**
Zinc	8.5	**74.6**	**31.7**	**362**	**101**	**101**	**49.6**	**144**	**82.4**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4177.02 B87 (6-12") 1/7/99	4177.04 B88 (6-12") 1/7/99	4177.06 B89 (6-12") 1/7/99	4177.08 B90 (6-12") 1/7/99	4177.10 B91 (6-12") 1/7/99	4177.12 B92 (6-12") 1/7/99	4177.14 B93 (6-12") 1/7/99	4177.16 B94 (6-12") 1/7/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	0.15J	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	0.37J	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.62J	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	0.54J	ND	ND	ND	0.12J	ND	ND	ND
Benzo[b]fluoranthene	59.8	0.48J	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	0.26J	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	0.52J	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.14J	ND	ND	ND	ND	0.16J	0.14J	ND
Chrysene	4.73	0.88J	ND	ND	ND	0.18J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.83J	0.23J	0.31J	0.70J	0.92J	1.5	1.00J	0.20J
Fluoranthene	122	1.70	ND	ND	ND	0.30J	ND	ND	ND
Fluorene	122	0.13J	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.27J	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.50	ND	ND	ND	0.21J	ND	ND	ND
Pyrene	78.5	1.50	ND	ND	ND	0.26J	ND	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	0.004	0.002	0.027	0.01	ND	0.069	ND	0.003
4,4'-DDE	0.596	0.005	0.002	0.234	0.058	0.003	0.058	0.001	0.007
4,4'-DDT	0.0035	**0.009**	ND	**0.351**	**0.07**	ND	**0.347**	0.002	**0.023**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4177.02 B87 (6-12") 1/7/99	4177.04 B88 (6-12") 1/7/99	4177.06 B89 (6-12") 1/7/99	4177.08 B90 (6-12") 1/7/99	4177.10 B91 (6-12") 1/7/99	4177.12 B92 (6-12") 1/7/99	4177.14 B93 (6-12") 1/7/99	4177.16 B94 (6-12") 1/7/99
Metals (mg/kg)									
Aluminum	50	**22100**	**17400**	**15800**	**5610**	**14700**	**14400**	**17400**	**12400**
Antimony	0.27	**1.55**	**0.789**	ND	**0.526**	**0.654**	ND	**0.434**	ND
Arsenic	9.9	**32.6**	**28.1**	**14.1**	2.96	**18.8**	**13.9**	**24.7**	**16.1**
Barium	283	153	54.1	23.7	12.4	26.4	81.9	24.1	16.4
Beryllium	10	2.57	2.26	1.54	0.375	1.14	1.83	2.58	1.35
Cadmium	0.36	**1.52**	**2.49**	**0.846**	**0.541**	**0.661**	**1.09**	**1.70**	**0.892**
Calcium	NAV	1060	885	246	221	691	4230	513	427
Chromium	0.4	**307**	**268**	**168**	**37.1**	**137**	**207**	**305**	**150**
Cobalt	13	4.48	2.38	2.18	1.14	1.45	1.47	0.971	0.93
Copper	28	**118**	**51.3**	6.72	3.52	**34.3**	**104**	20.3	18.5
Iron	NAV	63100	56000	41300	9870	26900	47800	63700	35400
Lead	11	**111**	**61.2**	6.61	3.65	**75.9**	**33.3**	**11.5**	**28.7**
Magnesium	NAV	8610	7600	4830	985	3580	5590	9110	4130
Manganese	220	145	107	33.3	24.1	42.6	29.0	34.0	22.6
Mercury	0.00051	**0.212**	**0.106**	**0.048**	**0.037**	**0.081**	**0.058**	**0.038**	**0.086**
Nickel	30	10.5	7.33	7.21	3.93	4.40	6.49	6.54	4.57
Potassium	NAV	20100	19300	12400	2090	7510	15200	24000	10500
Selenium	0.21	**2.13**	**0.91**	**0.796**	ND	ND	**1.77**	**0.666**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	169	242	74.2	82.1	122	118	232	199
Vanadium	2	**134**	**113**	**99.5**	**22.8**	**69.5**	**82.9**	**121**	**66.8**
Zinc	8.5	**158**	**147**	**50.4**	**33.6**	**67.1**	**92.3**	**71.8**	**44.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4177.18 B95 (6-12") 1/7/99	4179.02 B96 (6-12") 1/11/99	4179.04 B97 (6-12") 1/11/99	4179.06 B98 (6-12") 1/11/99	4179.08 B99 (6-12") 1/11/99	4179.10 B100 (6-12") 1/11/99	4179.12 B101 (6-12") 1/11/99	4179.14 B102 (6-12") 1/11/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	0.33J	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	0.27J	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	0.24J	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	0.19J	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	0.29J	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.12J	0.16J	ND	0.13J	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	0.66J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	0.19J	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.27J	0.54J	0.30J	1.3	0.38J	1.4	0.37J	0.38J
Fluoranthene	122	ND	ND	ND	ND	ND	ND	0.64J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	0.18J	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	0.67J	ND
Pyrene	78.5	ND	ND	ND	ND	ND	ND	0.77J	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	0.049	0.019	0.017	0.172	0.136	ND	0.061	0.003
4,4'-DDE	0.596	0.488	0.206	0.034	0.075	0.084	0.002	0.066	0.029
4,4'-DDT	0.0035	**0.516**	**0.213**	**0.028**	**0.309**	**2.93**	0.003	**0.283**	**0.029**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	0.002	ND
Dieldrin	0.0049	ND	ND	ND	0.001	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	0.003	ND

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4177.18 B95 (6-12") 1/7/99	4179.02 B96 (6-12") 1/11/99	4179.04 B97 (6-12") 1/11/99	4179.06 B98 (6-12") 1/11/99	4179.08 B99 (6-12") 1/11/99	4179.10 B100 (6-12") 1/11/99	4179.12 B101 (6-12") 1/11/99	4179.14 B102 (6-12") 1/11/99
Metals (mg/kg)									
Aluminum	50	**10700**	**13600**	**12400**	**15100**	**14900**	**3190**	**1420**	**4570**
Antimony	0.27	ND	ND	ND	**0.611**	ND	**0.566**	ND	ND
Arsenic	9.9	**18.0**	8.96	**23.2**	**29.9**	**28.0**	**24.4**	6.59	9.69
Barium	283	13.8	16.6	17.6	41.5	16.9	6.78	16.0	13.6
Beryllium	10	1.66	1.06	2.03	2.12	2.80	0.162	ND	0.257
Cadmium	0.36	**1.36**	**0.743**	**1.26**	**1.66**	**1.92**	**0.415**	**0.504**	**0.569**
Calcium	NAV	180	270	765	1860	1060	432	135	148
Chromium	0.4	**113**	**109**	**231**	**237**	**317**	**41.3**	**18.9**	**40.4**
Cobalt	13	1.06	1.59	0.771	1.86	0.628	0.677	0.437	0.655
Copper	28	4.68	7.04	11.7	**32.9**	20.6	10.9	10.6	5.24
Iron	NAV	53200	30400	48600	51300	64100	7170	6930	10500
Lead	11	6.11	6.11	10.8	**47.3**	**12.2**	4.86	**24.6**	4.79
Magnesium	NAV	2970	3160	6380	6730	8860	346	163	350
Manganese	220	24.8	28.6	20.8	100	21.9	11.3	5.13	11.0
Mercury	0.00051	**0.028**	**0.062**	**0.039**	**0.102**	**0.05**	**0.031**	**0.164**	**0.04**
Nickel	30	4.84	5.57	5.70	11.0	7.42	1.46	1.23	2.31
Potassium	NAV	7970	7990	16400	17800	23800	608	369	717
Selenium	0.21	**2.12**	ND	ND	**1.23**	**0.725**	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	1.03	ND
Sodium	NAV	80.1	334	139	178	93.5	63.7	63.9	87.5
Vanadium	2	**102**	**63.6**	**100**	**104**	**126**	**14.2**	**9.61**	**31.3**
Zinc	8.5	**46.7**	**40.4**	**61.7**	**95.5**	**76.1**	**24.9**	**16.6**	**27.6**

See Notes at end of Table

Table A-7
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4179.16 B103 (6-12") 1/11/99	4179.18 B104 (6-12") 1/11/99	4179.20 B105 (6-12") 1/11/99	4179.22 B106 (6-12") 1/11/99	4184.02 B107 (6-12") 1/12/99	4184.04 B108 (6-12") 1/12/99	4184.06 B109 (6-12") 1/12/99	4184.08 B110 (6-12") 1/12/99
Semi-Volatiles (mg/kg)									
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1480	ND	ND	ND	ND	0.30J	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	0.64J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	0.48J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	0.40J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	0.26J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	0.49J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.11J	0.16J	ND	0.15J	0.17J	0.20J	0.13J
Chrysene	4.73	ND	ND	ND	ND	0.92J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.3	0.88J	1.3	0.37J	1.9	1.2	30	2
Fluoranthene	122	ND	ND	0.14J	0.14J	1.60	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.28J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	1.20	ND	ND	ND
Pyrene	78.5	ND	ND	0.13J	0.12J	1.30	ND	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	0.002	0.051	0.006	0.031	0.025	0.001	ND	0.002
4,4'-DDE	0.596	0.02	0.024	0.013	0.109	0.04	0.007	0.001	0.024
4,4'-DDT	0.0035	**0.018**	**0.005**	**0.029**	**0.355**	**0.144**	**0.006**	ND	**0.012**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4179.16 B103 (6-12") 1/11/99	4179.18 B104 (6-12") 1/11/99	4179.20 B105 (6-12") 1/11/99	4179.22 B106 (6-12") 1/11/99	4184.02 B107 (6-12") 1/12/99	4184.04 B108 (6-12") 1/12/99	4184.06 B109 (6-12") 1/12/99	4184.08 B110 (6-12") 1/12/99
Metals (mg/kg)									
Aluminum	50	**4140**	**1600**	**1500**	**3380**	**12800**	**16600**	**17100**	**4320**
Antimony	0.27	**0.461**	ND	ND	ND	**0.663**	ND	**0.483**	**0.581**
Arsenic	9.9	6.47	1.14	**14.9**	**17.0**	**16.2**	**11.8**	**11.7**	1.90
Barium	283	16.8	4.92	34.0	10.2	26.5	26.5	26.9	10.7
Beryllium	10	0.295	ND	0.217	0.217	1.38	1.85	1.29	0.255
Cadmium	0.36	**0.418**	0.183	**0.952**	**0.532**	**0.786**	**1.02**	**0.714**	0.313
Calcium	NAV	143	73.7	9270	808	749	116	134	201
Chromium	0.4	**32.4**	**9.66**	**13.8**	**25.8**	**161**	**188**	**142**	**32.7**
Cobalt	13	0.303	0.248	1.02	0.562	0.996	1.83	1.89	0.634
Copper	28	3.56	2.61	10.3	12.5	**52.1**	**36.6**	**30.1**	23.6
Iron	NAV	7410	2320	8270	10200	37900	51300	35400	6360
Lead	11	2.21	1.21	**17.9**	7.06	**28.8**	6.91	7.09	2.60
Magnesium	NAV	214	51.0	4600	232	4880	6450	4150	728
Manganese	220	5.04	1.55	36.3	16.7	21.7	23.4	30.3	15.9
Mercury	0.00051	**0.039**	**0.055**	**0.799**	**0.154**	**0.154**	**0.054**	**0.07**	**0.055**
Nickel	30	1.54	1.44	5.85	1.81	5.69	7.82	6.76	2.43
Potassium	NAV	231	96.6	700	535	10500	15400	8550	1050
Selenium	0.21	ND	ND	**1.09**	ND	**1.14**	**0.711**	**1.11**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	50.2	66.0	115	56.9	174	118	194	71.6
Vanadium	2	**30.3**	**9.70**	**8.80**	**14.3**	**65.7**	**98.4**	**84.4**	**23.0**
Zinc	8.5	**23.5**	**17.0**	**59.4**	**24.3**	**52.7**	**75.9**	**43.1**	**15.8**

See Notes at end of Table

Table A-7
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4184.10 B111 (6-12") 1/12/99	4184.12 B112 (6-12") 1/12/99	4189.02 B113 (6-12") 1/13/99	4189.04 B114 (6-12") 1/13/99	4189.06 B115 (6-12") 1/13/99	4189.08 B116 (6-12") 1/13/99	4189.10 B117 (6-12") 1/13/99	4189.12 B118 (6-12") 1/13/99	4189.14 B119 (6-12") 1/13/99
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	0.13J	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.52J	ND	0.17J	ND	ND	ND	ND	ND
Anthracene	1480	ND	0.86J	ND	0.27J	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	2.80	ND	2.40	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	**2.30**	ND	**2.50**	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	2.00	ND	2.20	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	1.10	ND	1.50	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	2.10	ND	2.10	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.14J	0.15J	ND	ND	ND	ND	0.12J	0.17J	ND
Chrysene	4.73	ND	3.90	ND	2.60	ND	ND	ND	ND	0.12J
Dibenz[a,h]anthracene	18.4	ND	0.31J	ND	0.34J	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.10J	1.2	0.38J	0.47J	0.38J	1.20J	0.31J	1.4	3
Fluoranthene	122	ND	7.90	ND	6.40	ND	ND	ND	ND	0.25J
Fluorene	122	ND	0.31J	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.95J	ND	1.20J	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	**0.11J**	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	6.10	ND	0.86J	ND	ND	ND	ND	0.11J
Pyrene	78.5	ND	6.40	ND	4.80	ND	ND	ND	0.11J	0.19J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	ND	0.149	ND	0.072	0.695	ND	0.015	ND	0.022
4,4'-DDE	0.596	0.003	0.117	0.046	0.387	**0.743**	0.186	0.155	0.094	0.136
4,4'-DDT	0.0035	0.003	**0.509**	**0.036**	**0.466**	**4.142**	**0.152**	**0.165**	**0.08**	**0.113**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	**0.013**	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4184.10 B111 (6-12") 1/12/99	4184.12 B112 (6-12") 1/12/99	4189.02 B113 (6-12") 1/13/99	4189.04 B114 (6-12") 1/13/99	4189.06 B115 (6-12") 1/13/99	4189.08 B116 (6-12") 1/13/99	4189.10 B117 (6-12") 1/13/99	4189.12 B118 (6-12") 1/13/99	4189.14 B119 (6-12") 1/13/99
Metals (mg/kg)										
Aluminum	50	**3040**	**3070**	**18000**	**16300**	**17000**	**17300**	**2720**	**12100**	**5260**
Antimony	0.27	**1.03**	**1.16**	ND	ND	**0.588**	ND	**0.792**	**0.407**	**0.424**
Arsenic	9.9	1.12	1.92	**23.3**	**25.6**	**19.3**	**23.4**	1.36	**11.8**	5.03
Barium	283	10.1	17.5	26.2	29.2	17.6	40.3	12.9	20.8	19.8
Beryllium	10	0.197	0.319	2.54	2.16	2.30	2.39	0.19	1.15	0.47
Cadmium	0.36	0.326	0.25	**1.21**	**1.09**	**1.00**	**3.17**	0.268	**0.539**	0.276
Calcium	NAV	199	299	634	1200	758	1180	162	386	235
Chromium	0.4	**19.3**	**19.8**	**308**	**254**	**258**	**280**	**16.3**	**135**	**51.0**
Cobalt	13	0.425	1.41	0.573	1.07	0.298	0.959	0.443	0.938	0.692
Copper	28	20.1	21.3	**65.4**	**31.9**	25.5	**34.2**	4.80	**33.0**	7.50
Iron	NAV	5400	8550	64400	55300	55900	57600	4980	31000	13900
Lead	11	2.41	**40.7**	**32.5**	**36.5**	**16.1**	**45.2**	8.16	**30.5**	**11.9**
Magnesium	NAV	470	831	10100	8290	8380	9020	474	4270	1520
Manganese	220	12.2	20.5	22.2	30.4	18.2	47.0	18.5	29.6	24.1
Mercury	0.00051	**0.054**	**0.066**	**0.073**	**0.97**	**0.044**	**0.069**	**0.037**	**0.313**	**0.068**
Nickel	30	2.31	3.81	7.11	7.88	6.36	8.00	2.26	10.9	3.16
Potassium	NAV	566	1910	22800	18600	19600	20500	770	9350	3070
Selenium	0.21	ND	**1.16**	**2.48**	**2.11**	**1.94**	**1.67**	**0.661**	**1.08**	**0.705**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	69.4	79.5	148	118	238	124	74.9	130	64.9
Vanadium	2	**14.0**	**12.6**	**120**	**82.4**	**94.6**	**118**	**9.79**	**57.2**	**24.1**
Zinc	8.5	**20.1**	**37.7**	**84.9**	**85.3**	**70.5**	**256**	**26.7**	**49.8**	**32.6**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No Available Value
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4199.02 B01 (6-12") 1/20/1999	4199.04 B02 (6-12") 1/20/1999	4199.06 B03 (6-12") 1/20/1999	4199.08 B04 (6-12") 1/20/1999	4199.10 B05 (6-12") 1/20/1999	4199.12 B06 (6-12") 1/20/1999	4199.14 B07 (6-12") 1/20/1999	4199.16 B08 (6-12") 1/20/1999	4199.18 B09 (6-12") 1/20/1999	4199.20 B10 (6-12") 1/20/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	0.12J	ND	ND	ND	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.7	0.63J	0.48J	0.36J	0.37J	0.37J	1.10J	0.96J	2.5	1.3
Fluoranthene	122	ND	ND	ND	0.52J	ND	ND	ND	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.17J	ND	ND	ND	ND	ND	ND
Pyrene	78.5	ND	ND	ND	0.28J	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.066	0.001	ND	ND	0.002	0.022	ND	ND	ND	ND
4,4'-DDT	0.0035	**0.111**	0.003	ND	ND	ND	**0.022**	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	0.003	ND	ND	ND	ND	0.003	ND	ND	ND	ND
Heptachlor	0.00598	ND	0.001	ND	ND	0.002	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4199.02 B01 (6-12") 1/20/1999	4199.04 B02 (6-12") 1/20/1999	4199.06 B03 (6-12") 1/20/1999	4199.08 B04 (6-12") 1/20/1999	4199.10 B05 (6-12") 1/20/1999	4199.12 B06 (6-12") 1/20/1999	4199.14 B07 (6-12") 1/20/1999	4199.16 B08 (6-12") 1/20/1999	4199.18 B09 (6-12") 1/20/1999	4199.20 B10 (6-12") 1/20/1999
Metals (mg/kg)											
Aluminum	50	**2140**	**15700**	**3060**	**2000**	**756**	**2750**	**5220**	**3830**	**4680**	**3100**
Antimony	0.27	**0.866**	**0.60**	ND	**0.568**	**0.528**	ND	ND	**0.445**	ND	**0.351**
Arsenic	9.9	2.58	**12.9**	3.58	2.48	1.16	3.04	4.90	4.51	5.20	2.90
Barium	283	5.29	17.6	16.7	2.98	3.33	3.40	17.6	10.1	10.0	9.40
Beryllium	10	0.325	1.84	0.648	0.446	0.147	0.499	0.952	0.698	0.983	0.323
Cadmium	0.36	0.356	**1.22**	**0.374**	**0.443**	**0.414**	**0.463**	**0.602**	**0.59**	**0.539**	**0.538**
Calcium	NAV	143	324	102	98.5	81.8	155	719	153	410	132
Chromium	0.4	**21.9**	**136**	**37.0**	**29.6**	**13.6**	**33.9**	**49.7**	**44.6**	**59.9**	**28.8**
Cobalt	13	0.379	1.40	0.388	0.483	0.22	0.561	0.762	0.638	0.772	0.657
Copper	28	ND	ND	ND	ND	ND	ND	ND	5.43	3.26	3.80
Iron	NAV	10600	58800	17700	14100	6700	19800	23100	21500	28200	14500
Lead	11	5.38	**13.6**	1.87	1.35	1.21	**14.4**	5.82	2.30	2.04	10.6
Magnesium	NAV	587	3470	818	836	271	1540	1450	1270	1870	1000
Manganese	220	7.2	29.0	8.54	6.58	3.07	13.0	26.6	11.7	9.60	18.5
Mercury	0.00051	**0.064**	**0.081**	ND	ND	ND	ND	**0.086**	**0.068**	**0.028**	**0.036**
Nickel	30	2.48	6.57	2.10	1.88	1.40	2.56	3.57	3.24	3.57	2.49
Potassium	NAV	1040	6960	2040	2280	732	4030	2920	2980	4680	2350
Selenium	0.21	ND	**1.30**	**0.617**	ND	ND	ND	**0.892**	ND	**0.678**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	74.4	115	72.5	99.0	76.1	197	108	79.6	89.3	86.8
Vanadium	2	**19**	**92.0**	**24.8**	**16.4**	**12.2**	**23.4**	**33.3**	**33.3**	**41.2**	**23.5**
Zinc	8.5	**25.2**	**173**	**23.0**	**18.0**	**11.2**	**30.0**	**33.9**	**26.9**	**28.3**	**18.7**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4199.22 B11 (6-12") 1/20/1999	4199.24 B12 (6-12") 1/20/1999	4199.26 B13 (6-12") 1/20/1999	4199.28 B14 (6-12") 1/20/1999	4199.30 B15 (6-12") 1/20/1999	4201.02 B16 (6-12") 1/21/1999	4201.04 B17 (6-12") 1/21/1999	4201.06 B18 (6-12") 1/21/1999	4201.08 B19 (6-12") 1/21/1999	4201.10 B20 (6-12") 1/21/1999
Semi-Volatiles (mg/kg)											
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	0.14J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	0.13J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	0.11J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	ND	ND	ND	0.19J	ND	0.14J	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	ND	0.36J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.00J	1.10J	1.10J	1.4	0.26J	0.30J	1.4	0.76J	0.65J	0.68J
Fluoranthene	122	ND	ND	ND	ND	ND	ND	ND	0.31J	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	0.30J	ND	ND
Pyrene	78.5	ND	ND	ND	ND	ND	ND	ND	0.44J	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	0.001	0.001	ND	0.002	ND	ND	ND	ND	ND	ND
4,4'-DDT	0.0035	**0.012**	**0.005**	0.002	**0.006**	ND	ND	ND	ND	ND	0.002
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	0.003	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	0.002	ND	ND	ND	ND	0.001	ND	ND	0.001	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4199.22 B11 (6-12") 1/20/1999	4199.24 B12 (6-12") 1/20/1999	4199.26 B13 (6-12") 1/20/1999	4199.28 B14 (6-12") 1/20/1999	4199.30 B15 (6-12") 1/20/1999	4201.02 B16 (6-12") 1/21/1999	4201.04 B17 (6-12") 1/21/1999	4201.06 B18 (6-12") 1/21/1999	4201.08 B19 (6-12") 1/21/1999	4201.10 B20 (6-12") 1/21/1999
Metals (mg/kg)											
Aluminum	50	**1520**	**2650**	**5590**	**5210**	**3740**	**2980**	**3370**	**7120**	**3740**	**3140**
Antimony	0.27	**0.739**	**0.597**	ND	ND	**0.752**	ND	**0.892**	ND	ND	**0.838**
Arsenic	9.9	3.63	4.88	5.83	6.77	9.03	4.31	4.30	6.31	4.88	3.03
Barium	283	3.67	4.84	17.3	20.4	26.4	7.48	3.66	20.9	11.0	3.53
Beryllium	10	0.257	0.444	1.26	1.04	0.84	0.58	0.412	1.36	0.903	0.292
Cadmium	0.36	0.322	**2.27**	**0.648**	**0.646**	**0.515**	**0.372**	0.252	**0.654**	**0.423**	0.325
Calcium	NAV	121	230	489	441	939	102	592	333	577	469
Chromium	0.4	**20.2**	**35.5**	**57.2**	**61.2**	**39.1**	**37.4**	**70.1**	**70.4**	**42.0**	**53.1**
Cobalt	13	0.416	0.454	0.979	1.05	0.708	0.598	0.541	1.23	0.616	0.413
Copper	28	4.58	3.11	2.03	5.86	11.0	3.25	2.08	1.99	1.35	1.82
Iron	NAV	11400	18200	30900	31200	26200	20500	12300	35100	25400	9310
Lead	11	**12.1**	9.30	3.36	9.76	**54.3**	**15.6**	1.33	4.63	3.08	1.33
Magnesium	NAV	645	1110	1920	1920	1100	1240	874	2560	1080	601
Manganese	220	9.68	9.91	21.3	27.0	33.2	9.99	3.94	18.7	17.6	6.45
Mercury	0.00051	**0.025**	**0.031**	**0.04**	**0.044**	**0.062**	ND	ND	ND	ND	ND
Nickel	30	1.62	2.37	4.94	4.93	3.89	2.73	2.23	5.26	3.12	1.80
Potassium	NAV	1560	2720	4170	4850	2300	3160	2510	5870	2010	1730
Selenium	0.21	ND	ND	ND	**0.763**	**0.834**	ND	ND	**0.732**	**0.672**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	89.6	90.2	99.5	108	101	85.3	111	103	96.1	79.4
Vanadium	2	**16.4**	**29.4**	**38.6**	**41.9**	**31.9**	**29.7**	**66.1**	**44.2**	**34.1**	**48.1**
Zinc	8.5	**19.5**	**24.1**	**46.0**	**46.5**	**38.7**	**22.8**	**13.8**	**43.2**	**25.0**	**12.9**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4201.12 B21 (6-12") 1/21/1999	4201.14 B22 (6-12") 1/21/1999	4201.16 B23 (6-12") 1/21/1999	4201.18 B24 (6-12") 1/21/1999	4201.20 B25 (6-12") 1/21/1999	4201.22 B26 (6-12") 1/21/1999	4201.24 B27 (6-12") 1/21/1999	4201.26 B28 (6-12") 1/21/1999	4201.28 B29 (6-12") 1/21/1999
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	0.11J	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	ND	0.39J	0.19J
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	ND	0.48J	0.22J
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	0.44J	0.15J
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	0.34J	0.18J
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	0.45J	0.14J
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.13J	ND	0.45J	ND	ND	0.24J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	ND	ND	ND	0.60J	0.24J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	0.18J	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.34J	0.27J	0.27J	0.90J	0.38J	0.29J	0.27J	0.87J	0.79J
Fluoranthene	122	ND	ND	ND	ND	ND	ND	ND	0.75J	0.31J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	0.26J	0.14J
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	0.31J	0.16J
Pyrene	78.5	ND	ND	ND	ND	ND	ND	ND	0.71J	0.34J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	ND	ND	ND	ND	0.002	ND	ND	0.013	0.01
4,4'-DDE	0.596	ND	0.002	ND	ND	0.003	ND	ND	0.005	0.015
4,4'-DDT	0.0035	ND	0.002	ND	ND	**0.007**	ND	ND	**0.02**	**0.005**
alpha-Chlordane	0.224	ND	ND	ND	ND	0.002	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	0.001
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	0.002	ND	ND	ND	ND
Heptachlor	0.00598	ND	0.001	ND	ND	0.001	ND	0.001	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4201.12 B21 (6-12") 1/21/1999	4201.14 B22 (6-12") 1/21/1999	4201.16 B23 (6-12") 1/21/1999	4201.18 B24 (6-12") 1/21/1999	4201.20 B25 (6-12") 1/21/1999	4201.22 B26 (6-12") 1/21/1999	4201.24 B27 (6-12") 1/21/1999	4201.26 B28 (6-12") 1/21/1999	4201.28 B29 (6-12") 1/21/1999
Metals (mg/kg)										
Aluminum	50	**9430**	**3680**	**7040**	**8260**	**5020**	**5130**	**4970**	**9170**	**6560**
Antimony	0.27	**0.715**	**0.721**	ND	ND	**0.768**	**0.675**	**0.965**	**0.527**	**0.431**
Arsenic	9.9	9.41	4.05	9.16	8.73	4.93	4.58	4.24	9.50	4.72
Barium	283	6.27	5.13	19.1	12.3	23.7	3.75	4.95	70.8	28.9
Beryllium	10	0.97	0.416	1.01	1.55	0.443	0.60	0.582	1.31	0.581
Cadmium	0.36	**0.516**	0.267	**0.983**	**0.742**	**0.79**	0.328	**0.412**	**1.16**	**0.568**
Calcium	NAV	835	500	759	335	15000	148	385	2880	19500
Chromium	0.4	**129**	**61.6**	**63.4**	**97.3**	**38.2**	**87.5**	**97.5**	**110**	**46.3**
Cobalt	13	0.764	0.775	1.53	1.46	2.09	0.48	0.971	2.08	3.83
Copper	28	2.10	3.30	6.15	0.834	20.0	1.48	2.47	9.29	10.0
Iron	NAV	30900	13300	33700	46000	15000	19200	17600	28700	16500
Lead	11	2.47	4.94	**12.2**	4.12	**40.8**	1.30	2.59	**15.6**	**16.0**
Magnesium	NAV	2430	1100	1880	3030	1930	1520	1590	3450	2050
Manganese	220	9.40	14.1	37.1	24.9	52.9	4.16	7.69	41.5	67.2
Mercury	0.00051	ND	**0.031**	**0.062**	ND	**0.864**	**0.041**	ND	**0.318**	**0.09**
Nickel	30	4.15	2.64	5.85	5.91	6.78	4.62	3.62	10.5	8.27
Potassium	NAV	6940	2680	4280	7990	2100	4310	4190	7720	3370
Selenium	0.21	**0.77**	ND	**0.833**	**1.13**	**0.714**	ND	ND	**1.46**	**0.795**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	139	89.6	108	58.0	144	44.8	65.0	149	130
Vanadium	2	**116**	**51.8**	**48.4**	**54.2**	**26.3**	**81.6**	**83.1**	**47.8**	**25.5**
Zinc	8.5	**22.8**	**19.5**	**46.0**	**42.4**	**90.4**	**18.3**	**20.7**	**67.0**	**91.0**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4201.30 B30 (6-12") 1/21/1999	4224.02 B31 (6-12") 1/27/1999	4224.04 B32 (6-12") 1/27/1999	4224.06 B33 (6-12") 1/27/1999	4224.08 B34 (6-12") 1/27/1999	4224.10 B35 (6-12") 1/27/1999	4224.12 B36 (6-12") 1/27/1999	4224.14 B37 (6-12") 1/27/1999	4224.16 B38 (6-12") 1/27/1999
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	0.47J	ND	ND	0.35J	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	1.10	0.23J	0.12J	0.75J	ND	0.15J	ND	ND
Benzo[a]pyrene	1.52	ND	0.98J	0.27J	0.11J	0.58J	ND	0.16J	ND	ND
Benzo[b]fluoranthene	59.8	ND	1.20	0.22J	ND	0.44J	ND	0.14J	ND	ND
Benzo[g,h,I]perylene	119	ND	0.32J	0.21J	ND	0.33J	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	0.97J	0.26J	ND	0.53J	ND	0.17J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.15J	0.23J	0.11J	ND	ND	ND	0.14J	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.13J	1.80	0.29J	0.13J	0.85J	ND	0.23J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.5	0.21J	0.60J	0.42J	0.89J	0.14J	0.21J	0.44J	0.16J
Fluoranthene	122	0.21J	2.90	0.41J	0.24J	2.10	ND	0.26J	0.16J	ND
Fluorene	122	ND	0.20J	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	0.32J	0.16J	ND	0.27J	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.14J	2.70	0.17J	ND	1.80	ND	0.14J	ND	ND
Pyrene	78.5	0.19J	3.20	0.36J	0.20J	1.60	ND	0.29J	0.15J	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.018	0.014	0.027	ND	0.057	ND	0.017	0.029	ND
4,4'-DDE	0.596	0.023	0.011	0.013	ND	0.035	ND	0.012	0.017	ND
4,4'-DDT	0.0035	**0.012**	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	0.023	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	0.026	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4201.30 B30 (6-12") 1/21/1999	4224.02 B31 (6-12") 1/27/1999	4224.04 B32 (6-12") 1/27/1999	4224.06 B33 (6-12") 1/27/1999	4224.08 B34 (6-12") 1/27/1999	4224.10 B35 (6-12") 1/27/1999	4224.12 B36 (6-12") 1/27/1999	4224.14 B37 (6-12") 1/27/1999	4224.16 B38 (6-12") 1/27/1999
Metals (mg/kg)										
Aluminum	50	**5520**	**8760**	**14000**	**9770**	**7690**	**6640**	**10100**	**10200**	**10100**
Antimony	0.27	**0.771**	**0.973**	**1.09**	**0.754**	**0.748**	**0.774**	**0.866**	**1.04**	**0.605**
Arsenic	9.9	8.29	9.83	**14.0**	**16.6**	8.95	3.51	4.86	**13.8**	3.29
Barium	283	52.6	50.3	75.5	41.3	47.9	14.2	22.7	54.2	18.2
Beryllium	10	0.846	1.20	2.19	1.39	1.27	0.268	0.534	1.36	0.256
Cadmium	0.36	**0.725**	ND	ND	ND	ND	**0.496**	ND	0.184	ND
Calcium	NAV	3830	5170	11800	2170	2540	518	589	2700	422
Chromium	0.4	**77.7**	**132**	**258**	**122**	**100**	**32.2**	**55.4**	**124**	**29.0**
Cobalt	13	1.22	1.63	1.08	1.98	1.38	1.83	2.28	2.26	2.14
Copper	28	8.32	7.27	5.82	8.31	8.69	4.67	12.1	**29.9**	6.00
Iron	NAV	18800	28600	56700	34900	20700	12200	18600	38300	10600
Lead	11	**39.8**	**21.2**	6.36	**20.5**	**31.1**	6.94	**23.2**	**59.2**	5.66
Magnesium	NAV	2780	4110	8590	4050	2710	800	1900	4360	760
Manganese	220	31.5	27.0	33.3	24.5	15.5	40.6	42.4	51.5	49.0
Mercury	0.00051	**0.055**	**0.06**	**0.10**	**0.09**	**0.08**	**0.04**	**0.04**	**0.32**	**0.05**
Nickel	30	5.44	7.44	8.23	9.44	5.24	4.05	6.23	9.54	5.24
Potassium	NAV	4800	8280	18800	8190	5540	1200	3250	8940	1170
Selenium	0.21	**1.11**	**1.64**	**1.86**	**1.13**	**1.67**	ND	ND	**0.98**	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	151	183	328	118	266	81.2	102	174	96.2
Vanadium	2	**30.8**	**57.3**	**92.5**	**54.3**	**45.0**	**27.2**	**37.4**	**54.5**	**24.2**
Zinc	8.5	**45.5**	**65.6**	**71.2**	**65.6**	**42.6**	**19.1**	**36.8**	**109**	**17.8**

See Notes at End of Table

Table A-8
Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4224.18 B39 (6-12") 1/27/1999	4224.20 B40 (6-12") 1/27/1999	4224.22 B41 (6-12") 1/27/1999	4224.24 B42 (6-12") 1/27/1999	4224.26 B43 (6-12") 1/27/1999	4224.28 B44 (6-12") 1/27/1999	4224.30 B45 (6-12") 1/27/1999	4229.02 B46 (6-12") 1/28/1999	4229.04 B47 (6-12") 1/28/1999
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND	ND	0.21J	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	0.41J	ND
Acenaphthylene	682	ND	ND	0.33J	ND	ND	ND	ND	0.16J	ND
Anthracene	1,480	ND	ND	0.59J	ND	0.12J	ND	ND	2.20	ND
Benzo[a]anthracene	5.21	ND	ND	0.54J	ND	0.39J	ND	ND	4.00	0.23J
Benzo[a]pyrene	1.52	ND	ND	**1.80**	ND	0.49J	ND	ND	**3.10**	0.20J
Benzo[b]fluoranthene	59.8	ND	ND	2.40	ND	0.41J	ND	ND	2.90	0.16J
Benzo[g,h,I]perylene	119	ND	ND	0.52J	ND	0.24J	ND	ND	1.90	0.12J
Benzo[k]fluoranthene	148	ND	ND	1.90	ND	0.44J	ND	ND	2.50	0.15J
bis(2-Ethylhexyl)phthalate	0.925	0.13J	ND	ND	ND	ND	ND	0.11J	0.13J	0.15J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	1.90	0.22J	0.45J	0.13J	0.14J	4.50	0.36J
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	0.49J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	0.46J	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.4	0.49J	1.20	0.23J	0.21J	0.11J	0.45J	1.20	1.5
Fluoranthene	122	ND	0.14J	0.37J	0.17J	0.65J	0.16J	0.12J	12.00	0.52J
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	1.10J	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	0.68J	ND	0.20J	ND	ND	15.00	ND
Naphthalene	0.0994	ND	ND	**0.15J**	ND	ND	ND	ND	**0.22J**	ND
Phenanthrene	45.7	ND	ND	0.23J	ND	0.19J	ND	ND	12.00	0.58J
Pyrene	78.5	ND	0.12J	0.60J	0.25J	0.63J	0.17J	0.18J	8.70	0.62J
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	ND	0.014	0.061	0.053	0.021	0.014	0.016	0.026	0.138
4,4'-DDE	0.596	ND	0.01	0.018	0.03	ND	0.011	0.011	0.018	0.051
4,4'-DDT	0.0035	ND	ND	**0.034**	ND	ND	ND	ND	ND	**0.052**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4224.18 B39 (6-12") 1/27/1999	4224.20 B40 (6-12") 1/27/1999	4224.22 B41 (6-12") 1/27/1999	4224.24 B42 (6-12") 1/27/1999	4224.26 B43 (6-12") 1/27/1999	4224.28 B44 (6-12") 1/27/1999	4224.30 B45 (6-12") 1/27/1999	4229.02 B46 (6-12") 1/28/1999	4229.04 B47 (6-12") 1/28/1999
Metals (mg/kg)										
Aluminum	50	**9100**	**9870**	**11500**	**9190**	**14100**	**12100**	**7360**	**12400**	**10700**
Antimony	0.27	ND	**0.556**	**0.91**	**1.14**	**0.933**	**0.665**	**0.547**	**1.02**	**0.837**
Arsenic	9.9	5.76	**11.1**	**10.4**	**12.0**	**14.5**	**10.7**	5.77	**15.3**	**21.5**
Barium	283	23.8	23.5	48.8	63.1	58.4	20.2	17.7	31.2	48.9
Beryllium	10	0.524	1.50	1.38	1.53	1.76	1.12	0.496	1.15	1.44
Cadmium	0.36	ND	**17.4**	ND	ND	0.127	ND	0.218	ND	ND
Calcium	NAV	947	2630	2100	2140	3530	2010	3280	1600	1660
Chromium	0.4	**51.3**	**117**	**126**	**138**	**180**	**98.5**	**48.2**	**110**	**157**
Cobalt	13	2.00	2.41	2.62	1.62	2.92	3.44	1.98	2.35	1.88
Copper	28	7.15	13.7	9.38	12.6	12.3	16.5	8.03	12.3	16.6
Iron	NAV	17000	40100	34200	36000	47700	36000	16900	30300	40400
Lead	11	**11.8**	**91.0**	**36.5**	**37.8**	**36.7**	6.12	10.9	**18.3**	**33.0**
Magnesium	NAV	1540	4290	4110	4330	6170	4070	1670	3850	4590
Manganese	220	38.4	36.2	53.9	28.6	78.5	55.9	45.5	52.4	45.9
Mercury	0.00051	**0.06**	**0.05**	**0.10**	**0.11**	**0.19**	**0.06**	**0.09**	**0.08**	**0.08**
Nickel	30	6.12	8.44	10.8	8.54	13.3	5.88	5.63	8.01	9.17
Potassium	NAV	2760	9410	8550	9200	12700	7550	2600	7180	9630
Selenium	0.21	ND	**0.889**	**1.23**	**2.19**	**1.85**	ND	**0.84**	**1.09**	**1.47**
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	107	124	118	189	239	275	171	269	182
Vanadium	2	**32.0**	**59.3**	**61.9**	**54.8**	**80.7**	**65.5**	**32.7**	**58.7**	**65.9**
Zinc	8.5	**31.3**	**1970**	**90.0**	**74.4**	**126**	**42.7**	**37.9**	**66.5**	**76.7**

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4229.06 B48 (6-12") 1/28/1999	4229.08 B49 (6-12") 1/28/1999	4229.10 B50 (6-12") 1/28/1999	4229.12 B51 (6-12") 1/28/1999	4229.14 B52 (6-12") 1/28/1999	4229.16 B53 (6-12") 1/28/1999	4229.18 B54 (6-12") 1/28/1999	4229.20 B55 (6-12") 1/28/1999	4261.02 B56 (6-12") 2/9/1999
Semi-Volatiles (mg/kg)										
2-Methylnaphthalene	3.24	0.13J	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	0.64J	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	0.21J	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	0.65J	0.18J	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	0.46J	0.37J	ND	ND	ND	0.35J	ND	0.13J	ND
Benzo[a]pyrene	1.52	0.35J	0.51J	ND	ND	ND	0.36J	ND	0.14J	ND
Benzo[b]fluoranthene	59.8	0.32J	0.46J	ND	ND	ND	0.35J	ND	0.15J	ND
Benzo[g,h,I]perylene	119	0.17J	0.29J	ND	ND	ND	0.19J	ND	ND	ND
Benzo[k]fluoranthene	148	0.29J	0.42J	ND	ND	ND	0.39J	ND	0.15J	ND
bis(2-Ethylhexyl)phthalate	0.925	0.14J	0.16J	ND	0.15J	0.16J	ND	0.12J	0.18J	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.52J	0.75J	ND	ND	0.20J	0.59J	ND	0.24J	0.65J
Dibenz[a,h]anthracene	18.4	ND	0.19J	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	1.10	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.78J	0.43J	0.80J	0.002	0.39J	0.4J	0.40J	0.35J	ND
Fluoranthene	122	1.90	0.56J	ND	ND	0.17J	0.64J	ND	0.21J	ND
Fluorene	122	0.91J	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.14J	0.25J	ND	ND	ND	0.19J	ND	ND	ND
Naphthalene	0.0994	**0.48J**	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	1.20	0.28J	ND	ND	0.17J	0.31J	ND	ND	ND
Pyrene	78.5	1.50	0.77J	ND	ND	0.18J	0.61J	ND	0.20J	ND
Pesticides/PCBs (mg/kg)										
4,4'-DDD	0.758	0.079	0.016	0.039	0.023	0.048	0.079	ND	0.114	0.084
4,4'-DDE	0.596	0.032	0.009	0.018	0.023	0.038	0.026	ND	0.037	0.043
4,4'-DDT	0.0035	**0.03**	ND	ND	ND	**0.073**	**0.027**	ND	ND	**0.094**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	0.013	0.014	0.01	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	**0.011**	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	0.013	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4229.06 B48 (6-12") 1/28/1999	4229.08 B49 (6-12") 1/28/1999	4229.10 B50 (6-12") 1/28/1999	4229.12 B51 (6-12") 1/28/1999	4229.14 B52 (6-12") 1/28/1999	4229.16 B53 (6-12") 1/28/1999	4229.18 B54 (6-12") 1/28/1999	4229.20 B55 (6-12") 1/28/1999	4261.02 B56 (6-12") 2/9/1999
Metals (mg/kg)										
Aluminum	50	**7930**	**11200**	**13600**	**12200**	**8510**	**11200**	**9050**	**14200**	**11500**
Antimony	0.27	**1.03**	ND	**0.997**	**1.10**	**1.56**	**1.41**	ND	**1.43**	**1.08**
Arsenic	9.9	**11.1**	8.33	**11.7**	**12.4**	**27.2**	**14.3**	2.95	**13.9**	**12.8**
Barium	283	36.2	20.7	33.3	42.3	63.2	47.7	13.2	65.7	52.9
Beryllium	10	0.873	0.87	1.55	1.34	1.19	1.52	0.179	1.73	1.51
Cadmium	0.36	0.338	ND	ND	**0.668**	ND	0.294	0.194	ND	0.235
Calcium	NAV	2070	3210	1880	1200	2140	1760	266	1750	1970
Chromium	0.4	**81.4**	**85.9**	**150**	**117**	**131**	**151**	**27.1**	**151**	**143**
Cobalt	13	2.10	3.94	2.37	2.48	1.46	1.96	1.40	3.10	1.84
Copper	28	14.0	18.3	8.62	14.2	8.44	10.9	4.52	18.3	10.6
Iron	NAV	24600	28000	45100	36200	38400	37900	8710	50400	34400
Lead	11	**30.0**	**15.4**	**16.2**	**64.3**	**28.4**	**25.1**	**18.4**	**58**	**43.5**
Magnesium	NAV	2730	3320	5360	4430	4010	4560	515	5990	4130
Manganese	220	34.9	73.3	55.8	40.4	31.4	30.3	26.7	36.6	33.1
Mercury	0.00051	**0.04**	**0.25**	**0.11**	**0.69**	**0.10**	**0.14**	**0.03**	**0.76**	**0.08**
Nickel	30	8.24	11.0	7.80	9.15	8.01	10.9	4.61	10.6	9.75
Potassium	NAV	5300	5320	10500	9560	8340	9530	843	12700	8140
Selenium	0.21	**1.13**	ND	**1.13**	**1.07**	**2.96**	**2.12**	ND	**1.38**	**1.68**
Silver	2	ND	ND	ND	**2.56**	ND	ND	ND	1.31	ND
Sodium	NAV	161	132	178	161	274	104	208	258	151
Vanadium	2	**41.7**	**53.9**	**80.2**	**60.3**	**55.4**	**63.4**	**20.2**	**71.1**	**66.9**
Zinc	8.5	**84.2**	**51.2**	**76.0**	**186**	**63.6**	**82.8**	**13.5**	**109**	**99.6**

See Notes at End of Table

Table A-8
Soil Sampling Results
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Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4261.04 B57 (6-12") 2/9/1999	4261.06 B58 (6-12") 2/9/1999	4261.08 B59 (6-12") 2/9/1999	4261.10 B60 (6-12") 2/9/1999	4261.12 B61 (6-12") 2/9/1999	4261.14 B62 (6-12") 2/9/1999
Semi-Volatiles (mg/kg)							
2-Methylnaphthalene	3.24	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	0.41J	ND	ND	ND
Anthracene	1,480	ND	0.12J	0.19J	ND	0.12J	ND
Benzo[a]anthracene	5.21	0.27J	0.31J	0.74J	0.14J	0.37J	ND
Benzo[a]pyrene	1.52	0.34J	0.35J	0.81J	0.15J	0.42J	ND
Benzo[b]fluoranthene	59.8	0.31J	0.35J	0.66J	0.14J	0.36J	ND
Benzo[g,h,I]perylene	119	0.19J	0.20J	0.38J	0.13J	0.3J	ND
Benzo[k]fluoranthene	148	0.32J	0.36J	0.67J	0.15J	0.38J	ND
bis(2-Ethylhexyl)phthalate	0.925	0.23J	0.62J	0.21J	0.23J	0.22J	ND
Butylbenzylphthalate	0.239	ND	0.12J	ND	ND	ND	ND
Chrysene	4.73	0.55J	0.68J	1.60	0.29J	0.73J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	0.20J	ND	0.14J	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.14J	ND
Di-n-butylphthalate	200	1.8	1.10J	0.28J	0.26J	0.79J	ND
Fluoranthene	122	0.43J	0.63J	0.79J	0.22J	0.61J	ND
Fluorene	122	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	0.17J	0.19J	0.33J	0.12J	0.28J	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	0.21J	0.23J	0.28J	ND	0.23J	ND
Pyrene	78.5	0.45J	0.60J	1.20	0.23J	0.62J	ND
Pesticides/PCBs (mg/kg)							
4,4'-DDD	0.758	0.074	0.106	0.032	0.031	0.053	0.074
4,4'-DDE	0.596	0.02	0.032	0.024	0.019	0.022	0.029
4,4'-DDT	0.0035	ND	**0.03**	**0.089**	**0.053**	**0.027**	**0.033**
alpha-Chlordane	0.224	ND	ND	ND	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND
Endosulfan II	NAV	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND
gamma-Chlordane	0.224	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Soil Sampling Results
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4261.04 B57 (6-12") 2/9/1999	4261.06 B58 (6-12") 2/9/1999	4261.08 B59 (6-12") 2/9/1999	4261.10 B60 (6-12") 2/9/1999	4261.12 B61 (6-12") 2/9/1999	4261.14 B62 (6-12") 2/9/1999
Metals (mg/kg)							
Aluminum	50	**11600**	**12600**	**9750**	**8030**	**7710**	**7120**
Antimony	0.27	**0.903**	**1.31**	**0.939**	**1.04**	**1.03**	**0.676**
Arsenic	9.9	**10.5**	**13.2**	**13.4**	**17.8**	**10.2**	8.97
Barium	283	51.5	53.9	39.7	58.1	28.8	30.5
Beryllium	10	1.23	1.45	1.35	1.24	0.827	0.814
Cadmium	0.36	0.174	ND	0.344	ND	0.249	0.268
Calcium	NAV	2370	2030	1520	1220	1610	1730
Chromium	0.4	**115**	**136**	**112**	**123**	**74.4**	**67.7**
Cobalt	13	2.63	2.91	2.85	0.867	1.84	1.93
Copper	28	18.7	18.7	13.2	5.90	14.6	13.1
Iron	NAV	34200	40600	35300	34300	25600	21500
Lead	11	**66.2**	**53.7**	**36.6**	6.12	**39.2**	**40.8**
Magnesium	NAV	3940	4690	4000	3600	2360	2120
Manganese	220	47.2	49.5	80.5	19.1	37.8	24.5
Mercury	0.00051	**1.24**	**0.53**	**0.30**	**0.05**	**0.29**	**0.15**
Nickel	30	10.8	11.5	11.3	4.89	7.60	7.42
Potassium	NAV	7890	9500	8020	8160	4730	4260
Selenium	0.21	**1.44**	**1.13**	**1.77**	**2.85**	**1.37**	**0.973**
Silver	2	**4.22**	**2.30**	0.972	ND	ND	ND
Sodium	NAV	283	257	192	236	90.4	109
Vanadium	2	**61.9**	**66.6**	**49.3**	**40.0**	**39.9**	**34.7**
Zinc	8.5	**134**	**277**	**119**	**50.6**	**107**	**95.7**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No Available Value
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

Table A-9
Soil Sampling Results
CW-3A Landfill Site
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4124.02 B01 (6-12") 12/8/1998	4124.04 B02 (6-12") 12/8/1998	4124.06 B03 (6-12") 12/8/1998	4124.08 B04 (6-12") 12/8/1998	4124.10 B05 (6-12") 12/8/1998	4124.12 B06 (6-12") 12/8/1998	4124.14 B07 (6-12") 12/8/1998	4124.16 B08 (6-12") 12/8/1998	4128.02 B09 (6-12") 12/9/1998	4128.04 B10 (6-12") 12/9/1998
Semi-Volatiles (mg/kg)											
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	0.11J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	ND	0.11J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.13J	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	ND	0.01	0.11J	0.12J	ND	ND	ND	ND	0.39J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	0.12J	ND	ND	ND	ND	ND	0.17J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	0.12J	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	0.31J	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.20J	0.90J	0.20J	0.67J	0.87J	0.61J	0.70J	0.30J	0.28J	0.80J
Fluoranthene	122	0.17J	ND	ND	ND	ND	ND	0.17J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	78.5	0.17J	ND	ND	ND	ND	ND	0.24J	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	0.014	ND	ND	ND
4,4'-DDE	0.596	0.031	0.008	ND	ND	ND	ND	0.009	ND	ND	ND
4,4'-DDT	0.0035	**0.063**	**0.026**	ND	ND	ND	ND	**0.025**	ND	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4124.02 B01 (6-12") 12/8/1998	4124.04 B02 (6-12") 12/8/1998	4124.06 B03 (6-12") 12/8/1998	4124.08 B04 (6-12") 12/8/1998	4124.10 B05 (6-12") 12/8/1998	4124.12 B06 (6-12") 12/8/1998	4124.14 B07 (6-12") 12/8/1998	4124.16 B08 (6-12") 12/8/1998	4128.02 B09 (6-12") 12/9/1998	4128.04 B10 (6-12") 12/9/1998
Metals (mg/kg)											
Aluminum	50	**3090**	**3260**	**7910**	**2500**	**2570**	**2780**	**8010**	**8790**	**11300**	**11400**
Antimony	0.27	**1.08**	**0.819**	**0.421**	**0.582**	**0.605**	**0.802**	**0.373**	**0.529**	**0.499**	**0.461**
Arsenic	9.9	2.76	2.74	6.15	1.87	2.46	1.98	5.49	5.21	6.95	7.91
Barium	283	8.64	9.11	17.3	6.79	8.42	8.86	16.8	22.3	21.5	18.7
Beryllium	10	0.27	0.245	0.563	0.187	0.209	0.208	0.473	0.45	0.601	0.689
Cadmium	0.36	**0.586**	ND	ND	ND	ND	ND	ND	ND	0.272	ND
Calcium	NAV	389	505	1050	280	365	259	1020	619	880	884
Chromium	0.4	**27.1**	**24.6**	**50.4**	**20.9**	**20.7**	**21.4**	**46.3**	**42.6**	**61.6**	**66.8**
Cobalt	13	0.999	1.30	2.05	2.05	1.19	0.966	2.03	1.99	2.63	2.34
Copper	28	4.26	12.9	3.85	3.76	6.17	9.22	5.14	**52.9**	6.25	4.07
Iron	NAV	9170	8550	18000	6510	7580	7070	16000	15400	21600	22400
Lead	11	**13.1**	**17.6**	7.84	**17.1**	**13.9**	**14.1**	**12.1**	**19.3**	**37.9**	7.51
Magnesium	NAV	758	762	1660	563	607	618	1560	1320	1900	1960
Manganese	220	20.0	28.2	46.9	17.5	21.7	22.3	48.6	50.3	56.9	55.7
Mercury	0.00051	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.031**
Nickel	30	7.55	3.22	4.85	1.96	1.36	2.18	4.58	5.27	6.99	6.42
Potassium	NAV	1440	1330	2860	1040	1180	1210	2380	2240	2640	3200
Selenium	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	NAV	122	85.9	122	73.3	77.7	62.8	74.1	108	93.1	82.6
Vanadium	2	**21.8**	**20.2**	**43.0**	**15.0**	**16.7**	**15.7**	**39.4**	**36.2**	**51.5**	**54.9**
Zinc	8.5	**20.5**	**15.9**	**22.0**	**12.3**	**15.3**	**14.2**	**22.5**	**38.4**	**36.8**	**29.1**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4128.06 B11 (6-12") 12/9/1998	4128.08 B12 (6-12") 12/9/1998	4128.10 B13 (6-12") 12/9/1998	4128.12 B14 (6-12") 12/9/1998	4128.14 B15 (6-12") 12/9/1998	4128.16 B16 (6-12") 12/9/1998	4128.18 B17 (6-12") 12/9/1998	4128.20 B18 (6-12") 12/9/1998	4128.22 B19 (6-12") 12/9/1998	4128.24 B20 (6-12") 12/9/1998
Semi-Volatiles (mg/kg)											
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	ND	ND	0.11J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	ND	0.10J	0.12J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	ND	ND	0.13J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	ND	0.12J	ND	0.15J	0.21J	ND	ND	**1.70**	0.17J	0.19J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	0.13J	ND	ND
Chrysene	4.73	ND	ND	ND	0.18J	ND	0.16J	0.16J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	0.57J	0.64J	0.31J	1.10J	1.5	0.31J	0.82J	0.54J	1.1	1.2
Fluoranthene	122	ND	ND	ND	0.20J	ND	0.11J	0.19J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.12J	ND	ND	0.14J	ND	ND	ND
Pyrene	78.5	ND	ND	ND	0.22J	ND	0.16J	0.25J	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	0.018	0.011	0.015	ND	ND	ND	ND
4,4'-DDE	0.596	ND	ND	0.073	0.028	0.089	0.06	0.014	ND	0.01	ND
4,4'-DDT	0.0035	ND	ND	**0.066**	**0.073**	**0.269**	**0.218**	**0.021**	ND	**0.015**	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	**0.012**	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4128.06 B11 (6-12") 12/9/1998	4128.08 B12 (6-12") 12/9/1998	4128.10 B13 (6-12") 12/9/1998	4128.12 B14 (6-12") 12/9/1998	4128.14 B15 (6-12") 12/9/1998	4128.16 B16 (6-12") 12/9/1998	4128.18 B17 (6-12") 12/9/1998	4128.20 B18 (6-12") 12/9/1998	4128.22 B19 (6-12") 12/9/1998	4128.24 B20 (6-12") 12/9/1998
Metals (mg/kg)											
Aluminum	50	**4790**	**4880**	**3880**	**4060**	**11300**	**9600**	**10300**	**7690**	**6810**	**8330**
Antimony	0.27	**0.699**	**1.11**	**1.93**	**1.58**	**12.5**	**6.92**	**0.573**	**0.487**	**0.455**	**0.679**
Arsenic	9.9	3.70	3.53	2.94	3.37	8.72	5.99	7.44	6.48	5.33	6.28
Barium	283	9.93	18.3	24.5	19.7	**417**	122	23.9	19.2	15.9	16.9
Beryllium	10	0.339	0.33	0.261	0.279	0.577	0.517	0.609	0.463	0.378	0.52
Cadmium	0.36	ND	ND	**0.496**	0.151	**9.12**	**3.58**	ND	ND	ND	0.12
Calcium	NAV	298	345	528	398	1180	916	1540	1090	2600	1840
Chromium	0.4	**33.3**	**29.2**	**25.9**	**28.3**	**75.3**	**50.1**	**61.9**	**44.7**	**42.4**	**52.4**
Cobalt	13	1.39	1.64	1.59	1.25	3.23	2.75	2.38	1.70	4.19	2.08
Copper	28	6.32	16.1	**29.0**	26.4	**4040**	**181**	8.03	5.16	12.2	8.51
Iron	NAV	11300	11700	9960	10300	19300	17800	21700	17500	16600	20700
Lead	11	**12.2**	**26.3**	**37.4**	**54.7**	**473**	**137**	**15.0**	7.06	5.89	**12.2**
Magnesium	NAV	949	911	865	773	1800	1410	1970	1450	2400	1990
Manganese	220	29.1	34.9	37.1	32.9	**313**	114	62.3	37.2	69.4	47.5
Mercury	0.00051	**0.028**	**0.083**	**0.133**	**0.087**	**0.435**	**0.281**	**0.048**	**0.045**	**0.032**	**0.042**
Nickel	30	3.18	3.95	3.67	3.85	15.4	11.4	6.97	5.41	12.3	5.66
Potassium	NAV	1880	1680	1460	1500	3400	2910	3180	2590	1830	2470
Selenium	0.21	ND	ND	ND	ND	**1.39**	**0.981**	ND	**0.86**	ND	ND
Silver	2	ND	ND	ND	ND	**20.4**	**2.73**	ND	ND	ND	ND
Sodium	NAV	77.8	88.6	198	94.6	120	99.2	100	108	101	90.4
Vanadium	2	**25.6**	**22.4**	**19.3**	**20.9**	**39.4**	**32.2**	**48.0**	**33.7**	**36.7**	**42.9**
Zinc	8.5	**21.6**	**26.5**	**33.7**	**34.7**	**806**	**375**	**41.8**	**36.7**	**25.1**	**62.2**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4128.26 B21 (6-12") 12/9/1998	4128.28 B22 (6-12") 12/9/1998	4128.30 B23 (6-12") 12/9/1998	4140.02 B24 (6-12") 12/14/1998	4140.04 B25 (6-12") 12/14/1998	4140.06 B26 (6-12") 12/14/1998	4140.08 B27 (6-12") 12/14/1998	4140.10 B28 (6-12") 12/14/1998	4140.12 B29 (6-12") 12/14/1998	4140.14 B30 (6-12") 12/14/1998
Semi-Volatiles (mg/kg)											
Acenaphthene	20	ND	ND	ND	ND	0.44J	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	ND	0.58J	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	ND	1.10	0.19J	0.28J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	ND	1.10	0.17J	0.34J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	ND	0.86J	0.26J	0.28J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	ND	0.49J	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	ND	0.99J	0.24J	0.30J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.01	0.01	0.14J	0.18J	0.60J	0.14J	0.23J	0.15J	0.12J	0.32J
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	ND	1.30	0.34J	0.43J	ND	0.043J	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	0.19J	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	0.13J	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	0.28J	ND	ND	0.12J	ND	ND
Di-n-butylphthalate	200	1.4	0.43J	1.2	2.9	0.49J	1.5	1.20J	0.03	1.3	1.4
Fluoranthene	122	ND	ND	ND	ND	2.70	0.47J	0.40J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	0.26J	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	ND	0.46J	ND	0.14J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	**0.13J**	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	ND	2.30	0.11J	0.29J	ND	ND	ND
Pyrene	78.5	ND	ND	ND	ND	2.30	0.56J	0.56J	ND	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	0.093	ND	ND	ND
4,4'-DDE	0.596	ND	ND	0.005	ND	0.025	0.019	0.279	ND	0.004	ND
4,4'-DDT	0.0035	ND	ND	ND	**0.007**	**0.061**	**0.025**	**0.892**	**0.007**	**0.007**	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4128.26 B21 (6-12") 12/9/1998	4128.28 B22 (6-12") 12/9/1998	4128.30 B23 (6-12") 12/9/1998	4140.02 B24 (6-12") 12/14/1998	4140.04 B25 (6-12") 12/14/1998	4140.06 B26 (6-12") 12/14/1998	4140.08 B27 (6-12") 12/14/1998	4140.10 B28 (6-12") 12/14/1998	4140.12 B29 (6-12") 12/14/1998	4140.14 B30 (6-12") 12/14/1998
Metals (mg/kg)											
Aluminum	50	**9980**	**3520**	**4390**	**2390**	**6230**	**6620**	**7850**	**8140**	**10200**	**8010**
Antimony	0.27	ND	**0.826**	**0.972**	**1.09**	**1.00**	**31.3**	**3.90**	ND	ND	ND
Arsenic	9.9	9.02	9.02	3.71	2.52	6.64	**16.1**	7.10	6.90	7.33	7.75
Barium	283	22.8	14.1	11.4	11.3	18.8	82.2	77.2	18.0	19.3	16.4
Beryllium	10	0.691	0.261	0.312	0.222	0.511	0.477	0.561	0.601	0.557	0.648
Cadmium	0.36	ND	ND	0.171	0.25	0.16	**0.884**	**0.914**	0.22	ND	ND
Calcium	NAV	562	264	337	320	378	504	651	948	746	722
Chromium	0.4	**58.9**	**24.2**	**28.5**	**19.5**	**60.8**	**55.1**	**51.2**	**54.1**	**51.5**	**56.3**
Cobalt	13	2.58	1.15	1.47	0.992	1.78	2.99	2.29	2.22	2.22	2.03
Copper	28	9.35	13.4	11.9	13.4	**64.1**	**275**	**250**	5.44	3.98	6.18
Iron	NAV	24700	8650	10900	6980	14600	15600	19000	19600	18600	20300
Lead	11	10.0	**19.8**	**28.6**	**21.8**	**35.6**	**309**	**72.6**	10.2	6.56	6.65
Magnesium	NAV	1880	727	830	542	1400	1450	1540	1780	1580	1900
Manganese	220	64.5	25.7	31.3	26.2	46.4	176	54.0	57.2	51.6	47.5
Mercury	0.00051	**0.033**	**0.118**	**0.116**	**0.032**	**0.107**	**0.484**	**0.341**	**0.032**	**0.033**	**0.037**
Nickel	30	5.98	2.49	3.06	2.30	4.85	8.85	14.6	5.31	5.53	5.08
Potassium	NAV	3470	1490	1570	1120	2930	2240	2780	3040	2460	3630
Selenium	0.21	ND	ND	ND	ND	**0.724**	**0.847**	**1.06**	ND	**0.607**	**0.684**
Silver	2	ND	ND	ND	ND	ND	**3.22**	1.70	ND	ND	ND
Sodium	NAV	115	129	94.3	121	74.7	159	130	90.2	104	59.6
Vanadium	2	**47.6**	**18.6**	**23.0**	**15.8**	**39.9**	**37.2**	**39.8**	**43.1**	**44.7**	**43.5**
Zinc	8.5	**34.9**	**21.2**	**27.6**	**21.1**	**56.2**	**241**	**543**	**29.0**	**29.8**	**32.5**

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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4140.16 B31 (6-12") 12/14/1998	4140.18 B32 (6-12") 12/14/1998	4140.20 B33 (6-12") 12/14/1998	4140.22 B34 (6-12") 12/14/1998	4140.24 B35 (6-12") 12/14/1998	4140.26 B36 (6-12") 12/14/1998	4140.28 B37 (6-12") 12/14/1998	4140.30 B38 (6-12") 12/14/1998	4141.02 B39 (6-12") 12/15/1998	4141.04 B40 (6-12") 12/15/1998
Semi-Volatiles (mg/kg)											
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	0.15J	ND	0.16J	ND	ND	ND
Anthracene	1,480	ND	ND	ND	0.13J	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.81J	0.15J	0.12J	0.36J	0.12J	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.66J	0.45J	0.12J	0.37J	0.13J	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.47J	0.29J	0.12J	0.35J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.30J	0.28J	ND	0.20J	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.62J	0.28J	0.12J	0.37J	0.11J	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	0.22J	0.17J	0.19J	ND	0.17J	0.14J	0.14J	ND	ND	0.01
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	1.10	0.25J	0.17J	0.73J	0.16J	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.4	0.36J	0.74J	0.30J	0.69J	1.8	1.10J	0.76J	1.2	0.75J
Fluoranthene	122	ND	ND	ND	1.10	ND	0.28J	0.59J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.22J	0.19J	ND	0.14J	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	0.53J	ND	0.22J	0.52J	ND	ND	ND
Pyrene	78.5	ND	ND	ND	1.90	0.22J	0.26J	1.20	0.16J	ND	ND
Pesticides/PCBs (mg/kg)											
4,4'-DDD	0.758	ND	0.01	0.017	ND	ND	0.017	0.044	ND	ND	ND
4,4'-DDE	0.596	ND	0.028	0.041	0.009	0.014	0.057	0.03	0.031	ND	ND
4,4'-DDT	0.0035	ND	**0.026**	**0.079**	**0.016**	**0.027**	**0.071**	**0.143**	**0.041**	ND	ND
Dieldrin	0.0049	ND	ND	**0.006**	ND	ND	**0.032**	ND	**0.024**	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	**0.025**	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	**0.467**	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	0.253	ND	ND	ND	ND

See Notes at end of Table

Table A-9
Soil Sampling Results
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Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4140.16 B31 (6-12") 12/14/1998	4140.18 B32 (6-12") 12/14/1998	4140.20 B33 (6-12") 12/14/1998	4140.22 B34 (6-12") 12/14/1998	4140.24 B35 (6-12") 12/14/1998	4140.26 B36 (6-12") 12/14/1998	4140.28 B37 (6-12") 12/14/1998	4140.30 B38 (6-12") 12/14/1998	4141.02 B39 (6-12") 12/15/1998	4141.04 B40 (6-12") 12/15/1998
Metals (mg/kg)											
Aluminum	50	**10000**	**3860**	**2300**	**1130**	**1810**	**1560**	**1740**	**4550**	**6940**	**11500**
Antimony	0.27	**0.828**	ND	ND	**0.683**	ND	**0.878**	**1.23**	**5.55**	**0.693**	ND
Arsenic	9.9	9.45	7.57	4.24	2.01	3.00	5.20	4.91	6.54	7.39	8.35
Barium	283	35.0	26.1	22.4	5.44	6.98	29.1	18.5	59.4	15.1	31.5
Beryllium	10	0.595	0.466	0.159	ND	1.55	0.157	0.147	0.231	0.621	0.684
Cadmium	0.36	**0.472**	**2.25**	0.228	0.19	0.211	**0.506**	**0.416**	**2.39**	ND	ND
Calcium	NAV	729	989	1530	197	270	327	684	1100	469	2200
Chromium	0.4	**52.2**	**34.4**	**3.18**	**10.8**	**14.7**	**13.5**	**21.3**	**26.7**	**57.5**	**62.8**
Cobalt	13	2.74	1.09	1.98	0.50	0.718	0.515	1.13	2.49	1.93	2.69
Copper	28	25.2	3.26	11.1	8.06	4.52	17.7	18.9	**1260**	10.4	5.14
Iron	NAV	19300	13800	2590	4320	6130	4960	6020	16300	20500	22900
Lead	11	**36.4**	4.56	**11.9**	**13.9**	8.57	**21.0**	**48.0**	**266**	7.67	7.72
Magnesium	NAV	1700	847	99.9	172	245	236	438	383	1720	2050
Manganese	220	75.0	46.0	44.2	11.8	18.2	12.8	34.0	**499**	48.9	65.0
Mercury	0.00051	**0.131**	**0.037**	**0.052**	**0.036**	**0.031**	**0.047**	**0.062**	**0.121**	**0.051**	**0.057**
Nickel	30	8.21	3.54	4.41	1.38	1.58	9.33	3.29	15.5	4.95	7.02
Potassium	NAV	2890	1310	259	204	220	284	364	314	3070	3330
Selenium	0.21	**0.747**	ND	ND	ND	ND	ND	ND	**0.753**	**0.907**	ND
Silver	2	ND	ND	ND	ND	ND	1.51	ND	1.55	ND	ND
Sodium	NAV	84.1	67.0	135	50.8	38.4	103	54.1	93.1	127	158
Vanadium	2	**41.2**	**21.9**	**7.17**	**11.3**	**16.0**	**13.0**	**19.2**	**25.5**	**45.7**	**51.2**
Zinc	8.5	**88.5**	**112**	**86.3**	**16.3**	**182**	**40.0**	**64.1**	**1380**	**36.0**	**39.2**

See Notes at end of Table

Table A-9
Soil Sampling Results
CW-3A Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4141.06 B41 (6-12") 12/15/1998	4141.08 B42 (6-12") 12/15/1998	4141.10 B43 (6-12") 12/15/1998	4141.12 B44 (6-12") 12/15/1998	4141.14 B45 (6-12") 12/15/1998	4141.16 B46 (6-12") 12/15/1998	4141.18 B47 (6-12") 12/15/1998	4141.20 B48 (6-12") 12/15/1998
Semi-Volatiles (mg/kg)									
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	682	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1,480	ND	ND	ND	0.19J	ND	ND	ND	ND
Benzo[a]anthracene	5.21	ND	ND	ND	0.76J	0.11J	ND	ND	ND
Benzo[a]pyrene	1.52	ND	ND	ND	0.65J	0.11J	ND	ND	ND
Benzo[b]fluoranthene	59.8	ND	ND	ND	0.48J	0.11J	ND	ND	ND
Benzo[g,h,I]perylene	119	ND	ND	ND	0.34J	ND	ND	ND	ND
Benzo[k]fluoranthene	148	ND	ND	ND	0.63J	0.13J	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.925	**3.2**	ND	ND	ND	0.11J	ND	ND	ND
Butylbenzylphthalate	0.239	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	4.73	ND	ND	ND	0.91J	0.20J	ND	ND	ND
Dibenz[a,h]anthracene	18.4	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	100	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	200	1.1	0.89J	0.35J	0.41J	1.5	0.80J	0.89J	0.80J
Fluoranthene	122	ND	ND	ND	1.50	0.26J	ND	ND	ND
Fluorene	122	ND	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	109	ND	ND	ND	0.25J	ND	ND	ND	ND
Naphthalene	0.0994	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	45.7	ND	ND	ND	1.20	0.28J	ND	ND	ND
Pyrene	78.5	ND	ND	ND	2.10	0.34J	ND	ND	ND
Pesticides/PCBs (mg/kg)									
4,4'-DDD	0.758	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.596	ND	ND	ND	ND	0.024	0.007	ND	ND
4,4'-DDT	0.0035	ND	ND	ND	ND	**0.06**	**0.015**	ND	ND
Dieldrin	0.0049	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.0105	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.00598	ND	ND	ND	**0.109**	ND	ND	ND	ND
Aroclor 1254	0.371	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	0.371	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table A-9
Soil Sampling Results
CW-3A Landfill Site
Fort Monmouth, New Jersey
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Lab Sample ID Field Sample Location Sample Date	ESC (mg/kg)	4141.06 B41 (6-12") 12/15/1998	4141.08 B42 (6-12") 12/15/1998	4141.10 B43 (6-12") 12/15/1998	4141.12 B44 (6-12") 12/15/1998	4141.14 B45 (6-12") 12/15/1998	4141.16 B46 (6-12") 12/15/1998	4141.18 B47 (6-12") 12/15/1998	4141.20 B48 (6-12") 12/15/1998
Metals (mg/kg)									
Aluminum	50	**7740**	**8990**	**12200**	**10400**	**3190**	**6500**	**8230**	**7400**
Antimony	0.27	ND	**1.39**	**1.59**	**1.43**	**0.933**	**0.524**	ND	ND
Arsenic	9.9	5.77	7.53	**22.7**	9.66	5.52	5.46	5.74	7.98
Barium	283	19.2	22.2	90.8	145	17.6	24.2	15.5	11.3
Beryllium	10	0.424	0.531	1.23	0.886	0.261	0.627	0.40	0.672
Cadmium	0.36	ND	ND	**0.909**	**0.667**	0.0897	0.185	0.175	ND
Calcium	NAV	625	1100	3590	1550	252	607	211	125
Chromium	0.4	**41.6**	**51.6**	**30.1**	**49.4**	**33.1**	**71.2**	**43.1**	**59.6**
Cobalt	13	2.24	1.91	8.62	7.63	1.27	1.56	1.50	1.79
Copper	28	5.97	4.41	**59.2**	**78.2**	17.0	6.98	3.23	2.11
Iron	NAV	15600	196000	35700	25100	11000	16700	16300	20700
Lead	11	7.91	**17.6**	**40.0**	**65.9**	**33.2**	**20.4**	4.80	4.27
Magnesium	NAV	1120	1480	624	1440	665	1800	1090	1650
Manganese	220	43.2	44.5	114	**228**	23.7	31.8	29.2	33.5
Mercury	0.00051	**0.055**	**0.057**	**0.096**	**0.243**	**0.037**	**0.25**	**0.055**	**0.028**
Nickel	30	5.02	5.46	23.6	18.3	3.34	4.33	5.03	4.89
Potassium	NAV	1980	2740	1820	3190	1350	4040	1470	3230
Selenium	0.21	**0.739**	ND	**2.51**	**1.37**	ND	ND	ND	ND
Silver	2	ND	ND	ND	0.792	ND	ND	ND	ND
Sodium	NAV	130	122	351	291	86.9	98.3	135	87.5
Vanadium	2	**36.2**	**42.6**	**37.2**	**36.9**	**23.7**	**44.2**	**37.2**	**49.8**
Zinc	8.5	**35.8**	**38.2**	**413**	**189**	**28.0**	**53.2**	**42.9**	**40.4**

NOTES:
Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
mg/kg = milligrams per kilogram
ND = Not Detected
NAV = No Available Value
J = Estimated Value: Mass spectrometer and retention time data indicate the presence of the analyte, however the result is less than the method detection limit, but greater than zero.

APPENDIX B
Site Investigation Data Evaluated in the BEE

Table B-1
Fort Monmouth Phase II Site Investigation, Parcel 43
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results		
		Sample ID:	P43-SD1	P43-SD2	P43-SD3
		Lab ID:	7054801	7054803	7054805
		Date Sampled:	12/19/2007	12/19/2007	12/19/2007
		Depth (ft. bgs):	0.0-0.5	0.0-0.5	0.0-0.5
	ESC				
Chemical	FW-SED	SW-SED	Result	Result	Result
Volatiles					
Acetone	NAV	NAV	0.330 J	0.220 J	0.330 J
Methylene Chloride	0.159	NAV	0.086 JB	0.072 JB	0.520 U
Semi-Volatiles					
Anthracene	0.22	0.085	**0.150 J**	1.400 U	2.100 U
Benzo[a]anthracene	0.32	.261	**0.610 J**	0.200 J	**0.510 J**
Benzo[a]pyrene	0.37	0.43	**0.610 J**	0.190 J	**0.510 J**
Benzo[b]fluoranthene	10.4	1.8	1.100 J	0.210 J	1.000 J
Benzo[k]fluoranthene	0.24	0.24	**0.340 J**	0.160 J	**0.390 J**
bis(2-Ethylhexyl)phthalate	0.182	0.18216	**0.780 JB**	**0.440 JB**	**1.400 JB**
Chrysene	0.34	0.384	**0.860 J**	0.250 J	**0.880 J**
Di-n-butylphthalate	1.114	0.058	1.800 U	**0.098 JB**	2.100 U
Fluoranthene	0.75	0.6	**1.400 J**	0.380 J	**1.300 J**
Phenanthrene	0.56	0.24	**0.700 J**	0.210 J	**0.520 J**
Pyrene	0.49	0.665	**1.600 J**	0.450 J	**1.400 J**
Metals					
Aluminum	25500	18000	13700 B	14500 B	16400 B
Arsenic	6	8.2	**7.48**	**10.2**	**7.99**
Barium	NAV	48	**83.5 B**	**52.4 B**	**67.0 B**
Beryllium	NAV	NAV	3.22	2.01	2.97
Cadmium	0.6	1.2	**1.86**	0.358	**1.67**
Calcium	NAV	NAV	2320 B	1490 B	1300 B
Chromium (Total)	26	81	**155 B**	**161 B**	**155 B**
Cobalt	50	10	**20.1**	**15.7**	6.01
Copper	16	34	**39.4 B**	**53.6 B**	**29.1 B**
Iron	NAV	NAV	66800 B	47800 B	39600 B
Lead	31	47	**74.6**	**116**	**45.0**
Magnesium	NAV	NAV	5490	5170	5190
Manganese	630	260	152 B	140 B	31.6 B
Mercury	0.2	0.15	**0.47**	**0.25**	**0.28**
Nickel (Soluble Salts)	16	21	**36.4**	**28.3**	**23.7**
Potassium	NAV	NAV	10700 B	9580 B	10200 B
Vanadium	NAV	57	**79.1**	**81.1**	**75.4**
Zinc	120	150	**286 B**	108 B	**252 B**

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Salt Water-Sediment

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-2
Fort Monmouth Phase II Site Investigation, Parcel 39
Summary of Analytical Parameters Detected in Soil (mg/kg)

		Analytical Results
	Sample ID:	P39-SS1
	Lab ID:	8000805
	Date Sampled:	1/8/2008
	Depth (ft. bgs):	0.0-0.5
Chemical	ESC	Result
Semi-Volatiles		
bis(2-Ethylhexyl)phthalate	0.925	0.570 J
Di-n-butylphthalate	200	0.780 J
Fluoranthene	122	0.120 J
Pyrene	78.5	0.290 J
Metals		
Aluminum	50	**7450 B**
Arsenic	9.9	3.43
Barium	283	50.6 B
Beryllium	10	1.78
Cadmium	0.36	**1.56**
Calcium	NAV	1480 B
Chromium (Total)	0.4	**94.0**
Cobalt	13	**31.9**
Copper	28	27.7 B
Iron	NAV	26400
Lead	11	**80.0**
Magnesium	NAV	3000
Manganese	220	15.9
Mercury	0.00051	**0.21**
Nickel (Soluble Salts)	30	22.1
Potassium	NAV	7170
Vanadium	2	**41.8**
Zinc	8.5	**140 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-3
Fort Monmouth Phase II Site Investigation, Parcel 39
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results	
		Sample ID:	P39-SD1	P39-SD2
		Lab ID:	8000801	8000803
		Date Sampled:	01/08/2008	01/08/2008
		Depth (ft. bgs):	0.0-0.5	0.0-0.5
	ESC			
Chemical	FW-SED	SW-SED	Result	Result
Semi-Volatiles				
Benzo[a]anthracene	0.32	0.261	0.260 J	**0.540 J**
Benzo[a]pyrene	0.37	0.43	1.300 U	2.100 U
Benzo[b]fluoranthene	10.4	1.8	1.300 U	1.100 J
bis(2-Ethylhexyl)phthalate	0.182	0.18216	**2.100**	**1.300 J**
Chrysene	0.34	0.384	**0.370 J**	**0.710 J**
Di-n-butylphthalate	1.114	0.058	**0.950 J**	**1.900 J**
Fluoranthene	0.75	0.6	0.440 J	**0.990 J**
Phenanthrene	0.56	0.24	**0.260 J**	**0.670 J**
Pyrene	0.49	0.665	**1.000 J**	**2.000 J**
Metals				
Aluminum	25500	18000	4710 B	13900 B
Arsenic	6	8.2	2.28	**8.89**
Barium	NAV	48	26.8 B	**96.4 B**
Beryllium	NAV	NAV	0.638	3.34
Cadmium	0.6	1.2	**0.629**	**1.85**
Calcium	NAV	NAV	3150 B	2390 B
Chromium (Total)	26	81	**44.2**	**131**
Cobalt	50	10	3.92	**14.2**
Copper	16	34	**27.7 B**	**41.0 B**
Iron	NAV	NAV	17200	45600
Lead	31	47	19.5	**61.7**
Magnesium	NAV	NAV	2720	3910
Manganese	630	260	49.6	68.4
Mercury	0.2	0.15	0.120 U	**0.67**
Nickel (Soluble Salts)	16	21	11.6	**32.4**
Potassium	NAV	NAV	3150	7870
Vanadium	NAV	57	31.1	**74.4**
Zinc	120	150	100 B	**210 B**

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Surface Water-Sediment

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-4
Fort Monmouth Phase II Site Investigation, Parcel 49
Summary of Analytical Parameters Detected in Soil (mg/kg)

		Analytical Results												
	Sample ID:	P49-SB1-A	P49-SB2-A	P49-SB3-A	P49-SB4-A	P49-SB5-A	P49-SB6-A	P49-SS7-A	P49-SS8-A	P49-SS9-A	P49-SS10-A	P49-SS11-A	P49-SS12-A	P49-SS13-A
	Lab ID:	7051517	7051603	7051609	7051606	7051613	7051616	7051515	7051513	7051511	7051503	7051505	7051507	7051509
	Date Sampled:	12/06/2007	12/07/2007	12/07/2007	12/07/2007	12/07/2007	12/07/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007
	Depth (ft. bgs):	0.0-0.5	0.5-1.0	0.0-0.5	0.5-1.0	0.0-0.5	0.5-1.0	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
Chemical	ESC	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Semi-Volatiles														
Acenaphthene	20	1.100 U	1.100 U	1.200 U	1.100 U	1.100 U	1.000 U	20.000 JD	0.660 J	0.180 J	1.100 U	1.100 U	1.100 U	1.200 U
Acenaphthylene	682	0.056 J	1.100 U	1.200 U	0.920 J	0.260 J	0.076 J	0.450 J	0.048 J	0.490 J	0.073 J	0.059 J	0.130 J	0.097 J
Anthracene	1480	1.100 U	1.100 U	0.100 J	0.370 J	0.099 J	1.000 U	46.000 JD	1.800	3.000	0.083 J	0.093 J	0.100 J	0.200 J
Benzo[a]anthracene	5.21	0.091 J	1.100 U	0.550 J	2.500	0.420 J	1.000 U	**80.000 D**	3.600	**10.000 JD**	0.470 J	0.350 J	0.380 J	0.810 J
Benzo[a]pyrene	1.52	0.083 J	1.100 U	0.440 J	**2.200**	0.460 J	0.110 J	**54.000 JD**	**2.600**	**9.600**	0.610 J	0.310 J	0.360 J	0.730 J
Benzo[b]fluoranthene	59.8	0.120 J	1.100 U	0.670 J	2.800	0.460 J	0.140 J	**75.000 D**	3.900	9.200 JD	0.960 J	0.430 J	0.580 J	1.200
Benzo[g,h,i]perylene	119	1.100 U	1.100 U	1.200 U	0.900 J	0.260 J	1.000 U	16.000 JD	0.840 J	3.500	1.100 U	1.100 U	1.100 U	1.200 U
Benzo[k]fluoranthene	148	0.038 J	1.100 U	0.260 J	0.890 J	0.160 J	1.000 U	29.000 JD	1.500	6.200	0.340 J	0.220 J	0.220 J	0.490 J
bis(2-Ethylhexyl)phthalate	0.925	0.058 J	1.100 U	0.450 J	1.100 U	0.240 J	1.000 U	1.100 U	0.690 J	1.200 U	0.160 J	0.150 J	0.500 J	0.220 J
Butyl benzyl phthalate	0.239	1.100 U	1.100 U	**1.800**	1.100 U	1.100 U	1.000 U	**0.670 J**	**0.520 J**	1.200 U	1.100 U	1.100 U	1.100 U	1.200 U
Chrysene	4.73	0.120 J	1.100 U	0.610 J	3.500	0.610 J	0.150 J	**79.000 D**	3.700	**10.000 JD**	0.600 J	0.440 J	0.480 J	0.860 J
Dibenz[a,h]anthracene	18.4	1.100 U	1.100 U	1.200 U	1.100 U	1.100 U	1.000 U	2.600	0.340 J	1.300	1.100 U	1.100 U	1.100 U	1.200 U
Dibenzofuran	NAV	1.100 U	1.100 U	1.200 U	1.100 U	1.100 U	1.000 U	12.000	0.390 J	0.340 J	1.100 U	1.100 U	1.100 U	1.200 U
Di-n-butyl phthalate	200	1.500	0.420 JB	0.810 JB	1.800 B	1.700 B	1.000 B	1.100 U	0.630 JB	1.200 B	1.300 B	0.380 JB	1.900 B	0.800 JB
Fluoranthene	122	0.110 J	1.100 U	1.000 J	1.500	0.410 J	0.071 J	**190.000 D**	9.000	23.000 D	0.780 J	0.670 J	0.690 J	1.600
Fluorene	122	1.100 U	1.100 U	1.200 U	0.130 J	1.100 U	1.000 U	17.000 JD	0.640 J	1.200 U	1.100 U	1.100 U	1.100 U	1.200 U
Indeno[1,2,3-cd]pyrene	109	1.100 U	1.100 U	0.160 J	0.680 J	0.180 J	1.000 U	18.000 JD	0.930 J	3.500	1.100 U	1.100 U	1.100 U	1.200 U
2-Methylnaphthalene	3.24	1.100 U	1.100 U	1.200 U	0.098 J	1.100 U	1.000 U	**4.400**	0.130 J	0.240 J	1.100 U	1.100 U	1.100 U	1.200 U
4-Methylphenol	NAV	1.100 U	1.100 U	1.200 U	1.100 U	1.100 U	1.000 U	0.320 J	1.200 U	1.200 U	1.100 U	1.100 U	1.100 U	1.200 U
Naphthalene	0.0994	1.100 U	1.100 U	1.200 U	0.100 J	1.100 U	1.000 U	**11.000**	**0.280 J**	**0.098 J**	1.100 U	1.100 U	1.100 U	1.200 U
Phenanthrene	45.7	0.038 J	1.100 U	0.500 J	0.230 J	0.380 J	1.000 U	**170.000 D**	7.100	13.000	0.270 J	0.370 J	0.380 J	0.750 J
Pyrene	78.5	0.170 J	1.100 U	1.000 J	4.800	0.890 J	0.190 J	**160.000 D**	7.300	20.000 D	1.100 U	0.770 J	1.100 J	2.200
PCBs														
Aroclor 1260	0.371	0.0041 U	0.0042 U	0.34	0.0039 U	0.0040 U	0.0042 U	**0.47**	**8.85**	0.0041 U	0.0041 U	0.0039 U	0.0041 U	0.0041 U
Metals														
Aluminum	50	**12700 B**	**7840 B**	**21600 B**	**13200 B**	**13700 B**	**11500 B**	**15100 B**	**14600 B**	**17500 B**	**7420 B**	**7720 B**	**10500 B**	**7310 B**
Antimony	0.27	0.410 U	0.426 U	0.470 U	0.389 U	0.421 U	0.438 U	0.432 U	0.434 U	0.456 U	0.472 U	0.451 U	0.433 U	0.475 U
Arsenic	9.9	6.32	4.67	**12.8**	6.15	**10.5**	5.10	**10.1**	**10.6**	**17.4**	6.32	7.66	**10.3**	5.23
Barium	283	32.3 B	22.0	54.5	65.0	76.9	26.2	93.6 B	95.5 B	53.8 B	39.7 B	39.4 B	55.0 B	38.4 B
Beryllium	10	1.34	0.899	2.35	1.60	1.06	0.422	1.87	1.61	2.11	0.361	0.381	0.818	0.346
Cadmium	0.36	**1.02**	0.202	**1.81**	**0.444**	**0.786**	0.199	**1.86**	**3.66**	**1.31**	**0.511**	**0.429**	**0.723**	**0.424**
Calcium	NAV	4860 B	1700	11300	11600	13300	758	3750 B	2790 B	2500 B	34800 B	44700 B	23100 B	65400 B
Chromium (Total)	0.4	**104**	**62.2**	**313**	**79.5**	**92.4**	**33.7**	**146**	**144**	**135**	**27.1**	**25.6**	**71.7**	**25.9**
Cobalt	13	3.37	0.968	3.93	1.85	1.47	1.56	1.20	1.55	3.01	2.19	2.36	2.07	2.20
Copper	28	20.9 B	4.63 B	**36.9 B**	9.85 B	**28.3 B**	19.8 B	**73.1 B**	**115 B**	27.3 B	19.5 B	24.3 B	**36.8 B**	26.8 B
Iron	NAV	42300 B	26500	75000	33800	29000	20300	47800 B	43000 B	69500 B	15600 B	13600 B	25400 B	12900 B
Lead	11	**11.7**	5.78	**91.7**	**14.8**	**176**	9.84	**49.1**	**109**	**22.7**	**46.0**	**35.0**	**101**	**49.7**
Magnesium	NAV	6590 B	3040	12700	5370	4320	1200	6220 B	6000 B	6630 B	2830 B	4190 B	4130 B	5610 B
Manganese	220	93.1 B	41.1	53.7	146	104	82.6	68.7 B	120 B	163 B	132 B	115 B	95.9 B	**281 B**
Mercury	0.00051	**0.91**	0.099 U	**1.19**	0.097 U	**0.16**	0.093 U	0.113 U	0.119 U	0.109 U	0.113 U	0.106 U	0.108 U	0.107 U
Nickel (Soluble Salts)	30	9.48 B	4.38	10.7	7.91	9.88	6.69	8.80 B	12.1 B	14.7 B	8.10 B	15.5 B	9.12 B	8.09 B
Potassium	NAV	11400 B	4600 B	22900 B	7220 B	7010 B	1940 B	13200 B	10700 B	13800 B	1320 B	1270 B	5470 B	1280 B
Sodium	NAV	35.545 U	36.920 U	40.728 U	33.720 U	36.475 U	89.8	37.456 U	37.629 U	39.562 U	40.910 U	39.056 U	37.562 U	41.153 U
Vanadium	2	**62.4**	**40.6**	**114**	**48.1**	**58.3**	**43.4**	**74.2**	**71.8**	**85.8**	**32.8**	**33.1**	**46.7**	**32.3**
Zinc	8.5	**75.1 B**	**49.4**	**174**	**74.9**	**304**	**32.9**	**255 B**	**206 B**	**193 B**	**115 B**	**57.9 B**	**190 B**	**64.8 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-5
Fort Monmouth Phase II Site Investigation, Parcel 49
Summary of Analytical Parameters Detected in Groundwater (µg/L)

			Analytical Results						
		Sample ID:	P49-283-MW1	P49-283-MW1 DUP	P49-283-MW3	P49-296-MW7	P49-B4MWOB4	P49-GW-1	P49-GW-2
		Lab ID:	7051808	7051803	7051807	7051806	7051809	7051804	7051805
		Date Sampled:	12/08/2007	12/08/2007	12/08/2007	12/08/2007	12/08/2007	12/08/2007	12/08/2007
		Screened Interval (ft. bgs):	9.8-19.8	9.8-19.8	14.1-24.1	1.8-11.8	7.1-17.1	5-10	9-14
	ESC								
Chemical	FW-SW	SW-SW	Result	Result	Result	Result	Result	Result	Result
Volatiles									
Acetone	NAV	NAV	0.85 U	0.85 U	0.85 U	1.08	0.85 U	14.21	0.85 U
Benzene	114	NAV	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	1.24	0.17 U
Bromodichloromethane	NAV	NAV	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.35
Chloroform	140	NAV	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	3.47
Ethylbenzene	14	NAV	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.25 J	0.28 U
Methyl ethyl ketone (2-Butanone)	NAV	NAV	0.14 U	0.14 U	0.14 U	0.61	0.14 U	1.35	0.14 U
Toluene	253	NAV	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	1.39	0.27 U
Vinyl Chloride	930	NAV	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.27 J	0.30 U
Xylenes (Total)	27	NAV	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	2.75	0.49 U
Semi-Volatiles									
Benzoic acid	NAV	NAV	0.86 U	0.86 U	0.86 U	6.47	0.86 U	0.86 U	0.86 U
bis(2-Ethylhexyl)phthalate	0.3	NAV	**0.80 J**	**1.04 J**	**6.77**	**3.55**	1.28 U	**25.94**	**1.22 J**
Diethyl phthalate	110	NAV	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	7.70	0.96 U
Naphthalene	13	NAV	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.64 J	0.76 U
Metals									
Aluminum	NAV	NAV	4900	5110	60.8	112	106	NT	NT
Arsenic	150	36	2.70 U	2.70 U	3.68	6.17	2.70 U	NT	NT
Barium	220	NAV	123	126	95.6	8.99	40.2	NT	NT
Beryllium	3.6	NAV	1.28	1.33	0.100 U	0.100 U	0.100 U	NT	NT
Cadmium	NA	8.8	0.550 B	0.592 B	0.273 B	0.297 B	0.626 B	NT	NT
Calcium	NAV	NAV	11900	12300	17100	14600	7140	NT	NT
Cobalt	24	NAV	5.58	5.79	0.200 U	0.200 U	0.200 U	NT	NT
Copper	NA	3.1	2.78	2.65	0.500 U	0.500 U	0.500 U	NT	NT
Iron	NAV	NAV	323 U	323 U	10200	10600	1220	NT	NT
Magnesium	NAV	NAV	22100	22900	3310	3180	2850	NT	NT
Manganese	NAV	NAV	51.6	52.8	49.0	84.9	36.3	NT	NT
Nickel (Soluble Salts)	NA	22	14.4	14.7	7.34	0.300 U	0.300 U	NT	NT
Potassium	NAV	NAV	6570	6810	8500	6830	3470	NT	NT
Selenium	5	71	2.70 U	4.51	2.70 U	2.70 U	3.64	NT	NT
Silver	0.12	1.9	**0.881**	0.800 U	0.800 U	0.800 U	0.800 U	NT	NT
Sodium	NAV	NAV	110000 B	114000 B	8610 B	7430 B	11000 B	NT	NT
Vanadium	12	NAV	0.500 U	0.500 U	0.500 U	0.854	0.500 U	NT	NT
Zinc	NA	81	**103**	**107**	3.58 U	3.58 U	18.3	NT	NT

[1] Higher of Practical Quantitation Limits (PQLs) & Groundwater Quality Criterion (GWQC) per NJAC 7:9-6, 2005 (* Interim GWQC).

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

ft. bgs = feet below ground surface

µg/L = microgram per liter

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water.

B = The compound was found in the associated method blank as well as in the sample.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-6
Fort Monmouth Phase II Site Investigation, Parcel 49
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results						
		Sample ID:	P49-SD1-A	P49-SD1-A	P49-SD2-A	P49-SD2-A	P49-SD2-A DUP	P49-SD3-A	P49-SD3-A
		Lab ID:	12/06/2007	12/27/2007	12/06/2007	12/27/2007	12/06/2007	12/06/2007	12/27/2007
		Date Sampled:	7051520	7056801	7051522	7056803	7051502	7051524	7056805
		Depth (ft. bgs):	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
	ESC								
Chemical	FW-SED	SW-SED	Result	Result	Result	Result	Result	Result	Result
Volatiles									
Acetone	NAV	NAV	NT	0.350 U	NT	0.360 U	NT	NT	0.320 U
Semi-Volatiles									
Benzo[a]anthracene	0.32	0.261	0.920 U	NT	2.100 U	NT	2.500 U	0.200 J	NT
Benzo[a]pyrene	0.37	0.43	0.920 U	NT	2.100 U	NT	2.500 U	0.160 J	NT
Benzo[b]fluoranthene	10.4	1.8	0.920 U	NT	2.100 U	NT	2.500 U	0.240 J	NT
Benzo[k]fluoranthene	0.24	0.24	0.920 U	NT	2.100 U	NT	2.500 U	0.091 J	NT
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.920 U	NT	2.100 U	NT	2.500 U	0.070 J	NT
Chrysene	0.34	0.384	0.920 U	NT	2.100 U	NT	2.500 U	0.230 J	NT
Di-n-butylphthalate	1.114	0.058	**0.890 JB**	NT	**2.400 B**	NT	**0.950 JB**	**1.500 B**	NT
Fluoranthene	0.75	0.6	0.920 U	NT	2.100 U	NT	0.160 J	0.410 J	NT
Phenanthrene	0.56	0.24	0.920 U	NT	2.100 U	NT	2.500 U	0.160 J	NT
Pyrene	0.49	0.665	0.920 U	NT	2.100 U	NT	0.130 J	0.370 J	NT
Metals									
Aluminum	25500	18000	**29200 B**	NT	13900 B	NT	**18500 B**	15600 B	NT
Arsenic	6	8.2	**16.5**	NT	**14.8**	NT	**22.9**	**29.7**	NT
Barium	NAV	48	**96.4 B**	NT	**65.3 B**	NT	**79.0 B**	**83.7 B**	NT
Beryllium	NAV	NAV	4.52	NT	2.42	NT	3.24	1.70	NT
Cadmium	0.6	1.2	**1.65**	NT	**4.92**	NT	**5.55**	**1.02**	NT
Calcium	NAV	NAV	719 B	NT	1690 B	NT	2210 B	1360 B	NT
Chromium (Total)	26	81	**353**	NT	**176**	NT	**243**	**149**	NT
Cobalt	50	10	4.91	NT	**19.4**	NT	**29.3**	2.10	NT
Copper	16	34	**18.9 B**	NT	**82.3 B**	NT	**111 B**	**76.5 B**	NT
Iron	NAV	NAV	120000 B	NT	48900 B	NT	67800 B	49900 B	NT
Lead	31	47	0.432 U	NT	**41.8**	NT	**45.7**	**148**	NT
Magnesium	NAV	NAV	20600 B	NT	7610 B	NT	10800 B	6190 B	NT
Manganese	630	260	44.8 B	NT	24.2 B	NT	28.3 B	61.7 B	NT
Mercury	0.2	0.15	0.124 U	NT	**0.49**	NT	**0.53**	**0.23**	NT
Nickel (Soluble Salts)	16	21	13.1 B	NT	**44.0 B**	NT	**68.5 B**	11.3 B	NT
Potassium	NAV	NAV	40800 B	NT	15800 B	NT	22600 B	11800 B	NT
Silver	1	1	0.203 U	NT	**1.40**	NT	0.407 U	0.208 U	NT
Sodium	NAV	NAV	219	NT	69.037 U	NT	92.593 U	47.409 U	NT
Vanadium	NAV	57	**125**	NT	**82.3**	NT	**118**	**79.3**	NT
Zinc	120	150	**139 B**	NT	**1320 B**	NT	**2090 B**	117 B	NT

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Salt Water-Sediment

ft bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-7
Fort Monmouth Phase II Site Investigation, Parcel 61
Summary of Analytical Parameters Detected in Soil (mg/kg)

	Analytical Results	
	Sample ID:	P61-SS1
	Lab ID:	7055205
	Date Sampled:	12/20/2007
	Depth (ft. bgs):	0.0-0.5
Chemical	ESC	Result
Semi-Volatiles		
Acenaphthene	20	2.300
Anthracene	1480	2.500
Benzo[a]anthracene	5.21	4.600
Benzo[a]pyrene	1.52	**3.700**
Benzo[b]fluoranthene	59.8	5.800
Benzo[g,h,i]perylene	119	1.100 J
Benzo[k]fluoranthene	148	2.200
Butyl benzyl phthalate	0.239	1.100 U
Chrysene	4.73	**5.000**
Dibenzofuran	NAV	1.200
Di-n-butylphthalate	200	0.082 JB
bis(2-Ethylhexyl)phthalate	0.925	0.270 J
Fluoranthene	122	13.000
Fluorene	122	1.600
Indeno[1,2,3-cd]pyrene	109	1.100 J
2-Methylnaphthalene	3.24	0.540 J
Naphthalene	0.0994	**1.200**
Phenanthrene	45.7	14.000 E
Pyrene	78.5	12.000
Metals		
Aluminum	50	**10100 B**
Arsenic	9.9	7.40
Barium	283	26.7 B
Beryllium	10	0.972
Cadmium	0.36	**0.546**
Calcium	NAV	1410 B
Chromium (Total)	0.4	**73.6 B**
Cobalt	13	2.45
Copper	28	**32.4 B**
Iron	NAV	29300 B
Lead	11	**33.3**
Magnesium	NAV	3110
Manganese	220	84.5 B
Mercury	0.00051	**0.61**
Nickel (Soluble Salts)	30	6.50
Potassium	NAV	6140 B
Vanadium	2	**52.6**
Zinc	8.5	**74.7 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
ft. bgs = feet below ground surface
mg/kg = milligram per kilogram
B = The compound was found in the associated method blank as well as in the sample.
D = Sample was diluted.
E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.
J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
U = The compound was analyzed for but not detected.
NAV = No Available Value

Table B-8
Fort Monmouth Phase II Site Investigation, Parcel 61
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results	
	Sample ID:		P61-SD1	P61-SD2
	Lab ID:		7055201	7055203
	Date Sampled:		12/20/2007	12/20/2007
	Depth (ft. bgs):		0.0-0.5	0.0-0.5
	ESC			
Chemical	FW-SED	SW-SED	Result	Result
Volatiles				
Toluene	2.5	2.5	0.290 U	0.340 U
Semi-Volatiles				
Acenaphthene	0.016	0.016	1.200 U	**1.600**
Anthracene	0.22	0.085	**0.160 J**	**0.290 J**
Benzo[a]anthracene	0.32	0.261	**0.490 J**	**0.740 J**
Benzo[a]pyrene	0.37	0.43	**0.430 J**	**0.650 J**
Benzo[b]fluoranthene	10.4	1.8	0.990 J	1.000 J
Benzo[k]fluoranthene	0.24	0.24	1.200 U	**0.380 J**
bis(2-Ethylhexyl)phthalate	0.182	0.18216	**0.380 J**	**0.460 J**
Chrysene	0.34	0.384	**0.710 J**	**0.920 J**
Dibenzofuran	NAV	NAV	1.200 U	1.400 U
Di-n-butylphthalate	1.114	0.058	**0.280 JB**	**0.320 JB**
Fluoranthene	0.75	0.6	**1.300**	**1.700**
Fluorene	0.19	0.019	1.200 U	**0.140 J**
4-Methylphenol	NAV	NAV	1.200 U	1.400 U
Naphthalene	0.16	0.16	1.200 U	1.400 U
Phenanthrene	0.56	0.24	**0.680 J**	**1.200 J**
Pyrene	0.49	0.665	**1.500**	**2.200**
Metals				
Aluminum	25500	18000	4390 B	10000 B
Arsenic	6	8.2	1.77	**13.3**
Barium	NAV	48	27.2 B	17.2 B
Beryllium	NAV	NAV	0.662	1.19
Cadmium	0.6	1.2	0.221	0.274
Calcium	NAV	NAV	553 B	1180 B
Chromium (Total)	26	81	**39.9 B**	**86.0 B**
Cobalt	50	10	0.903	1.98
Copper	16	34	12.0 B	13.0 B
Iron	NAV	NAV	13000 B	32300 B
Lead	31	47	**33.0**	12.4
Magnesium	NAV	NAV	1820	3910
Manganese	630	260	13.0 B	62.6 B
Mercury	0.2	0.15	0.118 U	0.130 U
Nickel (Soluble Salts)	16	21	3.59	9.41
Potassium	NAV	NAV	4050 B	6470 B
Vanadium	NAV	57	24.8	49.9
Zinc	120	150	58.4 B	63.4 B

Exceedances of freshwater sediment quality criteria are bold and shaded.
Exceedances of saltwater sediment quality criteria are bold with a bold border.
DUP = Duplicate Sample
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
B = The compound was found in the associated method blank as well as in the sample.
D = Sample was diluted.
E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.
J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
U = The compound was analyzed for but not detected.

ft. bgs = feet below ground surface
mg/kg = milligram per kilogram
NT = Not Tested
NAV = No Available Value

Table B-9
Fort Monmouth Phase II Site Investigation, Parcel 69
Summary of Analytical Parameters Detected in Soil (mg/kg)

		Analytical Results			
	Sample ID:	P69SB-1A	P69SB-2A	P69SB-3A	P69SB-4A
	Lab ID:	7048003	7048006	7048009	7048012
	Date Sampled:	11/20/2007	11/20/2007	11/20/2007	11/20/2007
	Depth (ft. bgs):	0.5-1.0	0.5-1.0	0.5-1.0	0.5-1.0
Chemical	ESC	Result	Result	Result	Result
Volatiles					
Acetone	NAV	NT	NT	NT	NT
Methylene Chloride	4.05	NT	NT	NT	NT
Semi-Volatiles					
Diethyl phthalate	100	1.000 U	1.100 U	1.000 U	1.100 U
Di-n-butylphthalate	200	1.100 B	1.000 JB	0.420 JB	0.730 JB
Fluoranthene	122	1.000 U	1.100 U	0.094 J	1.100 U
Phenanthrene	45.7	1.000 U	1.100 U	0.080 J	1.100 U
Pyrene	78.5	1.000 U	1.100 U	0.170 J	1.100 U
Metals					
Aluminum	50	**6760 B**	**7890 B**	**7880 B**	**9190 B**
Arsenic	9.9	2.09	2.49	2.14	4.09
Barium	283	23.0 B	21.5 B	28.0 B	30.6 B
Beryllium	10	0.768	0.827	0.885	0.796
Calcium	NAV	1230	1070	1420	1300
Chromium (Total)	0.4	**46.9**	**56.5**	**60.0**	**46.8**
Cobalt	13	0.497	0.919	0.947	0.837
Copper	28	6.49 B	15.4 B	11.6 B	**46.8 B**
Iron	NAV	18600	24700	25100	18100
Lead	11	8.98 B	9.68 B	**21.8 B**	**23.0 B**
Magnesium	NAV	2200	2960	2960	2490
Manganese	220	36.7	43.8	46.2	69.5
Mercury	0.00051	0.107 U	0.095 U	0.103 U	**0.51**
Nickel (Soluble Salts)	30	4.50	4.96	5.16	5.52
Potassium	NAV	3320	4780	5400	3300
Vanadium	2	**31.3**	**37.1**	**37.8**	**32.0**
Zinc	8.5	**45.3 B**	**42.5 B**	**74.9 B**	**55.9 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.

ESC = Ecological Screening Criteria (see Section 3.3)

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zer

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-10
Fort Monmouth Phase II Site Investigation, Parcel 69
Summary of Analytical Parameters Detected in Groundwater (µg/L)

			Analytical Results		
		Sample ID:	P69GW-1	P69GW-1 DUP	P69GW-4
		Lab ID:	7048104	7048103	7048105
		Date Sampled:	11/21/2007	11/21/2007	11/21/2007
		Screened Interval (ft. bgs):	7-12'	7-12'	10-15'
	ESC				
Chemical	FW-SW	SW-SW	Result	Result	Result
Volatiles					
Acetone	NAV	NAV	0.85 U	0.85 U	1.09 B
Tetrachloroethylene	45	NAV	0.97	1.02	0.34 U
Toluene	253	NAV	0.27 U	0.27 U	0.14 J
Semi-Volatiles					
bis(2-Ethylhexyl)phthalate	0.3	NAV	8.54	3.08	1.28 U

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

ft bgs = feet below ground surface

µg/L = microgram per liter

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-11
Fort Monmouth Phase II Site Investigation, Parcel 69
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results			
		Sample ID:	P69SD-1A	P69SD-1A	P69SD-2A	P69SD-2A
		Lab ID:	7048017	7053911	7048019	7053913
		Date Sampled:	11/20/2007	12/17/2007	11/20/2007	12/17/2007
		Depth (ft. bgs):	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5
	ESC					
Chemical	FW-SED	SW-SED	Result	Result	Result	Result
Volatiles						
Acetone	NAV	NAV	NT	4.000 B	NT	5.300 B
Carbon disulfide	NAV	NAV	NT	0.130 J	NT	0.069 J
Methylene Chloride	0.159	NAV	NT	**0.160 JB**	NT	**0.190 JB**
Toluene	2.5	2.5	NT	0.440 U	NT	0.510 U
Semi-Volatiles						
Acenaphthene	0.016	0.016	**0.500 J**	NT	**1.200 J**	NT
Anthracene	0.22	0.085	2.800 U	NT	6.500 U	NT
Benzo[a]anthracene	0.32	0.261	2.800 U	NT	6.500 U	NT
Chrysene	0.34	0.384	2.800 U	NT	6.500 U	NT
Di-n-butylphthalate	1.114	0.058	**4.800 B**	NT	**1.200 JB**	NT
Fluoranthene	.75	0.6	**0.790 J**	NT	**2.800 J**	NT
Phenanthrene	0.56	0.24	0.250 J	NT	6.500 U	NT
Pyrene	0.49	0.665	**1.100 J**	NT	**3.100 J**	NT
Metals						
Aluminum	25500	18000	7790 B	NT	**41300 B**	NT
Arsenic	6	8.2	2.59	NT	**36.2**	NT
Barium	NAV	48	14.8 B	NT	89.6 B	NT
Beryllium	NAV	NAV	0.876	NT	3.90	NT
Cadmium	0.6	1.2	0.063 U		**14.1**	NT
Calcium	NAV	NAV	1460	NT	3850	NT
Chromium (Total)	26	81	**74.5**	NT	**345**	NT
Cobalt	50	10	2.05	NT	**20.3**	NT
Copper	16	34	**30.5 B**	NT	**203 B**	NT
Iron	NAV	NAV	23700	NT	92500	NT
Lead	31	47	**35.9 B**	NT	**410 B**	NT
Magnesium	NAV	NAV	3550	NT	11300	NT
Manganese	630	260	55.4	NT	**339**	NT
Mercury	0.2	0.15	0.143 U	NT	**0.83**	NT
Nickel (Soluble Salts)	16	21	9.32	NT	**53.1**	NT
Potassium	NAV	NAV	4880	NT	13900	NT
Silver	1	1	0.252 U	NT	**9.99**	NT
Sodium	NAV	NAV	57.316 U	NT	9690	NT
Vanadium	NAV	57	45.6	NT	185	NT
Zinc	120	150	**126 B**	NT	**515 B**	NT

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Salt Water-Sediment

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-12
Fort Monmouth Phase II Site Investigation, Parcel 15
Summary of Analytical Parameters Detected in Groundwater (µg/L)

			Analytical Results						
		Sample ID:	15GW-1	15GW-2	15GW-3	15GW-3DUP	15GW-4	15GW-5	15GW-6
		Lab ID:	7043104	7043105	7043106	7043103	7043107	7043108	7043109
		Date Sampled:	10/31/2007	10/31/2007	10/31/2007	10/31/2007	10/31/2007	10/31/2007	10/31/2007
		Screened Interval (ft. bgs):	7-12'	7-12'	7-12'	7-12'	7-12'	7-12'	7-12'
	ESC								
Chemical	FW-SW	SW-SW	Result	Result	Result	Result	Result	Result	Result
Volatiles									
Toluene	253	NAV	0.65	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Semi-Volatiles									
bis(2-Ethylhexyl)phthalate	0.3	NAV	1.28 U	1.28 U	3.74	1.28 U	4.04	1.19 J	1.28 U
Metals									
Aluminum	NAV	NAV	5240 B	1050 B	161 B	272 B	769 B	1280 B	800 B
Arsenic	150	36	4.41	2.70 U	2.70 U	2.70 U	7.47	2.70 U	2.70 U
Barium	220	NAV	73.2	375	354	354	779	121	72.2
Beryllium	3.6	NAV	0.934	0.468	0.100 U	0.100 U	0.100 U	0.355	0.376
Cadmium	0.15	8.8	0.285	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Calcium	NAV	NAV	4330 B	57200 B	50000 B	49300 B	136000 B	19900 B	3880 B
Chromium (Total)	20	50	**61.5**	5.38	0.516	1.81	3.31	8.19	6.81
Cobalt	24	NAV	13.2	0.200 U	0.200 U	0.200 U	0.387	0.707	0.457
Copper	7.0	3.1	**4.1**	0.500 U	0.500 U	0.500 U	**5.90**	**9.25**	**5.18**
Iron	NAV	NAV	16800	14100	66200	64900	78800	9410	6840
Lead	5.4	24	1.74	2.66	0.700 U	0.700 U	1.07	3.46	6.41
Magnesium	NAV	NAV	11300	8070	6910	6790	20200	3260	512
Manganese	NAV	NAV	208	213	277	276	1380	141	245
Nickel (Soluble Salts)	36	22	19.4	0.976	0.300 U	0.300 U	1.10	3.94	1.28
Potassium	NAV	NAV	6780 B	9110 B	10100 B	10000 B	14700 B	2500 B	584 B
Selenium	5	71	3.62 B	2.70 U	2.70 U	2.70 U	2.70 U	2.70 U	6.98 B
Sodium	NAV	NAV	49700	18300	50900	49200	40200	5380	1160
Vanadium	12	NAV	32.6	15.4	1.14	2.45	4.92	7.07	11.6
Zinc	94	81	63.4	13.5	15.2	18.3	40.2	14.3	16.4

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

ft. bgs = feet below ground surface

µg/L = microgram per liter

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-13
Fort Monmouth Phase II Site Investigation, Parcel 15
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results		
		Sample ID:	15SD-1	15SD-2	15SD-3
		Lab ID:	7042622	7042624	7042626
		Date Sampled:	10/29/2007	10/29/2007	10/29/2007
		Depth (ft. bgs):	0.0-0.5	0.0-0.5	0.0-0.5
	ESC				
Chemical	FW-SED	SW-SED	Result	Result	Result
Semi-Volatiles					
2-Methylphenol	NAV	NAV	1.200 U	1.200 U	0.460 J
Acenaphthene	0.016	0.016	1.200 U	1.200 U	1.200 U
Anthracene	0.22	0.085	1.200 U	1.200 U	0.052 J
Benzo[a]anthracene	0.32	0.261	1.200 U	1.200 U	0.200 J
Benzoic acid	NAV	NAV	1.200 U	1.200 U	0.790 J
bis(2-Ethylhexyl)phthalate	0.182	0.18216	1.200 U	1.200 U	**1.300**
Chrysene	0.34	0.384	1.200 U	1.200 U	0.320 J
Di-n-butylphthalate	1.114	0.058	**0.810 JB**	**0.280 JB**	**0.680 JB**
Fluoranthene	0.75	0.6	1.200 U	0.170 J	0.280 J
Fluorene	0.19	0.019	1.200 U	1.200 U	1.200 U
Phenanthrene	0.56	0.24	0.061 J	0.170 J	0.220 J
Pyrene	0.49	0.665	1.200 U	0.340 J	0.470 J
Metals					
Aluminum	25500	18000	2540 B	3280 B	4140 B
Arsenic	6	8.2	1.65	2.29	3.03
Barium	NAV	48	13.7 B	18.3 B	21.2 B
Beryllium	NAV	NAV	0.252	0.361	0.472
Cadmium	0.6	1.2	0.047 U	0.228	0.243
Calcium	NAV	NAV	622 B	750 B	1010 B
Chromium (Total)	26	81	**29.4**	**31.1**	**37.0**
Cobalt	50	10	0.733	1.60	2.67
Copper	16	34	8.23 B	10.7 B	13.0 B
Iron	NAV	NAV	7850	9210	11400
Lead	31	47	8.94	11.8	14.6
Magnesium	NAV	NAV	972	1090	1650
Manganese	630	260	30.7 B	20.4 B	16.9 B
Nickel (Soluble Salts)	16	21	3.50	4.73	7.47
Potassium	NAV	NAV	1870 B	2260 B	3180 B
Sodium	NAV	NAV	137 B	150 B	45.633 U
Vanadium	NAV	57	14.1	16.8	21.4
Zinc	120	150	49.9	56.6	86.0

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Surface Water-Sediment

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-14
Fort Monmouth Phase II Site Investigation, Parcel 27
Summary of Analytical Parameters Detected in Soil (mg/kg)

		Analytical Results		
	Sample ID:	P27-SS1	P27-SS2	P27-SS2 DUP
	Lab ID:	8000707	8000708	8000702
	Date Sampled:	01/08/2008	01/08/2008	01/08/2008
	Depth (ft. bgs):	0.0-0.5	0.0-0.5	0.0-0.5
Chemical	ESC	Result	Result	Result
Semi-Volatiles				
Benzo[a]anthracene	5.21	0.150 J	0.440 J	0.510 J
Benzo[b]fluoranthene	59.8	1.200 U	0.750 J	0.830 J
bis(2-Ethylhexyl)phthalate	0.925	0.280 J	0.760 J	**0.940 J**
Chrysene	4.73	0.220 J	0.580 J	0.700 J
Di-n-butylphthalate	200	0.400 JB	0.890 JB	1.100 JB
Fluoranthene	122	0.210 J	0.600 J	0.810 J
Phenanthrene	45.7	0.100 J	0.360 J	0.410 J
Pyrene	78.5	0.430 J	1.300 J	1.500
Metals				
Aluminum	50	**11600 B**	**22900 B**	**18700 B**
Arsenic	9.9	9.86	**16.7**	**14.9**
Barium	283	29.5 B	74.4 B	60.2 B
Beryllium	10	0.498	1.41	1.19
Cadmium	0.36	**0.720**	**5.62**	**4.51**
Calcium	NAV	1550 B	6320 B	5610 B
Chromium (Total)	0.4	**60.8 B**	**142 B**	**121 B**
Cobalt	13	1.49	5.49	5.33
Copper	28	17.0 B	**59.6 B**	**54.0 B**
Iron	NAV	20200	46800	40300
Lead	11	**44.6**	**87.0**	**87.6**
Magnesium	NAV	1790 B	6040 B	5230 B
Manganese	220	64.3 B	**342 B**	**287 B**
Mercury	0.00051	0.122 U	**0.18**	**0.17**
Nickel (Soluble Salts)	30	8.59	25.3	20.2
Potassium	NAV	2570 B	7760 B	6430 B
Vanadium	2	**67.2**	**123**	**106**
Zinc	8.5	**81.4 B**	**324 B**	**274 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.
DUP = Duplicate Sample
ESC = Ecological Screening Criteria (see Section 3.3)
ft. bgs = feet below ground surface
mg/kg = milligram per kilogram
B = The compound was found in the associated method blank as well as in the sample.
D = Sample was diluted.
E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.
J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
U = The compound was analyzed for but not detected.
NT = Not Tested
NAV = No Available Value

Table B-15
Fort Monmouth Phase II Site Investigation, Parcel 27
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results	
	Sample ID:		P27-SD1	P27-SD2
	Lab ID:		8000703	8000705
	Date Sampled:		01/08/2008	01/08/2008
	Depth (ft. bgs):		0.0-0.5	0.0-0.5
	ESC			
Chemical	FW-SED	SW-SED	Result	Result
Semi-Volatiles				
Benzo[a]anthracene	0.32	0.261	1.700 U	0.120 J
Benzoic acid	NAV	NAV	1.700 U	1.500 U
bis(2-Ethylhexyl)phthalate	0.182	0.18216	1.700 U	0.170 J
Chrysene	0.34	0.384	1.700 U	0.150 J
Di-n-butylphthalate	1.114	0.058	**0.460 JB**	**0.610 JB**
Fluoranthene	0.75	0.6	0.130 J	0.250 J
Phenanthrene	0.56	0.24	1.700 U	0.082 J
Pyrene	0.49	0.665	0.200 J	0.280 J
Metals				
Aluminum	25500	18000	7310 B	5560 B
Antimony	3	9.3	0.636 U	0.620 U
Arsenic	6	8.2	**6.11**	3.28
Barium	NAV	48	34.4 B	26.7 B
Beryllium	NAV	NAV	0.817	0.768
Cadmium	0.6	1.2	**1.76**	**0.715**
Calcium	NAV	NAV	1210 B	793 B
Chromium (Total)	26	81	**49.8 B**	**49.6 B**
Cobalt	50	10	3.51	2.37
Copper	16	34	**187 B**	15.1 B
Iron	NAV	NAV	12800	12000
Lead	31	47	**84.9**	21.9
Magnesium	NAV	NAV	1530 B	1550 B
Manganese	630	260	56.6 B	18.1 B
Mercury	0.2	0.15	0.149 U	0.146 U
Nickel (Soluble Salts)	16	21	12.8	10.3
Potassium	NAV	NAV	2590 B	3040 B
Selenium	NAV	1	0.940 U	0.915 U
Vanadium	NAV	57	44.4	29.3
Zinc	120	150	**264 B**	79.8 B

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Salt Water-Sediment

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-16
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters in Soil (mg/kg), South of Corregidor Road

		Analytical Results	
	Sample ID:	P28-SB1-A	P28-SB2-A
	Lab ID:	7051111	7051114
	Date Sampled:	12/5/2007	12/5/2007
	Depth (ft. bgs):	0.0-0.5'	0.0-0.5'
Chemical	ESC	Result	Result
Semi-Volatiles			
Benzo[b]fluoranthene	59.8	1.100 U	1.000 U
Benzo[a]anthracene	5.21	1.100 U	1.000 U
Benzo[a]pyrene	1.52	1.100 U	1.000 U
Benzo[k]fluoranthene	148	1.100 U	1.000 U
bis(2-Ethylhexyl)phthalate	0.925	0.160 J	1.000 U
Chrysene	4.73	1.100 U	1.000 U
Di-n-butylphthalate	200	1.100 JB	0.200 JB
Di-n-octyl phthalate	NAV	1.100 U	1.000 U
Fluoranthene	122	0.095 J	1.000 U
Indeno[1,2,3-cd]pyrene	109	1.100 U	1.000 U
Phenanthrene	45.7	0.069 J	1.000 U
Pyrene	78.5	0.120 J	1.000 U
Metals			
Aluminum	50	**7170 B**	**2290 B**
Arsenic	9.9	7.16	1.78
Barium	283	30.1 B	8.30 B
Beryllium	10	0.794	0.154
Cadmium	0.36	0.338	0.147
Calcium	NAV	1280 B	461 B
Chromium (Total)	0.4	**58.6**	**17.4**
Cobalt	13	1.15	0.465
Copper	28	9.21 B	5.27 B
Iron	NAV	21900	5660
Lead	11	**28.0**	**27.8**
Magnesium	NAV	2690 B	524 B
Manganese	220	52.4	24.1
Nickel (Soluble Salts)	30	6.55	2.15
Potassium	NAV	5250	770
Vanadium	2	**33.7**	**16.6**
Zinc	8.5	**51.9 B**	**31.1 B**

Exceedances of Eco-SSL soil criteria are bold and shaded.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-17
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters Detected in Groundwater (µg/L)

			Analytical Results				
		Sample ID:	P28GW-1	P28GW-1 DUP	P28GW-2	P28GW-3	P28GW-4
		Lab ID:	7051404	7051403	7051405	7051406	7051407
		Date Sampled:	12/06/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007
		Screened Interval (ft. bgs):	6-11'	6-11'	2.5-7.5'	3-8'	5-10'
	ESC						
Chemical	FW-SW	SW-SW	Result	Result	Result	Result	Result
Volatiles							
Acetone	NAV	NAV	1.33	0.85 U	0.85 U	1.25	1.43
Chloroform	140	NAV	0.32 U	0.32 U	0.66	0.32 U	0.32 U
Toluene	253	NAV	0.27 U	0.27 U	0.38	0.27 U	0.27 U
Semi-Volatiles							
bis(2-Ethylhexyl)phthalate	0.3	NAV	**2.07 B**	1.28 U	1.28 U	**0.94 JB**	**2.30 B**
Metals							
Aluminum	NAV	NAV	198	80.4	75.6	550	973
Barium	220	NAV	27.8	24.9	13.9	77.2	92.0
Beryllium	3.6	NAV	0.100 U	0.100 U	0.100 U	0.507	0.533
Cadmium	0.15	8.8	0.200 U	0.200 U	**0.314 B**	**0.388 B**	**0.533 B**
Calcium	NAV	NAV	5540	5200	5910	7160	30400
Chromium (Total)	20	50	0.200 U	0.200 U	0.200 U	2.34	0.200 U
Cobalt	24	NAV	0.200 U	0.200 U	0.200 U	6.21	5.99
Magnesium	NAV	NAV	3220	3000	2060	8210	7380
Manganese	NAV	NAV	56.9	53.3	8.36	50.0	248
Nickel (Soluble Salts)	37	22	0.300 U	0.300 U	0.300 U	21.0	5.03
Potassium	NAV	NAV	3270	2980	507	2000	3520
Sodium	NAV	NAV	4670 B	4250 B	48800 B	4850 B	14700 B
Zinc	96	81	3.58 U	3.58 U	3.58 U	65.0	35.8
Anions							
Nitrate	NAV	NAV	2040	2220	550	NT	NT
Nitrite	NAV	NAV	200 U	200 U	250	NT	NT

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

ft. bgs = feet below ground surface

µg/L = microgram per liter

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

Table B-18
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results	
	Sample ID:		P28SD-1	P28SD-2
	Lab ID:		7050607	7050609
	Date Sampled:		12/4/2007	12/4/2007
	Depth (ft. bgs):		0.0-0.5	0.0-0.5
	ESC			
Chemical	FW-SED	SW-SED	Result	Result
Volatiles				
Acetone	NAV	NAV	0.440	0.390
Semi-Volatiles				
Benzo[a]anthracene	0.32	0.261	1.200 U	0.180 J
Chrysene	0.34	0.384	1.200 U	0.270 J
Di-n-butylphthalate	1.114	0.058	**0.190 JB**	**0.150 JB**
Fluoranthene	0.75	0.6	1.200 U	0.160 J
Pyrene	0.49	0.665	1.200 U	0.370 J
Metals				
Aluminum	25500	18000	4710 B	4340 B
Arsenic	6	8.2	2.32	2.75
Barium	NAV	48	28.7 B	31.6 B
Beryllium	NAV	NAV	0.454	0.399
Cadmium	0.6	1.2	0.222	0.449
Calcium	NAV	NAV	964 B	1080 B
Chromium (Total)	26	81	**43.0**	**36.8**
Cobalt	50	10	0.596	1.09
Copper	16	34	5.92 B	11.5 B
Iron	NAV	NAV	13200	10600
Lead	31	47	7.69	28.0
Magnesium	NAV	NAV	1530 B	1390 B
Manganese	630	260	24.2	31.0
Nickel (Soluble Salts)	16	21	5.42	5.28
Potassium	NAV	NAV	3220	2150
Vanadium	NAV	57	23.5	22.3
Zinc	120	150	35.9 B	55.6 B

Exceedances of freshwater sediment quality criteria are bold and shaded.

Exceedances of saltwater sediment quality criteria are bold with a bold border.

DUP = Duplicate Sample

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SED = Fresh Water-Sediment

SW-SED = Salt Water-Sediment

ft. bgs = feet below ground surface

mg/kg = milligram per kilogram

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not Tested

NAV = No Available Value

APPENDIX C
Groundwater Monitoring Data Evaluated in the BEE

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		44	44	45	45	46	46	47	47	48	48	49	50	51
WELL ID			M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	LF1[(1)]	LF1[(1)] Duplicate	M2MW02	M2MW02	M2MW02
Date Collected	FW-SW	SW-SW	3/17/2008	3/17/2008	5/22/2008	5/22/2008	8/26/2008	8/26/2008	12/23/2008	12/23/2008	3/31/2009	3/31/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.04	80087.03	80176.04	80176.03	80308.04	80308.03	80472.04	80472.03	90137.05	90137.03	90249.04	90394.04	90470.04
VOCs (µg/L)															
Acetone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	23.95	NA	1.56 J	12.74	4.31	6.09	11.4	11.41	31.71	32.12	31.98	13.81	23.12
1,2-Dichlorobenzene	14	NAV	0.47	NA	ND	ND	ND	ND	ND	ND	0.50 J	0.54 J	0.56 J	ND	ND
1,3-Dichlorobenzene	38	NAV	0.82	NA	ND	0.45 J	ND	0.31 J	0.47 J	0.42 J	0.97 J	1.02 J	1.09 J	0.44 J	0.78
1,4-Dichlorobenzene	9.4	NAV	3.32	NA	ND	1.61 J	0.60 J	0.76 J	1.08 J	1.05 J	3.56	3.71	4.09	1.57	2.44
4-Methyl-2-pentanone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND
SVOCs (µg/L)															
Benzyl alcohol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	1.0 J	1.0 J	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Butyl benzyl phthalate	23	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
1,3-Dichlorobenzene	38	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.6 J	0.6 J	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	NA	NA	NA	NA	2.0 J	2.0 J	NA	NA	NA
2-Methylnaphthalene	330	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
N -Nitrosodiphenylamine	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	50	50	NA	NA	NA
Pesticides/PCBs (µg/L)															
alpha-BHC	12.4	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.038	0.04	NA	NA	NA
beta-BHC	0.495	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.037	0.048	NA	NA	NA
delta-BHC	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.039	0.059	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	**0.038**	**0.046**	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.051	0.056	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	**0.055**	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	NA	NA	NA	NA	**0.06**	ND	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	NA	NA	NA	NA	**0.038**	**0.041**	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	NA	NA	NA	NA	ND	**0.033**	NA	NA	NA
Endosulfan II	0.056	0.0087	NA	NA	NA	NA	NA	NA	NA	NA	ND	**0.038**	NA	NA	NA
Endrin	0.036	0.0023	NA	NA	NA	NA	NA	NA	NA	NA	**0.043**	**0.045**	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.146	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	NA	NA	NA	NA	ND	**0.046**	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	NA	NA	NA	NA	**0.047**	**0.054**	NA	NA	NA

See Notes at end of Table

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		44	44	45	45	46	46	47	47	48	48	49	50	51
WELL ID			M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	M2MW02	MW02 Duplicate	LF1[(1)]	LF1[(1)] Duplicate	M2MW02	M2MW02	M2MW02
Date Collected	FW-SW	SW-SW	3/17/2008	3/17/2008	5/22/2008	5/22/2008	8/26/2008	8/26/2008	12/23/2008	12/23/2008	3/31/2009	3/31/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.04	80087.03	80176.04	80176.03	80308.04	80308.03	80472.04	80472.03	90137.05	90137.03	90249.04	90394.04	90470.04
Metals (µg/L)															
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA	20.3	15.3	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA	**65.3**	**65.7**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA	**285**	**297**	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	NA	NA	NA	NA	0.353 ER	1.29 ER	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA	**7.16**	ND	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA	**41.2**	**51.9**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA

See Notes at end of Table

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		44	45	46	47	48	49	50	51
WELL ID			M2MW03	M2MW03	M2MW03	M2MW03	LF1[(1)]	M2MW03	M2MW03	M2MW03
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/26/2008	12/23/2008	3/30/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.05	80176.05	80308.05	80472.05	90133.07	90249.05	90394.05	90470.05
VOCs (µg/L)										
Benzene	114	NAV	5.53	5.48	ND	6.61	ND	5.55	ND	0.26 J
Chlorobenzene	47	NAV	**157.16**	**157.28**	6.05	**134.62 E**	6.96	**151.72**	14.19	8.14
Chloroethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	14	NAV	2.4	2.76	ND	2.51	ND	2.39	ND	ND
1,3-Dichlorobenzene	38	NAV	2.59	3.19	0.40 J	2.33	ND	2.61	ND	ND
1,4-Dichlorobenzene	9.4	NAV	6.55	7.77	0.39 J	6.74	0.36 J	6.55	0.64	0.52
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND	0.20 J	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.43 J	ND	0.25 J	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	3	ND	ND	3	ND	ND	ND	ND
SVOCs (µg/L)										
Acenaphthene	38	NAV	NA	NA	NA	NA	0.5 J	NA	NA	NA
Anthracene	0.035	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Butyl benzyl phthalate	23	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Dibenzofuran	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,2-Dichlorobenzene	14	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,3-Dichlorobenzene	38	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Fluorene	19	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Naphthalene	13	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4-Nitrophenol	60	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Phenanthrene	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	12	NA	NA	NA

See Notes at end of Table

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		44	45	46	47	48	49	50	51
WELL ID			M2MW03	M2MW03	M2MW03	M2MW03	LF1[(1)]	M2MW03	M2MW03	M2MW03
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/26/2008	12/23/2008	3/30/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.05	80176.05	80308.05	80472.05	90133.07	90249.05	90394.05	90470.05
Pesticides/PCBs (µg/L)										
alpha-BHC	12.4	NAV	NA	NA	NA	NA	0.029	NA	NA	NA
gamma-BHC	0.026	0.16	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	**0.027**	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.037**	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	**0.027**	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.043**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	28.0	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**101**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	96.1	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	0.395 ER	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	4.59 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**102**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

See Notes at end of Table

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		41	42	43	44	45	46	47	48
WELL ID			M2MW04	M2MW04	M2MW04	M2MW04	LF1[(1)]	M2MW04	M2MW04	M2MW04
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/26/2008	12/23/2008	3/30/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.06	80176.06	80308.05	80472.06	90133.10	90249.06	90394.06	90470.06
VOCs (µg/L)										
Benzene	114	NAV	ND	ND	0.34 J	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	1.49 J	ND	7.29	1.49 J	0.61 J	ND	1.61	0.50 J
1,3-Dichlorobenzene	38	NAV	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	0.62 J	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.24 J	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	3	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Acenaphthene	38	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Benzo[*g,h,i*]perylene	7.64	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Butyl benzyl phthalate	23	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Dibenz[*a,h*]anthracene	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Dibenzofuran	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1.4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Fluorene	19	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Indeno[1,2,3-*cd*]pyrene	4.31	NAV	NA	NA	NA	NA	ND	NA	NA	NA
2-Methylnapthhalene	330	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Naphthalene	13	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Phenanthrene	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	23	NA	NA	NA
Pesticides/PCBs (µg/L)										
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		41	42	43	44	45	46	47	48
WELL ID			M2MW04	M2MW04	M2MW04	M2MW04	LF1[(1)]	M2MW04	M2MW04	M2MW04
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/26/2008	12/23/2008	3/30/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.06	80176.06	80308.05	80472.06	90133.10	90249.06	90394.06	90470.06
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	18.0	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**56.9**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	74.7	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	0.538 ER	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	**6.55**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**85.6**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		39	40	41	42	42	43	44	44	45	45	46	46
WELL ID			M2MW05	M2MW05	M2MW05	M2MW05	MW05 Duplicate	LF1[(1)]	M2MW05	MW05 Duplicate	M2MW05	MW05 Duplicate	M2MW05	MW05 Duplicate
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	12/27/2008	3/31/2009	6/22/2009	6/22/2009	9/22/2009	9/22/2009	12/3/2009	12/3/2009
ANALYTE/Lab ID			80087.07	80178.04	80308.07	80473.04	80473.03	90137.04	90252.04	90252.03	90394.07	90394.03	90469.04	90469.03
VOCs (µg/L)														
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	6.23 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)														
Benzyl alcohol	NAV	NAV	NA	NA	NA	NA	NA	0.9 J	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Di-*n* -octyl phthalate	NAV	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)														
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	**0.034**	NA	NA	NA	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	NA	0.034	NA	NA	NA	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	NA	**0.038**	NA	NA	NA	NA	NA	NA
Metals (µg/L)														
Antimony	80	NAV	NA	NA	NA	NA	NA	12.8	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	**52**	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	93.9	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	2.68 ER	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	**58.8**	NA	NA	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA

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Round No.	ESC		41	42	43	44	45	46	47	48
WELL ID			M2MW06	M2MW06	M2MW06	M2MW06	LF3[(1)]	M2MW06	M2MW06	M2MW06
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	3/28/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.08	80178.05	80308.08	80473.05	90131.06	90252.05	90394.08	90469.05
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	0.19 J	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	12.83	9.47	0.89 J	20.52	3.65	3.19	ND	ND
1,2-Dichlorobenzene	14	NAV	0.38 J	0.42 J	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	38	NAV	0.41 J	0.40 J	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	1.94 J	2.2	ND	0.56 J	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	9	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1.4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	18	NA	NA	NA
Pesticides/PCBs (µg/L)										
Aroclor 1016	0.014	0.03	NA	NA	NA	NA	ND	NA	NA	NA
Aroclor 1260	0.014	0.03	NA	NA	NA	NA	ND	NA	NA	NA
alpha-BHC	12.4	NAV	NA	NA	NA	NA	0.027	NA	NA	NA
delta-BHC	NAV	NAV	NA	NA	NA	NA	0.043	NA	NA	NA
gamma-BHC	0.026	0.016	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	ND	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.045**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	**117**	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**74.1**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	95.4	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	3.11 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**117**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		39	40	40	41	42	43	44	45	46
WELL ID			M2MW07	M2MW07	MW07 Duplicate	M2MW07	M2MW07	LF1[(1)]	M2MW07	M2MW07	M2MW07
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	5/23/2008	8/26/2008	12/27/2008	3/28/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.09	80178.06	80178.03	80308.09	80473.06	90131.07	90252.06	90394.09	90469.06
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	38	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)											
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,2-Dichlorobenzene	14	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,3-Dichlorobenzene	38	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
2-Methylnaphthalene	330	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	18	NA	NA	NA
Pesticides/PCBs (µg/L)											
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	NA	NA	NA	NA	NA	18.5	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	**84.3**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	85.7	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	**5.47**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	**85.6**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M2MW08	M2MW08	M2MW08	M2MW08	LF1[(1)]	M2MW08	M2MW08	M2MW08
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	3/30/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.10	80178.07	80308.10	80308.10	90133.09	90252.07	90394.10	90469.07
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	7.03	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	19	NA	NA	NA
Pesticides/PCBs (µg/L)										
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	**0.027**	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.038**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	21.9	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**62.7**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	121	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	**7.38**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**96.3**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		41	42	43	44	45	46	47	48
WELL ID			M2MW09	M2MW09	M2MW09	M2MW09	LF3[(1)]	M2MW09	M2MW09	M2MW09
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	3/28/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.11	80178.08	80308.11	80473.08	90131.04	90252.08	90394.11	90469.08
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND	0.24 J	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Diethyl phthalate	110	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Phenol	180	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	19	NA	NA	NA
Pesticides/PCBs (µg/L)										
Aroclor 1016	0.014	0.03	NA	NA	NA	NA	ND	NA	NA	NA
Aroclor 1254	0.014	0.03	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	0.034	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	**0.034**	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	**0.044**	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	**0.031**	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	**0.028**	NA	NA	NA
Endosulfan sulfate	2.22	NAV	NA	NA	NA	NA	0.026	NA	NA	NA
Endrin aldehyde	0.15	NAV	NA	NA	NA	NA	0.023	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	0.034	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.034**	NA	NA	NA
Heptachlor Epoxide	0.0038	0.0036	NA	NA	NA	NA	**0.027**	NA	NA	NA
Methoxyclor	0.03	0.03	NA	NA	NA	NA	**0.052**	NA	NA	NA

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Round No.	ESC		41	42	43	44	45	46	47	48
WELL ID			M2MW09	M2MW09	M2MW09	M2MW09	LF3[(1)]	M2MW09	M2MW09	M2MW09
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	3/28/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.11	80178.08	80308.11	80473.08	90131.04	90252.08	90394.11	90469.08
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	13.5	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**90.1**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	42.2	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	0.442 ER	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	1.05 ER	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	2.01 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**117**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M2MW10	M2MW10	M2MW10	M2MW10	LF1[(1)]	M2MW10	M2MW10	M2MW10
Date Collected	FW-SW	SW-SW	3/17/2008	5/23/2008	8/26/2008	12/27/2008	3/30/2009	6/22/2009	9/22/2009	12/3/2009
ANALYTE/Lab ID			80087.12	80178.09	80308.12	80473.09	90133.05	90252.09	90394.12	90469.09
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	4	ND	ND	ND	ND
SVOCs (µg/L)										
TICs	NAV	NAV	NA	NA	NA	NA	14	NA	NA	NA
Pesticides/PCBs (µg/L)										
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	19.8	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**70.4**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	56.8	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	4.78 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**102**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		33	33	34	35	36	37	37	38	39	40
WELL ID			M2MW11	MW11 Duplicate	M2MW11	M2MW11	M2MW11	LF1[(1)]	LF1[(1)] Duplicate	M2MW11	M2MW11	M2MW11
Date Collected	FW-SW	SW-SW	3/18/2008	3/18/2008	5/22/2008	8/26/2008	12/23/2008	3/28/2009	3/28/2009	6/22/2009	9/23/2009	12/3/2009
ANALYTE/Lab ID			80088.04	80088.03	80176.07	80308.13	80472.07	90131.05	90131.03	90252.10	90396.04	90469.1
VOCs (µg/L)												
Acetone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	68.23	NA	54.5	48.43	100.78 E	ND	ND	12.45	0.20 J	13.39
2-Butanone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	11.96	NA	10.85	8.21	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)												
TICs	NAV	NAV	NA	NA	NA	NA	NA	22	28	ND	NS	NS
Pesticides/PCBs (µg/L)												
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	NA	**0.027**	ND	NA	NA	NA
Endrin aldehyde	0.15	NAV	NA	NA	NA	NA	NA	0.025	ND	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	NA	**0.033**	**0.033**	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	NA	**0.048**	ND	NA	NA	NA
Metals (µg/L)												
Antimony	80	NAV	NA	NA	NA	NA	NA	27.0	15.8	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	**56.7**	**66.1**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	28.1	28.1	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	NA	ND	**0.344 ER**	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	NA	0.916 ER	0.899	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	2.24 ER	**14.4**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	**111**	**84.9**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA

See Notes at end of Table

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Round No.	ESC		33	34	35	36	37	38	39	40
WELL ID			M2MW12	M2MW12	M2MW12	M2MW12	LF1[(1)]	M2MW12	M2MW12	M2MW12
Date Collected	FW-SW	SW-SW	3/18/2008	5/22/2008	8/26/2008	12/23/2008	3/30/2009	6/22/2009	9/23/2009	12/3/2009
ANALYTE/Lab ID			80088.05	80176.08	80308.14	80472.08	90133.06	90252.11	90396.05	90469.11
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	12	NA	NA	NA
Pesticides/PCBs (µg/L)										
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.034**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	22.0	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**66**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	30.1	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	1.14 ER	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	2.44 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**101**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Groundwater Sampling Results
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Round No.	ESC		33	34	35	36	37	38	39	40
WELL ID			M2MW13	M2MW13	M2MW13	M2MW13	LF1[(1)]	M2MW13	M2MW13	M2MW13
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/30/2009	6/19/2009	9/22/2009	12/4/2009
ANALYTE/Lab ID			80087.13	80176.09	80308.15	80472.09	90133.04	90249.07	90394.13	90470.07
VOCs (µg/L)										
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	13	NA	NA	NA
Pesticides/PCBs (µg/L)										
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	**0.042**	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	**0.027**	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	0.031	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.035**	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.04**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	19.4	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**74.1**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	153	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	**5.49**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**108**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		33	34	35	35	36	37	38	38	39	40	41
WELL ID			M2MW21	M2MW21	M2MW21	MW21 Duplicate	M2MW21	LF1[(1)]	M2MW21	MW21 Duplicate	M2MW21	M2MW21	MW21 Duplicate
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	8/27/2008	12/23/2008	3/30/2009	6/19/2009	6/19/2009	9/23/2009	12/4/2009	12/4/2009
ANALYTE/Lab ID			80087.14	80176.10	80309.04	80309.03	80472.10	90133.11	90249.08	90249.03	90396.06	90470.08	90470.03
VOCs (µg/L)													
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	1.42 J	1.07 J	2.03	1.98 J	1.63 J	1.16 J	0.73 J	0.59 J	1.22	0.89	0.88
Chlorobenzene	47	NAV	39.37	31.25	46.85	46.84	34.12	34.61	15.75	10.66	42.93	24.56	24.52
1,2-Dichlorobenzene	14	NAV	1.62 J	1.39 J	0.65 J	0.66 J	1.38 J	1.36 J	0.90 J	0.89 J	1.08	0.57	0.62
1,3-Dichlorobenzene	38	NAV	2.78	2.61	2.89	2.70	1.85 J	2.84	1.33 J	1.16 J	3.05	1.45	1.50
1,4-Dichlorobenzene	9.4	NAV	5.43	4.71	4.04	3.93	3.96	5.19	2.46	2.01	4.65	2.28	2.39
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.38 J	0.34 J	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	27	NAV	ND	ND	0.18 J	0.18 J	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	5.80	ND	4	3	ND	ND	ND	ND	4	ND	ND
SVOCs (µg/L)													
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	14	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	38	NAV	NA	NA	NA	NA	NA	0.7 J	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	NA	1.0 J	NA	NA	NA	NA	NA
2-Methylnaphthalene	330	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Phenol	180	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)													
alpha-BHC	12.4	NAV	NA	NA	NA	NA	NA	0.031	NA	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	**0.029**	NA	NA	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	0.093	NA	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	**0.069**	NA	NA	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	NA	**0.031**	NA	NA	NA	NA	NA
Endrin	0.036	0.0023	NA	NA	NA	NA	NA	**0.04**	NA	NA	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	NA	0.136	NA	NA	NA	NA	NA
Methoxyclor	0.03	0.03	NA	NA	NA	NA	NA	**0.048**	NA	NA	NA	NA	NA

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Round No.	ESC		33	34	35	35	36	37	38	38	39	40	41
WELL ID			M2MW21	M2MW21	M2MW21	MW21 Duplicate	M2MW21	LF1[(1)]	M2MW21	MW21 Duplicate	M2MW21	M2MW21	MW21 Duplicate
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	8/27/2008	12/23/2008	3/30/2009	6/19/2009	6/19/2009	9/23/2009	12/4/2009	12/4/2009
ANALYTE/Lab ID			80087.14	80176.10	80309.04	80309.03	80472.10	90133.11	90249.08	90249.03	90396.06	90470.08	90470.03
Metals (µg/L)													
Antimony	80	NAV	NA	NA	NA	NA	NA	30.0	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	**81.5**	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	**324**	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	**13.1**	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	**78.2**	NA	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA

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Round No.	ESC		33	34	35	36	37	38	39	40
WELL ID			M2MW22	M2MW22	M2MW22	M2MW22	LF1[(1)]	M2MW22	M2MW22	M2MW22
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/31/2009	6/19/2009	9/23/2009	12/4/2009
ANALYTE/Lab ID			80087.15	80176.11	80309.05	80472.11	90137.06	90249.09	90396.07	90470.09
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	251.4	228.05	416.66	ND	173.74	264.54	544.33	252.98
Chlorobenzene	47	NAV	0.33 J	ND	ND	0.33 J	0.32 J	0.20 J	ND	0.28 J
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	0.31 J	0.90 J	ND	0.64 J	0.95 J	3.07	3.26
4-Methyl-2-pentanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	53	53	343	491	47	82		54
SVOCs (µg/L)										
Benzyl alcohol	NAV	NAV	NA	NA	NA	NA	0.9 J	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Di-*n* -octyl phthalate	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	450	NA	NA	NA
Pesticides/PCBs (µg/L)										
alpha-BHC	12.4	NAV	NA	NA	NA	NA	0.028	NA	NA	NA
delta-BHC	0.495	NAV	NA	NA	NA	NA	0.057	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	**0.06**	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.039**	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.059**	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	8.77 ER	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**38.4**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	68.4	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	ND	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	4.63 ER	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**46.9**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

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Round No.	ESC		33	34	35	36	37	37	38	39	39	40
WELL ID			M2MW23	M2MW23	M2MW23	M2MW23	LF1[(1)]	LF1[(1)] Duplicate	M2MW23	M2MW23	MW23 Duplicate	M2MW23
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/30/2009	3/30/2009	6/19/2009	9/23/2009	9/23/2009	12/4/2009
ANALYTE/Lab ID			80087.16	80176.12	80309.06	80472.12	90133.08	90133.03	90249.10	90396.08	90396.03	90470.10
VOCs (µg/L)												
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	0.21 J	0.61 J	0.71 J	0.50 J	0.53 J	ND	0.44 J	0.48 J	ND
Chlorobenzene	47	NAV	2.76	3.89	28.37	18.25	18.20	18.49	ND	34.17	39.33	3.59
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	38	NAV	ND	ND	0.85 J	0.38 J	0.34 J	0.35 J	ND	0.78	0.88	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	2.68	1.24 J	1.09 J	1.07 J	ND	2.50	2.86	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.34 J	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	27	NAV	ND	ND	0.18 J	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	35	ND	ND	ND	ND	8	12	ND
SVOCs (µg/L)												
Acenaphthene	38	NAV	NA	NA	NA	NA	ND	0.7 J	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	0.7 J	NA	NA	NA	NA
2-Methylnaphthalene	330	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
N- Nitrosodiphenylamine	NAV	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	24	35	NA	NA	NA	NA
Pesticides/PCBs (µg/L)												
Aldrin	0.017	1.3	NA	NA	NA	NA	ND	**0.029**	NA	NA	NA	NA
alpha-BHC	12.4	NAV	NA	NA	NA	NA	0.028	0.029	NA	NA	NA	NA
beta-BHC	0.495	NAV	NA	NA	NA	NA	ND	0.034	NA	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	ND	**0.028**	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	ND	**0.028**	NA	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	**0.029**	**0.028**	NA	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	0.034	0.035	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	ND	**0.034**	NA	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	**0.046**	**0.051**	NA	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	ND	**0.028**	NA	NA	NA	NA
Endosulfan II	0.056	0.0087	NA	NA	NA	NA	ND	**0.028**	NA	NA	NA	NA
Endosulfan sulfate	2.22	NAV	NA	NA	NA	NA	ND	0.028	NA	NA	NA	NA
Endrin aldehyde	0.15	NAV	NA	NA	NA	NA	0.028	0.032	NA	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	0.069	0.073	NA	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	**0.036**	ND	NA	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.048**	**0.042**	NA	NA	NA	NA

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Round No.	ESC		33	34	35	36	37	37	38	39	39	40
WELL ID			M2MW23	M2MW23	M2MW23	M2MW23	LF1[(1)]	LF1[(1)] Duplicate	M2MW23	M2MW23	MW23 Duplicate	M2MW23
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/30/2009	3/30/2009	6/19/2009	9/23/2009	9/23/2009	12/4/2009
ANALYTE/Lab ID			80087.16	80176.12	80309.06	80472.12	90133.08	90133.03	90249.10	90396.08	90396.03	90470.10
Metals (µg/L)												
Antimony	80	NAV	NA	NA	NA	NA	26.3	22.1	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**93.9**	**74**	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	**227**	**235**	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	0.365 ER	0.598 ER	NA	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	**10.7**	**6.39**	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**84.2**	**96.7**	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA

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Round No.	ESC		33	34	35	36	37	38	39	40
WELL ID			M2MW24	M2MW24	M2MW24	M2MW24	LF1[(1)]	M2MW24	M2MW24	M2MW24
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/30/2009	6/19/2009	9/23/2009	12/4/2009
ANALYTE/Lab ID			80087.14	80176.13	80309.06	80472.13	90133.12	90249.11	90396.09	90470.11
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	2.24	1.82 J	1.59 J	2.65	1.68 J	1.36 J	1.27	1.92
Chlorobenzene	47	NAV	7.46	7.36	4.7	7.38	7.35	5.53	4.30	6.03
1,2-Dichlorobenzene	14	NAV	0.54 J	0.54 J	0.52 J	0.45 J	0.50 J	0.50 J	0.47 J	0.45 J
1,3-Dichlorobenzene	38	NAV	0.58 J	0.60 J	0.59 J	0.62 J	0.59 J	0.53 J	0.5	0.56
1,4-Dichlorobenzene	9.4	NAV	3.82	3.82	3.63	3.74	3.62	3.50	3.46	3.49
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	187	169	264	171	136	179	127	141
SVOCs (µg/L)										
Acenaphthene	38	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Benzyl alcohol	NAV	NAV	NA	NA	NA	NA	0.9 J	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Dibenzofuran	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,3-Dichlorobenzene	38	NAV	NA	NA	NA	NA	ND	NA	NA	NA
1,4-Dichlorobenzene	9.4	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Diethyl phthalate	110	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Fluorene	19	NAV	NA	NA	NA	NA	ND	NA	NA	NA
2-Methylnaphthalene	330	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Naphthalene	13	NAV	NA	NA	NA	NA	ND	NA	NA	NA
N- Nitrosodiphenylamine	NAV	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Phenanthrene	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	29	NA	NA	NA
Pesticides/PCBs (µg/L)										
alpha-BHC	12.4	NAV	NA	NA	NA	NA	0.031	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	**0.027**	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	0.036	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	**0.033**	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	ND	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	0.075	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	**0.059**	NA	NA	NA

See Notes at end of Table

Table C-1
Groundwater Sampling Results
Landfill M-2
Fort Monmouth, New Jersey
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Round No.	ESC		33	34	35	36	37	38	39	40
WELL ID			M2MW24	M2MW24	M2MW24	M2MW24	LF1[(1)]	M2MW24	M2MW24	M2MW24
Date Collected	FW-SW	SW-SW	3/17/2008	5/22/2008	8/27/2008	12/23/2008	3/30/2009	6/19/2009	9/23/2009	12/4/2009
ANALYTE/Lab ID			80087.14	80176.13	80309.06	80472.13	90133.12	90249.11	90396.09	90470.11
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	26.8	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	**71.9**	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	**279**	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	ND	NA	NA	NA
Cadmium	0.16	8.8	NA	NA	NA	NA	ND	NA	NA	NA
Chromium	22	50	NA	NA	NA	NA	0.346 ER	NA	NA	NA
Copper	7.8	3.1	NA	NA	NA	NA	ND	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	**11.9**	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	41	22	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	**76.0**	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	ND	NA	NA	NA

Notes:

Exceedances of freshwater surface water quality criteria are bold and shaded

Exceedances of saltwater surface water quality criteria are bold with a bold border

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NAV - No available value

NA - Not analyzed

ND - Not detected

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

PCB - Polychlorinated Biphenyl

SVOC - Semivolatile Organic Compound

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum hardness detected in adjacent creek during BEE sampling activities.

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		44	44	45	46	46	47	47	48	48	49	49
WELL ID			M3MW04	MW04 Duplicate	M3MW04	M3MW04	MW04 Duplicate	M3MW04	MW04 Duplicate	M3MW04	MW04 Duplicate	M3MW04	MW04 Duplicate
Date Collected	FW-SW	SW-SW	03/26/08	03/26/08	06/24/08	09/09/08	09/09/08	12/31/08	12/31/08	02/27/09	02/27/09	06/13/09	06/13/09
ANALYTE/Lab ID			80097.04	80097.03	80209.04	80325.04	80325.03	80485.04	80485.03	90080.04	90080.04	90236.04	90236.03
VOCs (ug/L)													
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m +*p* -xylenes	27	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		50	50	51	51
WELL ID			M3MW04	MW04 Duplicate	M3MW04	MW04 Duplicate
Date Collected	FW-SW	SW-SW	09/09/09	09/09/09	12/02/09	12/02/09
ANALYTE/Lab ID			90372.04	90372.03	90466.04	90466.03
VOCs (ug/L)						
tert -Butyl alcohol	35500	NAV				
Vinyl chloride	930	NAV				
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND
m +*p* -xylenes	27	NAV	ND	ND	ND	ND
o- xylene	27	NAV	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		44	45	45	46	47	48	49	50	51
WELL ID			M3MW05	M3MW05	MW05 Duplicate	M3MW05	M3MW05	M3MW05	M3MW05	M3MW05	M3MW05
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.05	80209.05	80209.03	80325.05	80485.05	90080.05	90236.05	90372.05	90466.05
VOCs (ug/L)											
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	14	NAV	ND	0.47 J	0.45 J	ND	ND	ND	ND	0.56	0.39 J
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND	ND		
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND	ND		
1,4-Dichlorobenzene	NAV	NAV	ND	0.88 J	0.93 J	0.41 J	ND	0.63 J	0.40 J	0.97	0.77
Carbon Tetrachloride	9.4	NAV	2.29	ND	ND	2.86	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND		
Benzene	114	NAV	ND	0.35 J	0.35 J	ND	ND	0.21 J	0.20 J	0.34 J	0.31 J
m +*p* -xylenes	27	NAV	ND	ND	ND	ND	ND	ND	ND		
Chlorobenzene	47	NAV	0.95 J	6.97	7.29	2.29	1.88 J	6.01	3.79	8.10	5.39
Total xylenes	27	NAV	ND	0.16 J	0.18 J	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	27	27	25	ND	29	15	31	22

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		44	45	46	47	48	49	50	51
WELL ID			M3MW06	M3MW06	M3MW06	M3MW06	M3MW06	M3MW06	M3MW06	M3MW06
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.06	80209.06	80325.06	80485.06	90080.06	90236.06	90372.06	90466.06
VOCs (ug/L)										
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
m +p -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND		
Chlorobenzene	47	NAV	0.29 J	0.59 J	0.90 J	ND	0.80 J	ND	1.12	0.63
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	ND	ND
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		40	41	42	43	44	45	46	47
WELL ID			M3MW07	M3MW07	M3MW07	M3MW07	M3MW07	M3MW07	M3MW07	M3MW07
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.07	80209.07	80325.07	80485.07	90080.07	90236.07	90372.07	90466.07
VOCs (ug/L)										
Benzene	114	NAV	ND	0.19 J	0.22 J	ND	0.35 J	0.21 J	0.19 J	ND
cis -1,2-Dichloroethene	NAV	NAV	33.77	21.93	28.31	47.87	72.51	36.09	22.28	5.98
tert -Butyl alcohol	35500	NAV	ND	6.16 J	14.19	ND	ND	ND	ND	ND
trans -1,2-Dichloroethene	970	NAV	0.34 J	0.32 J	0.53 J	ND	0.70 J	0.34 J	0.34 J	ND
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	10.69	6.45	10.92	29.60	35.77	15.04	11.57	1.98
Toluene	253	NAV	ND	ND	ND	ND	ND	ND		
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND	ND		
m +p -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND		
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND		
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M3MW08	M3MW08	M3MW08	M3MW08	M3MW08	M3MW08	M3MW08	M3MW08
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.08	80209.08	80325.08	80485.08	90080.08	90236.08	90372.08	90466.08
VOCs (ug/L)										
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND		
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND		
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND		ND
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND		ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND		
Chlorobenzene	47	NAV	0.25 J	0.22 J	0.40 J	0.97 J	1.08 J	1.06 J	0.50 J	0.82
m +p -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND		ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	0.63 J	0.38 J	0.54 J	0.26 J	0.65
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M3MW09	M3MW09	M3MW09	M3MW09	M3MW09	M3MW09	M3MW09	M3MW09
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.09	80209.09	80325.09	80485.09	90080.09	90236.09	90372.09	90466.09
VOCs (ug/L)										
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND		
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND		
Toluene	253	NAV	ND	ND	ND	ND	ND	ND		ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
m +*p* -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		ND
Chlorobenzene	47	NAV	11.88	11.81	11.25	10.82	10.05	10.01	12.38	10.78
1,2-Dichlorobenzene	14	NAV	0.64 J	0.72 J	0.46 J	0.45 J	0.47 J	0.59 J	0.71	0.71
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND		
1,4-Dichlorobenzene	9.4	NAV	1.47 J	1.83 J	1.28 J	1.02 J	0.74 J	1.23 J	1.53	1.86
Total xylenes	27	NAV	ND	ND	0.18 J	ND	ND	ND	ND	ND
TICs	NAV	NAV	4	4	69	ND	ND	4	4	4

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M3MW10	M3MW10	M3MW10	M3MW10	M3MW10	M3MW10	M3MW10	M3MW10
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.10	80209.10	80325.10	80485.10	90080.10	90236.10	90372.10	90466.10
VOCs (ug/L)										
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND		
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND		ND
Benzene	114	NAV	0.19 J	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	10.62	7.98	6.70	12.00	10.98	6.11	9.25	11.03
m +*p* -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	14	NAV	0.40 J	ND	0.45 J	0.42 J	0.42 J	ND	0.35 J	0.43 J
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND		
1,4-Dichlorobenzene	9.4	NAV	1.14 J	0.88 J	1.08 J	1.29 J	1.00 J	0.72 J	0.98	1.29
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	38	14	6	18	24	15	22	23

See Notes at end of Table

Table C-2
Groundwater Sampling Results
Landfill M-3
Fort Monmouth, New Jersey
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M3MW11	M3MW11	M3MW11	M3MW11	M3MW11	M3MW11	M3MW11	M3MW11
Date Collected	FW-SW	SW-SW	03/26/08	06/24/08	09/09/08	12/31/08	02/27/09	06/13/09	09/09/09	12/02/09
ANALYTE/Lab ID			80097.11	80209.11	80325.11	80485.11	90080.11	90236.11	90372.11	90466.11
VOCs (ug/L)										
tert -Butyl alcohol	35500	NAV	ND	ND	ND	ND	ND	ND		
Vinyl chloride	930	NAV	ND	ND	ND	ND	ND	ND		
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	240	NAV	ND	ND	ND	ND	ND	ND		ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND		ND
Chlorobenzene	47	NAV	2.03	3.09	3.73	1.34 J	2.24	1.18 J	3.99	3.38
m +*p* -xylenes	27	NAV	ND	ND	ND	ND	ND	ND		
o- xylene	27	NAV	ND	ND	ND	ND	ND	ND		
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	0.27 J	ND
trans -1,2-Dichloroethene	970	NAV	ND	ND	ND	ND	ND	ND		ND
1,4-Dichlorobenzene	9.4	NAV	0.61 J	1.17 J	1.34 J	0.67 J	0.72 J	0.39 J	0.86	1.31
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	0.21 J	ND
TICs	NAV	NAV	4	4	40	ND	ND	ND	19	13

Notes:

J - Estimated concentration is greater than the MDL and less than the RL.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

NAV - No Available Value

ND - Analyte not detected in sample.

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Table C-3
Groundwater Sampling Results
Landfill M-4
Fort Monmouth, New Jersey
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Round No.	ESC		46	46	47	47	48	49	50	51	51	52	52
WELL ID			M4MW07	MW07 Duplicate	M4MW07	MW07 Duplicate	M4MW07	M4MW07	M4MW07	M4MW07	MW07 Duplicate	M4MW07	MW07 Duplicate
Date Collected	FW-SW	SW-SW	1/8/2008	1/8/2008	4/3/2008	4/3/2008	7/10/2008	10/10/2008	3/12/2009	5/20/2009	5/20/2009	7/20/2009	7/20/2009
ANALYTE / Lab ID			80010.03	80010.02	80110.03	80110.02	80228.03	80361.03	90105.03	90207.03	90207.02	90303.03	90303.02
Metals (µg/L)													
Antimony	80	NAV	ND	ND	ND	ND	ND	ND	5.24 ER	2.88 ER	1.30 ER	5.21 ER	ND
Arsenic	150	36	ND	ND	ND	ND	ND	ND	9.05	7.36	5.37	5.28	14.8
Barium	220	NAV	19.5	20.9	12.4	11.4	79.9	68.5	15.7	27.2	29.1	48.4	50.9
Beryllium	3.6	NAV	0.326 ER	0.329 ER	0.134 ER	0.122 ER	0.604	0.597	ND	0.150 ER	0.154 ER	0.377 ER	0.350 ER
Cadmium	0.18	8.8	**0.471 ER**	**0.678 ER**	ND	ND	**1.30 ER**	**0.278 ER**	ND	ND	ND	**0.906 ER**	**0.519 ER**
Chromium	24	50	ND	ND	ND	ND	0.521 ER	2.56 ER	0.495 ER	1.79 ER	1.26 ER	ND	ND
Copper	8.5	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	ND	ND	ND	4.46 ER	2.50 ER	2.39 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06 ER	0.08 ER
Nickel	44	22	3.91 ER	3.76 ER	1.80 ER	1.79 ER	9.15	7.35	1.28 ER	3.96 ER	4.29 ER	7.86	7.50
Selenium	5	71	ND	**5.43 ER**	ND	ND	**8.64 ER**	3.68 ER	32.1	ND	4.35 ER	**21.1**	**28.8**

See Notes at end of Table

Table C-3
Groundwater Sampling Results
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Round No.	ESC		53	53	54	54	55
WELL ID			M4MW07	MW07 Duplicate	M4MW07	MW07 Duplicate	LF3[1]
Date Collected	FW-SW	SW-SW	11/4/2009	11/4/2009	1/6/2010	1/6/2010	4/6/2010
ANALYTE / Lab ID			90436.03	90436.02	10005.03	10005.02	10124.04
Metals (µg/L)							
Antimony	80	NAV	ND	ND	ND	7.58 ER	11.6
Arsenic	150	36	0.68 ER	ND	ND	ND	ND
Barium	220	NAV	54.8	54.1	23.4	24.1	32.0
Beryllium	3.6	NAV	0.290 ER	0.285 ER	0.117 ER	0.108 ER	ND
Cadmium	0.18	8.8	ND	ND	ND	ND	ND
Chromium	24	50	ND	ND	ND	ND	ND
Copper	8.5	3.1	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND
Nickel	44	22	8.44	8.44	5.17	5.45	ND
Selenium	5	71	**8.37 ER**	ND	ND	ND	**45.9**

See Notes at end of Table

Table C-3
Groundwater Sampling Results
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Round No.	ESC		46	47	48	49	49	50	51	52	53	54	55
WELL ID			M4MW08	M4MW08	M4MW08	M4MW08	MW08 Duplicate	M4MW08	M4MW08	M4MW08	M4MW08	M4MW08	LF3[1]
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/10/2008	10/10/2008	3/12/2009	5/20/2009	7/20/2009	11/4/2009	1/6/2010	4/6/2010
ANALYTE / Lab ID			80010.04	80110.04	80228.04	80361.04	80361.02	90105.04	90207.04	90303.04	90436.04	10005.04	10124.05
Metals (µg/L)													
Antimony	80	NAV	48.8	20.7	1.73 ER	4.10 ER	10.2	18.7	2.28 ER	ND	ND	4.94 ER	ND
Arsenic	150	36	ND	ND	ND	ND	ND	**109.0**	20.2	24.8	4.36 ER	1.09 ER	1.11 ER
Barium	220	NAV	81.1	65.6	150.0	98.0	207.0	90.7	77.8	79.6	**883**	42.3	12.4
Beryllium	3.6	NAV	0.171 ER	ND	ND	0.272 ER	0.591	ND	ND	ND	0.151 ER	ND	ND
Cadmium	0.18	8.8	**0.508 ER**	**0.917 ER**	**1.78 ER**	ND	**0.204 ER**	ND	ND	**0.914 ER**	**9.23**	ND	ND
Chromium	24	50	ND	ND	ND	1.54 ER	5.56	0.320 ER	ND	ND	20.5	ND	ND
Copper	8.5	3.1	ND	ND	ND	ND	**3.16 ER**	ND	ND	ND	ND	ND	1.07 ER
Lead	5.4	24	ND	ND	ND	ND	ND	3.62 ER	2.58 ER	ND	**31.10**	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	0.07 ER	ND	ND	ND
Nickel	44	22	ND	ND	ND	ND	ND	ND	ND	1.32 ER	ND	3.05 ER	2.19 ER
Selenium	5	71	ND	ND	**7.43 ER**	ND	ND	**84.5**	**3.55 ER**	**13.3**	ND	ND	ND

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		46	47	48	49	50	50	51	52	53	54	55
WELL ID			M4MW09	M4MW09	M4MW09	M4MW09	M4MW09	MW09 Duplicate	M4MW09	M4MW09	M4MW09	M4MW09	LF3[1]
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/10/2008	3/12/2009	3/12/2009	5/20/2009	7/20/2009	11/4/2009	1/6/2010	4/6/2010
ANALYTE / Lab ID			80010.05	80110.05	80228.05	80361.05	90105.05	90105.02	90207.05	90303.05	90436.05	10005.05	10124.03
Metals (µg/L)													
Antimony	80	NAV	ND	ND	ND	ND	15.0	12.0	3.71 ER	ND	ND	ND	11.6
Arsenic	150	36	ND	ND	ND	ND	**96.0**	**92.0**	18.9	20.8	ND	ND	3.61 ER
Barium	220	NAV	62.4	50.7	37.2	65.9	63.5	67.3	44.4	63.0	44.0	60.2	18.8
Beryllium	3.6	NAV	0.196 ER	ND	ND	0.188 ER	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.18	8.8	**0.343 ER**	ND	**0.270 ER**	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	24	50	ND	ND	ND	0.561 ER	0.90 ER	ND	ND	ND	ND	ND	ND
Copper	8.5	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.30 ER
Lead	5.4	24	ND	ND	ND	ND	5.0 ER	**6.81**	2.02 ER	ND	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	44	22	ND	ND	ND	ND	ND	ND	0.993 ER	2.75 ER	0.524 ER	1.21 ER	1.71 ER
Selenium	5	71	ND	ND	**7.62 ER**	ND	**87.0**	**73.3**	4.73 ER	**26.2**	**17.7 ER**	ND	**68.0**
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	2.02 ER	ND	ND	ND	ND

See Notes at end of Table

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Round No.	ESC		55
WELL ID			LF3[(1)] Duplicate
Date Collected	FW-SW	SW-SW	4/6/2010
ANALYTE / Lab ID			10124.02
Metals (µg/L)			
Antimony	80	NAV	8.16 ER
Arsenic	150	36	ND
Barium	220	NAV	34.2
Beryllium	3.6	NAV	ND
Cadmium	0.18	8.8	ND
Chromium	24	50	ND
Copper	8.5	3.1	ND
Lead	5.4	24	ND
Mercury	0.77	0.94	ND
Nickel	44	22	0.672 ER
Selenium	5	71	**55.4**
Thallium	10	NAV	ND

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		35	36	37	38	39	40	52	53	54	55
WELL ID			M4MW10	M4MW10	M4MW10	M4MW10	M4MW10	M4MW10	M4MW10	M4MW10	M4MW10	LF3[(1)]
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/10/2008	3/12/2009	5/20/2009	7/21/2009	11/4/2009	1/6/2010	4/6/2010
ANALYTE / Lab ID			80010.06	80110.06	80228.06	80361.06	90105.06	90207.05	90303.06	90436.06	10005.06	10124.06
Metals (µg/L)												
Antimony	80	NAV	ND	ND	ND	2.52 ER	15.4	2.00 ER	ND	ND	ND	7.30 ER
Arsenic	150	36	ND	5.11	ND	ND	**61.5**	17.6	17.7	ND	1.40 ER	0.83 ER
Barium	220	NAV	**1330.0**	**346.0**	129.0	88.7	**410.0**	190.0	112.0	109.0	114.0	41.8
Beryllium	3.6	NAV	2.65	0.472 ER	0.398 ER	0.342 ER	0.433 ER	0.320 ER	0.096 ER	ND	ND	ND
Cadmium	0.18	8.8	**5.74**	**5.9**	**2.9**	ND	ND	ND	**1.22 ER**	ND	ND	ND
Chromium	24	50	0.529 ER	ND	ND	ND	0.833 ER	ND	ND	ND	ND	ND
Copper	8.5	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34 ER
Lead	5.4	24	ND	4.53 ER	2.13 ER	ND	**11.6**	1.78 ER	ND	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	44	22	ND	0.309 ER	ND	ND	ND	ND	1.27 ER	ND	4.32 ER	3.54 ER
Selenium	5	71	ND	ND	ND	ND	**52.7**	4.61 ER	ND	ND	ND	**57.3**

Notes:

Exceedances of freshwater surface water quality criteria are bold and shaded.

[(1)] Low Flow sampling method used to collect sample

µg/L - micrograms per liter

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

B - Compound detected in the sample and its associated blank sample .

ER - Estimated Result

NAV - No Available Value

ND - Analyte not detected in sample.

Sampling for VOCs, SVOCs, and Pesticides/PCBs were discontinued

after the 10/7/04 sampling event as per NJDEP approval dated (November 2004)

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Groundwater Sampling Results
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Round	ESC		46	46	47	47
WELL ID			M5MW10	MW10 Duplicate	M5MW10	MW10 Duplicate
Date Collected	FW-SW	SW-SW	3/11/2008	3/11/2008	6/3/2008	6/3/2008
ANALYTE / Lab ID			80077.04	80077.03	80185.04	80185.03
VOCs (µg/L)						
Acetone	NAV	NAV	ND	NA	ND	ND
Bromoform	230	NAV	ND	NA	ND	ND
2-Butanone	NAV	NAV	ND	NA	ND	ND
Methylene chloride	940	NAV	ND	NA	ND	ND
Toluene	253	NAV	ND	NA	ND	ND
TICs	NAV	NAV	ND	NA	ND	ND
SVOCs (µg/L)						
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA
Pest/PCBs (µg/L)						
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA
Metals (µg/L)						
Antimony	80	NAV	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		48	48	49	49	50	51	52	53
WELL ID			M5MW10	MW10 Duplicate	M5MW10	MW10 Duplicate	M5MW10	M5MW10	M5MW10	M5MW10
Date Collected	FW-SW	SW-SW	8/25/2008	8/25/2008	11/10/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80306.04	80306.03	80404.04	80404.03	90077.04	90235.04	90390.04	90490.04
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	230	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	0.65 J	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Pest/PCBs (µg/L)										
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		45	46	47	48	49	49	50	51	52
WELL ID			M5MW11	M5MW11	M5MW11	M5MW11	M5MW11	MW11 Duplicate	M5MW11	M5MW11	M5MW11
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.05	80185.05	80306.05	80404.05	90077.04	90077.03	90235.05	90390.05	90490.05
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	0.4 J	0.53 J	8.4	6.93	1.55 J	1.28 J	2.60	11.56	1.62
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl *tert*- butyl ether	51000	18000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	2.02	2.93	ND	2.47	0.94	1.16 J	2.74	1.00	1.73
Trichloroethene	47	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)											
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pest/PCBs (µg/L)											
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Round	ESC		38	39	40	41	42	43	43	44	45
WELL ID			M5MW12	M5MW12	M5MW12	M5MW12	M5MW12	M5MW12	MW12 Duplicate	M5MW12	M5MW12
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.06	80185.06	80306.06	80404.06	90077.06	90235.06	90235.03	90390.06	90490.06
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)											
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Round	ESC		42	43	44	45	46	47	48	49
WELL ID			M5MW13	M5MW13	M5MW13	M5MW13	M5MW13	M5MW13	M5MW13	M5MW13
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.07	80185.07	80306.07	80404.07	90077.07	90235.07	90390.07	90490.07
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Pest/PCBs (µg/L)										
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Round	ESC		41	42	43	44	45	46	47	47	48
WELL ID			M5MW14	M5MW14	M5MW14	M5MW14	M5MW14	M5MW14	M5MW14	MW14 Duplicate	M5MW14
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.08	80185.08	80306.08	80404.08	90077.08	90235.08	90390.08	90390.03	90490.08
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)											
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		38	39	40	41	42	43	44	45
WELL ID			M5MW16	M5MW16	M5MW16	M5MW16	M5MW16	M5MW16	M5MW16	M5MW16
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.09	80185.09	80306.09	80404.09	90077.09	90235.09	90390.09	90490.09
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	8.48	3.23	13.2	4.23	14.93	5.14	1.87	2.52
Tetrachloroethene	45	NAV	6.93	4.42	5.92	4.43	1.75 J	2.99	1.95	4.90
Trichloroethene	47	NAV	0.74 J	0.75 J	1.99 J	1.36 J	1.58 J	0.50 J	ND	ND
Vinyl chloride	930	NAV	ND	ND	1.2 J	ND	1.28 J	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		38	39	40	41	42	43	44	45	45
WELL ID			M5MW18	M5MW18	M5MW18	M5MW18	M5MW18	M5MW18	M5MW18	M5MW18	MW18 Duplicate
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009	12/28/2009
ANALYTE / Lab ID			80077.10	80185.10	80306.10	80404.10	90077.10	90235.10	90390.10	90490.10	90490.03
VOCs (µg/L)											
Tetrachloroethene	45	45	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)											
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pest/PCBs (µg/L)											
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		38	39	40	41	42	43	44	45
WELL ID			M5MW19	M5MW19	M5MW19	M5MW19	M5MW19	M5MW19	M5MW19	M5MW19
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.11	80185.11	80306.11	80404.11	90077.11	90235.11	90390.11	90490.11
VOCs (µg/L)										
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	1.25 J	1.11 J	0.57 J	8.5	2.96	5.05	1.75	1.40
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	0.58 J	ND	0.75 J	2.01	3.03	3.17	ND	0.44 J
Trichloroethene	47	NAV	1.34 J	ND	0.33 J	3.68	2.9	0.51 J	ND	0.88
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		38	39	40	41	42	43	44	45
WELL ID			M5MW20	M5MW20	M5MW20	M5MW20	M5MW20	M5MW20	M5MW20	M5MW20
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.12	80185.12	80306.12	80404.12	90077.12	90235.12	90390.12	90490.12
VOCs (µg/L)										
Acetone	NAV	NAV	2.15	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	3.71	21.55	6.61	20.33	2.91	13.16	1.44
Tetrachloroethene	45	NAV	0.95 J	1.28 J	2.41	2.19	2.13	1.86 J	1.73	0.96
Trichloroethene	47	NAV	ND	0.55 J	1.65 J	0.70 J	3.59	0.70 J	1.70	0.30 J
TICs	NAV	NAV	4	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Pest/PCBs (µg/L)										
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	68	22	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round	ESC		38	39	40	41	42	43	44	45
WELL ID			M5MW23	M5MW23	M5MW23	M5MW23	M5MW23	M5MW23	M5MW23	M5MW23
Date Collected	FW-SW	SW-SW	3/11/2008	6/3/2008	8/25/2008	11/10/2008	2/26/2009	6/12/2009	9/18/2009	12/28/2009
ANALYTE / Lab ID			80077.13	80185.13	80306.13	80404.13	90077.13	90235.13	90390.13	90490.13
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	0.29 J	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	1.86 J	4.5	2.74	3.34	29.15	8.26	3.94	1.76
Trichloroethene	47	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	150	36	NA	NA	NA	NA	NA	NA	NA	NA
Barium	220	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3.6	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	0.26	8.8	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	36	50	NA	NA	NA	NA	NA	NA	NA	NA
Copper	13.1	3.1	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.4	24	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.77	0.94	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	5	71	NA	NA	NA	NA	NA	NA	NA	NA
Silver	0.12	1.9	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	10	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	175	81	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

J - Estimated concentration is greater than the MDL and less than the RL.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

NA - Not Analyzed

NAV - No Available Value

ND - Not Detected

SVOC - Semivolatile Organic Compound

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Table C-5
Groundwater Sampling Results
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Round No.	ESC		44	44	45	46	46	47	47
WELL ID			M8MW12	MW12 Duplicate	M8MW12	M8MW12	MW12 Duplicate	M8MW12	MW12 Duplicate
Date Collected	FW-SW	SW-SW	3/13/2008	3/13/2008	6/5/2008	9/4/2008	9/4/2008	11/21/2008	11/21/2008
ANALYTE / Lab ID			80083.04	80083.03	80193.04	80315.04	80315.03	80430.04	80430.03
VOCs (µg/L)									
2-Butanone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND
Bromodichloromethane	NAV	NAV	ND	NA	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	NA	ND	ND	ND	ND	ND
Dibromochloromethane	NAV	NAV	ND	NA	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	NA	ND	2.79	2.63	5.0	4.88
Methylene chloride	940	NAV	ND	NA	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	NA	0.71 J	2.34	2.67	9.83	9.75
Toluene	253	NAV	ND	NA	ND	ND	ND	ND	ND
Trichloroethene	47	NAV	ND	NA	ND	0.52 J	0.59 J	5.12	5.06
TICs	NAV	NAV	ND	NA	ND	ND	ND	ND	ND
Pesticides/PCBs (µg/L)									
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	NA	NA	NA

See Notes at end of Table

Table C-5
Groundwater Sampling Results
Landfill M-8
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Round No.	ESC		48	49	50	51	52
WELL ID			M8MW12	M8MW12	M8MW12	M8MW12	M8MW12
Date Collected	FW-SW	SW-SW	2/9/2009	2/23/2009	6/27/2009	9/21/2009	12/10/2009
ANALYTE / Lab ID			90041.04	90068.04	90267.04	90391.04	90478.04
VOCs (µg/L)							
2-Butanone	NAV	NAV	NA	ND	ND	ND	ND
Acetone	NAV	NAV	NA	ND	ND	ND	ND
Bromodichloromethane	NAV	NAV	NA	ND	2.06	ND	ND
Chlorobenzene	47	NAV	NA	ND	ND	ND	ND
Dibromochloromethane	NAV	NAV	NA	ND	0.28 J	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	NA	0.85 J	ND	0.38 J	ND
Methylene chloride	940	NAV	NA	ND	ND	ND	ND
Tetrachloroethene	45	NAV	NA	4.3	0.49 J	1.55	0.58
Toluene	253	NAV	NA	ND	ND	ND	ND
Trichloroethene	47	NAV	NA	2.13	ND	0.57	ND
TICs	NAV	NAV	NA	ND	ND	ND	ND
Pesticides/PCBs (µg/L)							
4,4'-DDD	NAV	NAV	ND	ND	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	ND	ND	NA	NA	NA
Methoxychlor	0.03	0.03	ND	**0.044**	NA	NA	NA

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		44	45	45	46	47	48	49	50	51
WELL ID			M8MW13	M8MW13	MW13 Duplicate	M8MW13	M8MW13	M8MW13	M8MW13	M8MW13	M8MW13
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80083.05	80193.05	80193.03	80315.05	80430.05	90068.05	90267.05	90391.05	90474.07
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		44	44	45	46	47	48	49	50	50
WELL ID			M8MW14	M8MW14	M8MW14	M8MW14	M8MW14	M8MW14	M8MW14	M8MW14	MW14 Duplicate
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/10/2009	12/10/2009
ANALYTE / Lab ID			80083.06	80193.06	80315.06	80430.06	90068.06	90267.06	90391.06	90478.05	90478.03
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	5.68	10.79	13.87	ND	ND	7.04 J	ND	ND	ND
Chlorobenzene	47	NAV	9.58	9.68	6.30	3.84	5.89	8.04	6.16	6.49	6.73
1,4-Dichlorobenzene	9.4	NAV	2.34	2.64	1.77 J	1.14 J	1.51 J	2.20	1.76	2.00	2.11
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	9	7	21	ND	3	6	4	4	4

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		44	44	45	45	46	46	47	48	49	50	51
WELL ID			M8MW15	MW15 Duplicate	M8MW15	MW15 Duplicate	M8MW15	MW15 Duplicate	M8MW15	M8MW15	M8MW15	M8MW15	M8MW15
Date Collected	FW-SW	SW-SW	3/14/2008	3/14/2008	6/11/2008	6/11/2008	9/5/2008	9/5/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/10/2009
ANALYTE / Lab ID			80086.04	80086.04	80197.04	80197.03	80319.04	80319.03	80430.07	90068.07	90267.07	90391.07	90478.06
VOCs (µg/L)													
Acetone	NAV	NAV	ND	NA	ND	1.32 J	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	0.31 J	NA	0.61 J	0.61 J	0.19 J	0.19 J	ND	ND	0.87 J	0.62	0.87
2-Butanone	NAV	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	ND	NA	12.36	13.59	13.53	15.41	ND	ND	9.57 J	ND	ND
Chlorobenzene	47	NAV	13.20	NA	23.73	23.54	26.76	26.33	12.04	9.02	30.46	35.16	32.09
1,2-Dichlorobenzene	14	NAV	1.02 J	NA	1.48 J	1.46 J	1.94 J	1.86 J	0.68 J	0.77 J	1.12 J	1.67	1.42
1,3-Dichlorobenzene	38	NAV	1.50 J	NA	2.33	2.16	2.69	2.63	1.02 J	1.05 J	1.98 J	2.67	2.22
1,4-Dichlorobenzene	9.4	NAV	2.95	NA	4.59	4.60	5.44	5.29	2.10	2.02	4.43	5.93	4.76
Toluene	253	NAV	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	27	NAV	ND	NA	0.19 J	0.19 J	0.57 J	0.56 J	ND	ND	0.21	0.66 J	0.67 J
TICs	NAV	NAV	23	NA	25	25	74	76	13	9	43	51	62

See Notes at end of Table

Table C-5
Groundwater Sampling Results
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Round No.	ESC		40	41	42	43	44	45	46	47
WELL ID			M8MW16	M8MW16	M8MW16	M8MW16	M8MW16	M8MW16	M8MW16	M8MW16
Date Collected	FW-SW	SW-SW	3/14/2008	6/11/2008	9/5/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/10/2009
ANALYTE / Lab ID			80086.05	80197.05	80319.05	80430.08	90068.08	90267.08	90391.08	90478.07
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	0.70 J	1.13 J	0.68 J	0.54 J	1.27 J	1.32 J	0.47 J	ND
Chlorobenzene	47	NAV	9.83	20.32	24.78	18.26	25.26	25.42	20.03	0.39 J
1,2-Dichlorobenzene	14	NAV	ND	ND	0.51 J	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	38	NAV	ND	0.58 J	0.99 J	0.57 J	0.43 J	0.54 J	0.53	ND
1,4-Dichlorobenzene	9.4	NAV	0.82 J	2.18	3.42	2.15	1.74 J	2.46	2.33	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	3	16	ND	ND	4	3	ND

See Notes at end of Table

Table C-5
Groundwater Sampling Results
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Round No.	ESC		40	41	42	43	44	45	45	46	46	47	47
WELL ID			M8MW17	M8MW17	M8MW17	M8MW17	M8MW17	M8MW17	MW17 Duplicate	M8MW17	MW17 Duplicate	M8MW17	MW17 Duplicate
Date Collected	FW-SW	SW-SW	3/14/2008	6/11/2008	9/5/2008	11/21/2008	2/23/2009	6/27/2009	6/27/2009	9/21/2009	9/21/2009	12/8/2009	12/8/2009
ANALYTE / Lab ID			80086.06	80197.06	80319.06	80430.09	90068.09	90267.09	90267.03	90391.09	90391.03	90474.04	90474.03
VOCs (µg/L)													
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	0.30 J	2.62	ND	ND	0.40 J	0.30 J	0.17 J	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	0.67 J	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	12	42	4	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M8MW18	M8MW18	M8MW18	M8MW18	M8MW18	M8MW18	M8MW18	M8MW18
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/10/2009
ANALYTE / Lab ID			80083.07	80193.07	80315.07	80430.10	90068.10	60267.10	90391.10	90478.08
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	11.39	6.95	13.34	8.59	13.26	7.85	11.99	0.37 J
1,2-Dichlorobenzene	14	NAV	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	2.42	1.87 J	4.73	2.02	3.39	1.07 J	3.15	ND
TICs	NAV	NAV	9.5	ND	24	4	4	13	7	ND

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M8MW19	M8MW19	M8MW19	M8MW19	M8MW19	M8MW19	M8MW19	M8MW19
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80083.08	80193.08	80315.08	80430.11	90068.11	60267.11	90391.11	90474.08
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	ND	8.86	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	14	8	10	5	ND	9	11	11

See Notes at end of Table

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Groundwater Sampling Results
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M8MW20	M8MW20	M8MW20	M8MW20	M8MW20	M8MW20	M8MW20	M8MW20
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80083.09	80193.09	80315.09	80430.12	90068.12	90267.12	90391.12	90474.09
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	1.57 J	0.30 J	2.12	1.39 J	1.83 J	1.35 J	1.45	1.06
TICs	NAV	NAV	ND	ND	4	ND	ND	ND	ND	ND

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Groundwater Sampling Results
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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M8MW21	M8MW21	M8MW21	M8MW21	M8MW21	M8MW21	M8MW21	M8MW21
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80083.10	80193.10	80315.10	80430.13	90068.13	90267.13	90391.13	90474.06
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Round No.	ESC		39	40	41	42	43	44	45	46
WELL ID			M8MW22	M8MW22	M8MW22	M8MW22	M8MW22	M8MW22	M8MW22	M8MW22
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/4/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80083.11	80193.11	80315.11	80430.14	90068.14	90267.14	90391.14	90474.05
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	0.36 J	0.27 J	0.31 J	ND	ND	0.24 J	ND	0.21 J
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Round No.	ESC		37	38	39	40	41	44	45	46
WELL ID			M8MW23	M8MW23	M8MW23	M8MW23	M8MW23	M8MW23	M8MW23	M8MW23
Date Collected	FW-SW	SW-SW	3/13/2008	6/5/2008	9/5/2008	11/21/2008	2/23/2009	6/27/2009	9/21/2009	12/10/2009
ANALYTE / Lab ID			80083.12	80193.12	80319.07	80430.15	90068.15	90267.15	90391.15	90478.09
VOCs (µg/L)										
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	0.33 J	ND	11.67	5.60	2.09	ND	6.48	1.11
Tetrachloroethene	45	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	0.30 J	ND
Trichloroethene	47	NAV	ND	ND	ND	ND	2.06	ND	ND	0.19 J
Vinyl chloride	930	NAV	ND	ND	2.73	0.79 J	ND	ND	0.71	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

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Groundwater Sampling Results
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Round No.	ESC		36	37	38	39	40	41	42	43	44
WELL ID			M8MW24	M8MW24	M8MW24	M8MW24	M8MW24	M8MW24	M8MW24	M8MW24	M8MW24
Date Collected	FW-SW	SW-SW	3/14/2008	6/5/2008	9/5/2008	11/21/2008	2/9/2009	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80086.07	80193.13	80319.08	80430.16	90041.05	90068.16	90267.16	90391.16	90474.10
VOCs (µg/L)											
Benzene	114	NAV	0.74 J	ND	0.24 J	ND	NA	ND	0.26 J	0.22 J	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	NA	ND	ND	ND	ND
Chlorobenzene	47	NAV	5.08	2.35	3.68	2.30	NA	3.31	4.03	3.98	2.68
Chloroform	140	NAV	ND	ND	ND	ND	NA	ND	ND	ND	ND
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	0.31 J	ND	NA	ND	ND	ND	ND
1,3-Dichlorobenzene	38	NAV	0.30 J	ND	0.33 J	ND	NA	ND	ND	ND	ND
1,4-Dichlorobenzene	9.4	NAV	1.03 J	0.53 J	1.04 J	0.53 J	NA	0.58 J	0.80 J	0.83	0.70
Ethylbenzene	14	NAV	ND	ND	ND	ND	NA	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	NA	ND	ND	ND	ND
Total Xylenes	27	NAV	ND	ND	ND	ND	NA	ND	ND	ND	ND
TICs	NAV	NAV	8	ND	17	4	NA	4	5	6	ND
Pesticides/PCBs (µg/L)											
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	ND	**0.043**	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	ND	**0.156**	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	ND	**0.049**	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	ND	**0.021**	NA	NA	NA
Endrin	0.036	0.0023	NA	NA	NA	NA	ND	**0.026**	NA	NA	NA
Endrin aldehyde	0.15	NAV	NA	NA	NA	NA	ND	0.056	NA	NA	NA
Endrin ketone	NAV	NAV	NA	NA	NA	NA	ND	0.055	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	ND	**0.15**	NA	NA	NA

See Notes at end of Table

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Round No.	ESC		44	45	46	47	48	48	49	50	51
WELL ID			697MW01	697MW01	697MW01	697MW01	697MW01	MW01 Duplicate	697MW01	697MW01	697MW01
Date Collected	FW-SW	SW-SW	3/14/2008	6/5/2008	9/5/2008	11/21/2008	2/23/2009	2/23/2009	6/27/2009	9/21/2009	12/8/2009
ANALYTE / Lab ID			80086.08	80193.14	80319.09	80430.17	90068.17	90068.03	90267.17	90391.17	90478.10
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	0.42 J	ND	ND	ND	ND	ND	0.22 J	ND	0.26 J
cis -1,2-Dichloroethene	NAV	NAV	ND	ND	0.39 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	0.86 J	1.01 J	1.15 J	1.44 J	1.16 J	1.19 J	0.98 J	1.85 J	1.71
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides/PCBs (µg/L)											
alpha-BHC	12.4	NAV	NA	NA	NA	NA	ND	ND	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	**0.628**	**0.540**	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	**0.461**	**0.512**	NA	NA	NA
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	1.280	1.370	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	ND	**0.048**	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	ND	**0.301**	NA	NA	NA
Dieldrin	0.056	0.0019	NA	NA	NA	NA	ND	**0.055**	NA	NA	NA
Heptachlor	0.0038	0.0036	NA	NA	NA	NA	ND	**0.071**	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	ND	ND	NA	NA	NA
Methoxychlor	0.03	0.03	NA	NA	NA	NA	ND	**0.035**	NA	NA	NA

Notes:

Exceedances of freshwater surface water quality criteria are boldand shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

J - Estimated concentration exceeds the MDL and is less than the RL.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

NA - Not Analyzed

NAV - No Available Value

ND - Not Detected

PCB - Polychlorinated Biphenyl

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Table C-6
Groundwater Sampling Results
Landfill M-12
Fort Monmouth, New Jersey
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Round No.	ESC		Site Specific MBC[(2)]	46	46	47	48	48	49	49	50	51	52	53
WELL ID				M12MW16	MW16 Duplicate	M12MW16	M12MW16	MW16 Duplicate	M12MW16	MW16 Duplicate	M12MW16	M12MW16	M12MW16	M12MW16
Date Collected	FW-SW	SW-SW		3/7/2008	3/7/2008	5/15/2008	8/7/2008	8/7/2008	10/27/2008	10/27/2008	3/13/2009	6/25/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.03	80074.02	80165.03	80286.03	80286.02	80390.03	80390.02	90109.03	90263.01	90370.03	90451.03
Metals (µg/L)														
Antimony	80	NAV	N/A	ND	ND	ND	ND	ND	1.39 ER	ND	12.8	2.31 ER	ND	ND
Arsenic	150	36	N/A	**45.1**	**40.8**	23.3	22.0	21.6	**43.5**	**58.7**	**84.2**	**57.5**	**55**	**39.1**
Barium	220	NAV	699	110	113	53.0	118	118	**286**	**282**	102	97.8	205	213
Beryllium	3.6	NAV	N/A	0.182 ER	0.173 ER	ND	0.131 ER	0.155 ER	1.03	1.37	0.109 ER	0.246 ER	0.651	0.628
Cadmium	0.14	8.8	N/A	ND	ND	**2.84**	**3.11**	**2.91**	ND	ND	ND	**0.441 ER**	**2.08**	ND
Chromium	18	50	N/A	1.88 ER	1.85 ER	2.02 ER	0.901 ER	0.746 ER	0.732 ER	1.92 ER	1.82 ER	1.84 ER	ND	ND
Copper	6.4	3.1	65.6	**4.66 ER**	**4.29 ER**	ND	ND	ND	ND	ND	ND	0.979 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	2.66 ER	2.97 ER	1.86 ER	ND	ND	**10.2**	ND	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	7.20	6.92	0.934 ER	3.59 ER	3.43 ER	11.6	10.2	ND	2.55 ER	6.95	10.6
Selenium	5	71	N/A	ND	ND	ND	ND	ND	ND	ND	**29.6**	**13.4**	**20.8**	ND
Thallium	10	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

Table C-6
Groundwater Sampling Results
Landfill M-12
Fort Monmouth, New Jersey
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Round No.	ESC		Site Specific MBC[(2)]	46	47	47	48	49	50	50	51	52	53
WELL ID				M12MW17	M12MW17	MW17 Duplicate	M12MW17	M12MW17	M12MW17	MW17 Duplicate	M12MW17	M12MW17	M12MW18
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.04	80165.04	80165.02	80286.04	80390.04	90109.04	90109.02	90221.04	90370.04	90451.04
Metals (µg/L)													
Antimony	80	NAV	N/A	ND	ND	ND	ND	ND	15.6	10.9	3.95 ER	ND	ND
Arsenic	150	36	N/A	ND	ND	ND	ND	ND	**83.0**	**80.6**	27.7	21.6	0.770 ER
Barium	220	NAV	699	33.2	73.0	72.2	114	42.6	112	117	122	80.7	39.3
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	N/A	ND	**1.37 ER**	**1.36 ER**	**2.1**	**0.294 ER**	ND	ND	ND	**1.54 ER**	ND
Chromium	18	50	N/A	0.240 ER	0.486 ER	0.679 ER	ND	ND	ND	1.01 ER	ND	ND	ND
Copper	6.4	3.1	65.6	**4.31 ER**	ND	ND	ND	ND	ND	ND	1.29 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	1.83 ER	ND	**6.17**	4.44 ER	2.55 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	3.54 ER	ND	ND	ND	ND	ND	1.55 ER	ND	ND	ND
Selenium	5	71	N/A	ND	ND	ND	ND	ND	**72.7**	**70.8**	ND	36.7	ND
Thallium	10	NAV	N/A	ND	ND	ND	ND	1.69 ER	ND	ND	ND	ND	ND

See Notes at end of Table

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Groundwater Sampling Results
Landfill M-12
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Round No.	ESC		Site Specific MBC[2]	46	47	48	49	50	51	51	52	52	53	53
WELL ID				M12MW18	M12MW18	M12MW18	M12MW18	M12MW18	M12MW18	MW18 Duplicate	M12MW18	MW18 Duplicate	M12MW18	MW18 Duplicate
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	6/8/2009	9/8/2009	9/8/2009	11/18/2009	11/18/2009
ANALYTE / Lab ID				80074.05	80165.05	80286.05	80390.05	90109.05	90221.05	90221.02	90370.05	90370.02	90451.05	90451.02
Metals (µg/L)														
Antimony	80	NAV	N/A	ND	ND	ND	ND	15.5	2.89 ER	2.53 ER	ND	ND	ND	ND
Arsenic	150	36	N/A	ND	ND	ND	ND	32.3	14.3	14.7	9.26	6.83	1.11 ER	ND
Barium	220	NAV	699	**424**	**313**	**314**	**316**	**280**	**232**	**238**	**239**	**239**	**256**	**258**
Beryllium	3.6	NAV	N/A	1.11	0.87	0.823	0.94	0.809	0.746	0.767	0.767	0.792 ER	0.801	0.819
Cadmium	0.14	8.8	N/A	**1.18 ER**	**0.946 ER**	**1.26 ER**	**1.05 ER**	**0.745 ER**	**0.633 ER**	**0.700 ER**	**0.739 ER**	**0.627 ER**	ND	ND
Chromium	18	50	N/A	0.417 ER	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	6.4	3.1	65.6	**7.92**	3.09 ER	1.63 ER	ND	0.846 ER	2.34 ER	2.41 ER	2.53 ER	2.92 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	**5.67**	ND	ND	ND	ND	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	15.2	10.3	9.39	8.75	6.77	8.67	8.85	7.06	7.25	9.12	9.03
Selenium	5	71	N/A	ND	**5.85 ER**	**5.05 ER**	ND	**63.7**	ND	ND	**27**	**18**	**9.05 ER**	ND
Thallium	10	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Round No.	ESC		Site Specific MBC[2]	36	37	38	39	40	41	42	43
WELL ID				M12MW19	M12MW19	M12MW19	M12MW19	M12MW19	M12MW19	M12MW19	M12MW19
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.06	80165.06	80286.06	80390.06	90109.06	90221.06	90370.06	90451.06
Metals											
Antimony	80	NAV	N/A	ND	ND	2.89 ER	ND	16.5	4.52 ER	ND	ND
Arsenic	150	36	N/A	ND	ND	ND	ND	**91.1**	28.3	25.4	0.990 ER
Barium	220	NAV	699	9.88	27.4	12.3	11.8	9.24	8.72	7.92	16.9
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	1.15	0.124 ER	ND	ND
Cadmium	0.14	8.8	N/A	**0.301 ER**	**0.374 ER**	ND	**0.880 ER**	**0.836 ER**	**0.219 ER**	ND	ND
Chromium	18	50	N/A	0.215 ER	1.06 ER	ND	0.544 ER	1.07 ER	0.539 ER	ND	ND
Copper	6.4	3.1	65.6	2.91 ER	10.9	ND	**3.57 ER**	**404**	**9.91**	1.07 ER	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	**18.0**	1.57 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	5.28	23.8	1.72 ER	0.775 ER	ND	3.41 ER	ND	3.05 ER
Selenium	5	71	N/A	ND	**7.82 ER**	**8.01 ER**	ND	**79.5**	ND	**36.6**	ND

See Notes at end of Table

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Round No.	ESC		Site Specific MBC[2]	36	37	38	39	40	41	42	43
WELL ID				M12MW20	M12MW20	M12MW20	M12MW20	M12MW20	M12MW20	M12MW20	M12MW20
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.07	80165.07	80286.07	80390.07	90109.07	90221.07	90370.07	90451.07
Metals (µg/L)											
Antimony	80	NAV	N/A	ND	ND	ND	ND	18.0	1.48 ER	ND	ND
Arsenic	150	36	N/A	3.11 ER	ND	ND	ND	**87.4**	27.0	25.0	0.800 ER
Barium	220	NAV	699	41.9	44.0	44.6	31.0	34.1	30.9	28.6	30.4
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	N/A	ND	**0.979 ER**	**0.895 ER**	**0.391 ER**	ND	ND	ND	ND
Chromium	18	50	N/A	0.494 ER	ND	0.359 ER	ND	ND	ND	ND	ND
Copper	6.4	3.1	65.6	**7.78**	0.953 ER	**22.1**	ND	ND	1.32 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	**6.82**	1.47 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	3.52 ER	0.538 ER	1.96 ER	ND	ND	ND	ND	0.632 ER
Selenium	5	71	N/A	ND	**5.85 ER**	4.86 ER	ND	**86.4**	ND	**39.2**	ND
Thallium	10	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND

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Round No.	ESC		Site Specific MBC[2]	36	37	38	39	40	41	42	43
WELL ID				M12MW21	M12MW21	M12MW21	M12MW21	M12MW21	M12MW21	M12MW21	M12MW21
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.08	80165.08	80286.08	80390.08	90109.08	90221.08	90370.08	90451.08
Metals (µg/L)											
Antimony	80	NAV	N/A	ND	ND	ND	ND	11.8	6.20 ER	ND	7.79 ER
Arsenic	150	36	N/A	ND	ND	2.78 ER	ND	**109**	26.1	26.8	1.74 ER
Barium	220	NAV	699	61.3	57.1	43.7	55.0	71.6	65.1	56.7	64.3
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	N/A	ND	**0.727 ER**	ND	**0.321 ER**	ND	ND	ND	ND
Chromium	18	50	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Copper	6.4	3.1	65.6	**3.54 ER**	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	2.40 ER	3.45 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	3.22 ER	0.755 ER	1.04 ER	ND	ND	ND	ND	0.644 ER
Selenium	5	71	N/A	ND	4.31 ER	**6.04 ER**	ND	**106**	**8.14 ER**	**44.9**	ND

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Round No.	ESC		Site Specific MBC[2]	36	37	38	39	40	41	42	43
WELL ID				M12MW22	M12MW22	M12MW22	M12MW22	M12MW22	M12MW22	M12MW22	M12MW22
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.09	80165.09	80286.09	80390.09	90109.09	90221.09	90370.09	90451.09
Metals (µg/L)											
Antimony	80	NAV	N/A	ND	ND	ND	4.48 ER	11.0	4.28 ER	ND	ND
Arsenic	150	36	N/A	25.5	93.4	68.8	55.8	113	110	64.8	96.1
Barium	220	NAV	699	42.5	50.3	60.8	45.9	50.9	50.8	50.3	52.0
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	N/A	ND	**8.20**	**10.3**	ND	ND	ND	**4.34**	ND
Chromium	18	50	N/A	0.362 ER	ND	0.840 ER	ND	ND	0.920 ER	ND	ND
Copper	6.4	3.1	65.6	4.39 ER	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	N/A	ND	**8.49**	**11.6**	ND	**12.0**	ND	5.02	**6.04**
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	2.08 ER	ND	1.38 ER	ND	ND	ND	ND	ND
Selenium	5	71	N/A	ND	ND	ND	ND	ND	3.39 ER	ND	ND

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Round No.	ESC		Site Specific MBC[(2)]	36	37	38	39	40	41	42	43
WELL ID				M12MW23	M12MW23	M12MW23	M12MW23	M12MW23	M12MW23	M12MW23	M12MW23
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.10	80165.10	80286.10	80390.10	90109.10	90221.10	90370.10	90451.10
Metals											
Antimony	80	NAV	N/A	ND	ND	ND	ND	7.04 ER	3.14 ER	ND	ND
Arsenic	150	36	N/A	2.8 ER	ND	ND	2.60 ER	**56.8**	17.9	15.0	1.05 ER
Barium	220	NAV	699	44.9	46.8	31.8	40.8	36.5	46.7	31.6	57.0
Beryllium	3.6	NAV	N/A	ND	ND	1.84	1.87	0.931	0.574	1.67	0.568
Cadmium	0.14	8.8	N/A	**0.741 ER**	**0.634 ER**	**1.71 ER**	**2.27**	**1.14 ER**	**0.782 ER**	**1.95 ER**	**1.13 ER**
Chromium	18	50	N/A	1.71 ER	1.97 ER	1.60 ER	2.40 ER	1.17 ER	0.472 ER	ND	ND
Copper	6.4	3.1	65.6	**6.07**	**3.92 ER**	**5.99**	**3.82 ER**	**3.70 ER**	2.63 ER	**4.32 ER**	ND
Lead	5.4	24	N/A	ND	ND	ND	1.50 ER	4.83 ER	2.40 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	10.7	7.95	**29.9**	**30.8**	20.1	16.7	**25.7**	18.0
Selenium	5	71	N/A	ND	3.94 ER	**5.07 ER**	ND	**65.9**	ND	**30.2**	**10.9 ER**

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Round No.	ESC		Site Specific MBC[(2)]	36	37	38	39	40	41	42	43
WELL ID				M12MW24	M12MW24	M12MW24	M12MW24	M12MW24	M12MW24	M12MW24	M12MW24
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.11	80165.11	80286.11	80390.11	90109.11	90221.11	90370.11	90451.11
Metals											
Antimony	80	NAV	N/A	ND	ND	ND	ND	18.6	2.37 ER	ND	ND
Arsenic	150	36	N/A	ND	ND	ND	ND	**72.8**	16.7	17.3	0.820 ER
Barium	220	NAV	699	49.7	33.5	30.1	60.0	43.6	27.1	39.9	53.3
Beryllium	3.6	NAV	N/A	0.553	0.203 ER	ND	1.44	0.765	0.193 ER	0.432 ER	1.24
Cadmium	0.14	8.8	N/A	**0.454 ER**	**0.689 ER**	**0.359 ER**	**1.41 ER**	ND	ND	ND	ND
Chromium	18	50	N/A	ND	0.473 ER	ND	ND	ND	ND	ND	ND
Copper	6.4	3.1	65.6	**6.2**	1.35 ER	ND	0.821 ER	ND	0.928 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	4.67 ER	ND	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	12.7	5.51	2.29 ER	25.6	7.94	4.86 ER	5.57	19.2
Selenium	5	71	N/A	ND	**6.05 ER**	**6.31 ER**	ND	**92.4**	ND	**35.3**	**13.6 ER**
Thallium	10	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at end of Table

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Round No.	ESC		Site Specific MBC[2]	36	37	38	39	40	41	42	43
WELL ID				M12MW25	M12MW25	M12MW25	M12MW25	M12MW25	M12MW25	M12MW25	M12MW25
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.12	80165.12	80286.12	80390.12	90109.12	90221.12	90370.12	90451.12
Metals (µg/L)											
Antimony	80	NAV	N/A	ND	ND	ND	ND	21.0	2.79 ER	ND	5.87 ER
Arsenic	150	36	N/A	ND	ND	3.01 ER	ND	**111**	29.2	29.2	0.700 ER
Barium	220	NAV	699	29.1	25.7	66.8	**256**	31.4	38.2	58.3	78.0
Beryllium	3.6	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	N/A	ND	ND	**0.578 ER**	**0.404 ER**	ND	ND	ND	ND
Chromium	18	50	N/A	1.26 ER	0.873 ER	ND	ND	0.438 ER	ND	ND	ND
Copper	6.4	3.1	65.6	**8.7**	**7.35**	ND	ND	0.746 ER	1.04 ER	ND	ND
Lead	5.4	24	N/A	ND	ND	ND	ND	2.77 ER	1.33 ER	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	6.82	2.20 ER	ND	ND	ND	1.38 ER	ND	0.821 ER
Selenium	5	71	N/A	ND	**7.22 ER**	**8.74 ER**	ND	**91.5**	**5.85 ER**	**48.8**	**11.5 ER**
Thallium	10	NAV	N/A	ND	ND	ND	2.15 ER	ND	ND	ND	ND

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Round No.	ESC		Site Specific MBC[(2)]	36	37	38	39	40	41	42	43
WELL ID				M12MW26	M12MW26	M12MW26	M12MW26	M12MW26	M12MW26	M12MW26	M12MW26
Date Collected	FW-SW	SW-SW		3/7/2008	5/15/2008	8/7/2008	10/27/2008	3/13/2009	6/8/2009	9/8/2009	11/18/2009
ANALYTE / Lab ID				80074.13	80165.13	80286.13	80390.13	90109.13	90221.13	90370.13	90451.13
Metals											
Antimony	80	NAV	N/A	ND	ND	ND	ND	15.1	3.69 ER	ND	ND
Arsenic	150	36	N/A	6.37	4.06 ER	3.44 ER	ND	**76.2**	11.5	20.4	2.27 ER
Barium	220	NAV	699	78.7	41.9	46.1	41.4	38.5	19.7	31.8	27.1
Beryllium	3.6	NAV	N/A	0.379 ER	0.295 ER	ND	0.117 ER	ND	0.114 ER	ND	ND
Cadmium	0.14	8.8	N/A	**0.822 ER**	**1.65 ER**	**0.454 ER**	**1.24 ER**	ND	ND	ND	ND
Chromium	18	50	N/A	1.21 ER	1.74 ER	ND	2.32 ER	ND	1.12 ER	ND	ND
Copper	6.4	3.1	65.6	**15.9**	**5.97**	ND	ND	1.15 ER	**3.84 ER**	ND	ND
Lead	5.4	24	N/A	ND	2.16 ER	ND	ND	**5.56**	ND	ND	ND
Mercury	0.77	0.94	N/A	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	187	5.17	1.65 ER	0.650 ER	ND	ND	2.27 ER	ND	1.01 ER
Selenium	5	71	N/A	ND	ND	**6.88 ER**	ND	**78.7**	ND	**36.2**	ND
Thallium	10	NAV	N/A	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

(2) MBC - Maximum Background Criteria for native metals (Weston, 1995).

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

ER - Estimated Result

N/A - Not Applicable

NAV - No Available Value

ND - Not Detected

Table C-7
Groundwater Sampling Results
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Round No.	ESC		46	47	48	48	49	49	50	51
WELL ID			M14MW19	M14MW19	M14MW19	MW19 Duplicate	M14MW19	MW19 Duplicate	M14MW19	M14MW19
Date Collected	FW-SW	SW-SW	3/18/2008	5/19/2008	8/14/2008	8/14/2008	10/30/2008	10/30/2008	3/31/2009	6/17/2009
ANALYTE / Lab ID			80089.04	80167.04	80299.04	80299.03	80395.04	80395.03	90139.04	90242.04
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	6	ND	ND	ND	ND	ND	ND
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	ND	ND	ND	12.0	3.05 ER
Arsenic	150	36	ND	ND	2.97 ER	ND	ND	ND	32.4	14.6
Barium	220	NAV	32.5	25.3	16.8	17.5	61.1	61.2	47.7	52.4
Beryllium	3.6	NAV	ND	0.253 ER	ND	ND	0.112 ER	ND	ND	ND
Cadmium	0.14	8.8	ND	**1.08 ER**	**1.51 ER**	**1.42 ER**	ND	ND	ND	ND
Chromium	18	50	ND	17.8	0.372 ER	0.511 ER	2.08 ER	1.49 ER	1.32 ER	2.23 ER
Copper	6.4	3.1	**7.19**	4.40 ER	ND	ND	**6.21**	**4.79 ER**	ND	**7.03**
Lead	5.4	24	ND	**10.2**	ND	ND	2.73 ER	2.01 ER	**6.67**	3.97 ER
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	ND	1.71 ER	0.506 ER	ND	1.0 ER	0.729 ER	ND	3.55 ER
Selenium	5	71	ND	ND	ND	ND	ND	ND	**33.6**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

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Groundwater Sampling Results
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Round No.	ESC		51	52	52	52	52
WELL ID			MW19 Duplicate	M14MW19	MW19 Duplicate	M14MW19	MW19 Duplicate
Date Collected	FW-SW	SW-SW	6/17/2009	9/10/2009	9/10/2009	11/20/2009	11/20/2009
ANALYTE / Lab ID			90242.03	90375.03	90375.02	90452.04	90452.03
VOCs (µg/L)							
Acetone	NAV	NAV	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND
Metals (µg/L)							
Antimony	80	NAV	1.67 ER	ND	ND	ND	ND
Arsenic	150	36	16.3	11.2	9.69	1.03 ER	0.68 ER
Barium	220	NAV	58.1	45.0	55.7	72.2	90.7
Beryllium	3.6	NAV	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	**0.227 ER**	**0.573 ER**	**1.08 ER**	ND	ND
Chromium	18	50	2.36 ER	ND	ND	1.81 ER	1.09 ER
Copper	6.4	3.1	**7.5**	ND	ND	ND	ND
Lead	5.4	24	**6.79**	ND	4.72 ER	ND	3.11 ER
Mercury	0.77	0.94	ND	ND	ND	ND	ND
Nickel	34	22	3.62 ER	ND	ND	2.62 ER	2.42 ER
Selenium	5	71	**7.08 ER**	**12.7**	**10.2**	ND	ND
Thallium	10	NAV	ND	ND	ND	ND	ND

See Notes at End of Table

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Round No.	ESC		46	47	48	49	50	50	51	52	53
WELL ID			M14MW20	M14MW20	M14MW20	M14MW20	M14MW20	MW20 Duplicate	M14MW20	M14MW20	M14MW20
Date Collected	FW-SW	SW-SW	3/18/2008	5/19/2008	8/14/2008	10/30/2008	3/31/2009	3/31/2009	6/17/2009	9/10/2009	11/20/2009
ANALYTE / Lab ID			80089.05	80167.05	80299.05	80395.05	90139.05	90139.03	90242.05	90375.04	90452.05
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	2.80	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert -Butyl alcohol	355000	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	4	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	9.38 ER	8.68 ER	1.88 ER	ND	ND
Arsenic	150	36	2.74 ER	4.50 ER	6.1	3.27 ER	**54.2**	**47.5**	24.6	22.7	1.92 ER
Barium	220	NAV	18.8	ND	92.1	19.8	25.4	42.3	15.9	18.9	96.9
Beryllium	3.6	NAV	ND	1.20 ER	0.145 ER	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	**0.902 ER**	**0.586 ER**	**2.13**	ND	ND	ND	**0.621 ER**	ND	ND
Chromium	18	50	0.315 ER	ND	4.07 ER	ND	1.22 ER	0.873 ER	0.476 ER	ND	ND
Copper	6.4	3.1	**4.99 ER**	ND	ND	ND	2.90 ER	2.18 ER	**11.8**	ND	ND
Lead	5.4	24	ND	ND	ND	ND	**5.46**	ND	1.79 ER	ND	2.93 ER
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	1.92 ER	ND	1.68 ER	ND	ND	ND	1.64 ER	ND	8.11
Selenium	5	71	ND	**6.80 ER**	ND	ND	**51.2**	**60.2**	**8.42 ER**	**24.1**	ND
Thallium	10	NAV	ND	4.94 ER	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-7
Groundwater Sampling Results
Landfill M 14
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	47	48	49	50	51	52	53
WELL ID			M14MW21	M14MW21	MW21 Duplicate	M14MW21	M14MW21	M14MW21	M14MW21	M14MW21	M14MW21
Date Collected	FW-SW	SW-SW	3/18/2008	5/19/2008	5/19/2008	8/14/2008	10/30/2008	3/31/2009	6/17/2009	9/10/2009	11/20/2009
ANALYTE / Lab ID			80089.06	80167.06	80167.03	80299.06	80395.06	90139.06	90242.06	90375.05	90452.06
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	ND	9.71 ER	ND	ND	ND
Arsenic	150	36	ND	2.88 ER	ND	3.87 ER	ND	**47.3**	21.7	17.8	0.75 ER
Barium	220	NAV	39.7	34.8	32.8	27.0	97.9	71.9	29.3	29.0	51.9
Beryllium	3.6	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	**0.227 ER**	**0.307 ER**	**0.381 ER**	**0.523 ER**	ND	ND	**0.332 ER**	ND	ND
Chromium	18	50	ND	0.692 ER	1.04 ER	1.16 ER	ND	1.25 ER	ND	ND	ND
Copper	6.4	3.1	0.908 ER	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	ND	ND	ND	ND	ND	ND	ND	ND	0.745 ER
Selenium	5	71	ND	4.88 ER	**5.44 ER**	3.57 ER	ND	**72.6**	**6.51 ER**	**31.1**	ND

See Notes at End of Table

Table C-7
Groundwater Sampling Results
Landfill M 14
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	48	49	50	51	52	53
WELL ID			M14MW22	M14MW22	M14MW22	M14MW22	M14MW22	M14MW22	M14MW22	M14MW22
Date Collected	FW-SW	SW-SW	3/18/2008	5/19/2008	8/14/2008	10/30/2008	3/31/2009	6/17/2009	9/10/2009	11/20/2009
ANALYTE / Lab ID			80089.07	80167.07	80299.07	80395.07	90139.07	90242.07	90375.06	90452.07
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	47	NAV	ND	ND	5.56	4.60	1.34 J	ND	1.84	5.21
1,4-Dichlorobenzene	9.4	NAV	ND	ND	0.65 J	0.74 J	ND	ND	ND	0.61
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	16	ND	ND	ND	ND	ND
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	2.93 ER	21.8	4.92 ER	ND	ND
Arsenic	150	36	ND	3.33 ER	4.02 ER	ND	**52.1**	28.1	22.7	0.97 ER
Barium	220	NAV	33.7	41.7	143	**346**	184	213	156	**393**
Beryllium	3.6	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	ND	**0.665 ER**	**2.5**	ND	ND	**0.743 ER**	**1.21 ER**	**0.521 ER**
Chromium	18	50	ND	0.814 ER	0.561 ER	ND	1.05 ER	ND	ND	ND
Copper	6.4	3.1	1.53 ER	ND	ND	ND	ND	1.39 ER	ND	ND
Lead	5.4	24	ND	ND	ND	ND	**9.96**	ND	ND	2.41 ER
Nickel	34	22	ND	1.11 ER	0.643 ER	11.3	ND	0.518 ER	ND	6.02
Selenium	5	71	ND	ND	ND	ND	**42.5**	**9.71 ER**	**33.2**	ND

See Notes at End of Table

Table C-7
Groundwater Sampling Results
Landfill M 14
Fort Monmouth, New Jersey
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Round No.	ESC		35	36	37	38	39	40	41	42
WELL ID			M14MW23	M14MW23	M14MW23	M14MW23	M14MW23	M14MW23	M14MW23	M14MW23
Date Collected	FW-SW	SW-SW	3/18/2008	5/19/2008	8/14/2008	10/30/2008	3/31/2009	6/17/2009	9/10/2009	11/20/2009
ANALYTE / Lab ID			80089.08	80167.08	80299.08	80395.08	90139.08	90242.08	90375.07	90452.08
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	ND	17.7	ND	ND	ND
Arsenic	150	36	7.63	4.20 ER	14.2	4.85 ER	**74**	29.5	23.0	2.60 ER
Barium	220	NAV	203	**249**	59.2	**360**	73.2	42.9	61.6	208
Beryllium	3.6	NAV	ND	ND	ND	1.09	0.332 ER	0.182 ER	ND	ND
Cadmium	0.14	8.8	**0.777 ER**	**1.70 ER**	**0.971 ER**	**15.3**	**1.90 ER**	**0.502 ER**	ND	**5.82**
Chromium	18	50	0.329 ER	1.38 ER	0.861 ER	ND	0.696 ER	ND	ND	ND
Copper	6.4	3.1	**60.6**	**3.59 ER**	ND	**15.8**	**20.8**	**6.94**	ND	ND
Lead	5.4	24	1.19 ER	2.09 ER	ND	ND	ND	1.30 ER	ND	ND
Nickel	34	22	7.11	8.35	ND	**50.7**	7.03	1.86 ER	0.582 ER	**40.1**
Selenium	5	71	ND	ND	**5.75 ER**	ND	**73.3**	**9.39 ER**	**28.6**	**12.9 ER**

See Notes at End of Table

Table C-7
Groundwater Sampling Results
Landfill M 14
Fort Monmouth, New Jersey
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Round No.	ESC		34	34	35	36
WELL ID			M14MW24	MW24 Duplicate	M14MW24	M14MW24
Date Collected	FW-SW	SW-SW	3/18/2008	3/18/2008	5/19/2008	8/14/2008
ANALYTE / Lab ID			80089.09	80089.03	80167.09	80299.09
VOCs (µg/L)						
Acetone	NAV	NAV	ND	NA	ND	ND
2-Butanone	NAV	NAV	ND	NA	ND	ND
Carbon disulfide	NAV	NAV	ND	NA	ND	ND
Methylene chloride	940	NAV	ND	NA	ND	ND
TICs	NAV	NAV	ND	NA	ND	ND
Metals (µg/L)						
Antimony	80	NAV	3.91 ER	5.93 ER	ND	ND
Arsenic	150	36	**44.5**	**43.1**	8.43	4.64 ER
Barium	220	NAV	27.8	28.9	25.0	32.7
Beryllium	3.6	NAV	ND	ND	0.165 ER	0.136 ER
Cadmium	0.14	8.8	**0.455 ER**	**0.613 ER**	ND	ND
Chromium	18	50	0.213 ER	0.561 ER	0.424 ER	0.508 ER
Copper	6.4	3.1	1.29 ER	2.11 ER	ND	ND
Lead	5.4	24	ND	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND
Nickel	34	22	**28.4**	**25.6**	6.20	1.72 ER
Selenium	5	71	ND	ND	**15.5**	**16.4**
Thallium	10	NAV	2.45 ER	1.73 ER	ND	ND

See Notes at End of Table

Table C-7
Groundwater Sampling Results
Landfill M 14
Fort Monmouth, New Jersey
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Round No.	ESC		37	38	39	40	41
WELL ID			M14MW24	M14MW24	M14MW24	M14MW24	M14MW24
Date Collected	FW-SW	SW-SW	10/30/2008	3/31/2009	6/17/2009	9/10/2009	11/20/2009
ANALYTE / Lab ID			80395.09	90139.09	90242.09	90375.08	90452.09
VOCs (µg/L)							
Acetone	NAV	NAV	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND
Carbon disulfide	NAV	NAV	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND
Metals (µg/L)							
Antimony	80	NAV	ND	23.1	4.81 ER	6.59 ER	4.90 ER
Arsenic	150	36	ND	**95.6**	21.3	30.9	3.41 ER
Barium	220	NAV	35.6	23.7	28.4	20.9	25.9
Beryllium	3.6	NAV	ND	ND	0.103 ER	ND	ND
Cadmium	0.14	8.8	**1.63 ER**	**1.05 ER**	**0.891 ER**	ND	ND
Chromium	18	50	ND	0.629 ER	ND	ND	ND
Copper	6.4	3.1	ND	**11.8**	ND	ND	ND
Lead	5.4	24	ND	ND	**5.41**	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND
Nickel	34	22	6.15	7.79	3.94 ER	1.25 ER	2.61 ER
Selenium	5	71	ND	**62.7**	4.42 ER	**58.0**	**10.7 ER**
Thallium	10	NAV	4.02 ER	ND	ND	ND	ND

Notes:

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

ER - Estimated Result

NA - Not Analyzed

NAV - No Available Value

ND - Not Detected

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Sampling for Semivolatiles and Metals were discontinued after the
8/5/04 sampling event as per NJDEP approval dated November 2004

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum hardness detected in adjacent creek during BEE sampling activities.

Table C-8
Groundwater Sampling Results
Site M-18
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	48	49	50	51	52	53
WELL ID			M18MW24	M18MW24	M18MW24	M18MW24	M18MW24	M18MW24	M18MW24	M18MW24
Date Collected	FW-SW	SW-SW	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009
ANALYTE / Lab ID			80067.01	80162.01	80296.01	80387.01	90121.01	90219.01	90385.01	90458.01
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	2.88	4.04	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	ND	28.2	8.00 ER	ND	ND
Arsenic	150	36	ND	6.41	13.2	ND	**140**	ND	**42.9**	1.33 ER
Barium	220	NAV	108	115	**243**	**310**	**279**	**225**	**289**	**460**
Beryllium	3.6	NAV	ND	0.195 ER	0.269 ER	ND	ND	0.113 ER	ND	ND
Cadmium	NA	8.8	0.519 ER	ND	5.04	0.568 ER	ND	ND	3.17	ND
Chromium	NA	50	1.20 ER	0.942 ER	1.61 ER	2.00 ER	3.90 ER	1.85 ER	ND	ND
Copper	NA	3.1	1.93 ER	ND	ND	ND	**25.5**	ND	ND	ND
Lead	5.4	24	2.48 ER	3.01 ER	3.11 ER	ND	**5.87**	3.07 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	NA	22	11.2	5.25	ND	3.60 ER	ND	ND	ND	ND
Selenium	5	71	ND	**24.2**	**17.9**	ND	**36.7**	ND	ND	ND
Thallium	10	NAV	5.80 ER	ND	ND	7.19 ER	**36.5**	ND	ND	ND

See Notes at End of Table

Table C-8
Groundwater Sampling Results
Site M-18
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	48	49	50	51	52	53
WELL ID			M18MW25	M18MW25	M18MW25	M18MW25	M18MW25	M18MW25	M18MW25	M18MW25
Date Collected	FW-SW	SW-SW	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009
ANALYTE / Lab ID			80067.02	80162.02	80296.02	80387.02	90121.02	90219.02	90385.02	90458.02
VOCs (µg/L)										
Acetone	NAV	NAV	ND	ND	ND	ND	6.86	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	940	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	11.7	22.7	6.19 ER	ND	ND
Arsenic	150	36	4.61 ER	7.00	13.5	ND	**112**	15.4	**52**	2.98 ER
Barium	220	NAV	43.9	39.3	**295**	**376**	147	133	**352**	170
Beryllium	3.6	NAV	ND	0.100 ER	0.120 ER	ND	ND	ND	ND	ND
Cadmium	NA	8.8	0.262 ER	2.40	**8.83**	ND	ND	ND	2.05	ND
Chromium	NA	50	ND	2.20 ER	ND	4.29 ER	0.923 ER	ND	ND	ND
Copper	NA	3.1	**9.21**	ND	ND	**3.43 ER**	2.37 ER	ND	ND	ND
Lead	5.4	24	ND	3.00 ER	**6.89**	ND	**11.5**	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	NA	22	20.8	3.00 ER	ND	ND	ND	ND	0.824 ER	ND
Selenium	5	71	ND	ND	**7.79 ER**	ND	**73.4**	**6.19 ER**	**24.6**	ND
Thallium	10	NAV	3.31 ER	ND	ND	2.21 ER	ND	ND	ND	ND

See Notes at End of Table

Table C-8
Groundwater Sampling Results
Site M-18
Fort Monmouth, New Jersey
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Round No.	ESC		44	45	46	47	48	48	49	49	49
WELL ID			296MW03	296MW03	296MW03	296MW03	296MW03	MW03 Duplicate	296MW03	296MW03	296MW03
Date Collected	FW-SW	SW-SW	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	3/25/2009	6/2/2009	9/17/2009	11/23/2009
ANALYTE / Lab ID			80065.06	80161.06	80295.06	80386.06	90122.04	90122.03	90217.06	90384.06	90456.06
VOCs (µg/L)											
Acetone	NAV	NAV	ND	ND	ND	6.89	ND	ND	ND	ND	ND
Bromofluorobenzene	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	9	ND	ND	ND	ND	ND
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	9.10 ER	9.54 ER	3.05 ER	6.05 ER	ND
Arsenic	150	36	ND	ND	ND	3.55 ER	21.9	19.0	ND	8.49	0.71 ER
Barium	220	NAV	3.53 ER	4.77 ER	10.4	5.71	3.55 ER	3.42 ER	2.09 ER	6.91	6.64
Beryllium	3.6	NAV	ND	0.214 ER	0.167 ER	ND	ND	ND	ND	0.122 ER	ND
Cadmium	NA	8.8	1.22 ER	1.86 ER	3.91	1.71 ER	1.39 ER	1.41 ER	0.689 ER	3.53	1.63 ER
Chromium	NA	50	1.76 ER	0.980 ER	1.46 ER	1.85 ER	2.30 ER	1.57 ER	1.98 ER	1.45 ER	ND
Copper	NA	3.1	1.31 ER	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	ND	**5.51**	**7.33**	2.56 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	0.15 ER	ND
Nickel	NA	22	5.61	4.00 ER	5.59	2.81 ER	1.31 ER	2.01 ER	2.10 ER	5.51	4.52 ER
Selenium	5	71	ND	4.83 ER	ND	ND	**46.8**	**51.5**	ND	22.1	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

ER - Estimated Result

NA - Not Applicable

NAV - No Available Value

ND - Not Detected

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Sampling for Semivolatiles and PCBs/Pesticides were

discontinued after November 2004 as per NJDEP approval dated November 12, 2004

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
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Round No.	ESC		46	46	47	47	48	48	49	49
WELL ID			1122MW01	MW01 Duplicate	1122MW01	MW01 Duplicate	1122MW01	MW01 Duplicate	1122MW01	MW01 Duplicate
Date Collected	FW-SW	SW-SW	1/8/2008	1/8/2008	4/3/2008	4/3/2008	7/10/2008	7/10/2008	10/9/2008	10/9/2008
ANALYTE / Lab ID			80006.04	80006.03	80109.04	80109.03	80226.04	80226.03	80360.04	80360.03
VOCs (µg/L)										
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	ND	0.49 J	0.50 J	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
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Round No.	ESC		50	50	51	51	52	53
WELL ID			1122MW01	MW01 Duplicate	1122MW01	MW01 Duplicate	1122MW01	1122MW01
Date Collected	FW-SW	SW-SW	1/23/2009	1/23/2009	4/13/2009	4/13/2009	7/20/2009	11/4/2009
ANALYTE / Lab ID			90021.04	90021.03	90159.04	90159.03	90302.04	90435.04
VOCs (µg/L)								
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND
Benzene	114	NAV	ND	ND	0.46 J	0.44 J	0.45 J	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.63 J	0.56 J	0.88	ND
Tetrachloroethene	45	NAV	0.61 J	0.73 J	ND	ND	ND	ND
Toluene	253	NAV	ND	ND	ND	ND	0.37 J	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	48	49	50	51	52	52	53	53
WELL ID			1122MW02	1122MW02	1122MW02	1122MW02	1122MW02	1122MW02	1122MW02	MW02 Duplicate	1122MW02	MW02 Duplicate
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/9/2008	1/23/2009	4/13/2009	7/20/2009	7/20/2009	11/4/2009	11/4/2009
ANALYTE / Lab ID			80006.05	80109.05	80226.05	80360.05	90021.05	90159.05	90302.05	90302.03	90435.05	90435.03
VOCs (µg/L)												
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	0.28 J	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	ND	0.39 J	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	42	ND	ND	ND	4	ND	ND	ND	ND

See Notes at End of Table

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
Page 4 of 6

Round No.	ESC		34	35	36	37	38	39	40	41
WELL ID			1122MW03	1122MW03	1122MW03	1122MW03	1122MW03	1122MW03	1122MW03	1122MW03
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/9/2008	1/23/2009	4/13/2009	7/20/2009	11/4/2009
ANALYTE / Lab ID			80006.06	80109.06	80226.06	80360.06	90021.06	90159.06	90302.06	90435.06
VOCs (µg/L)										
Bromodichloromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	0.41 J	ND	1.03 J	0.74 J	ND	ND	ND
Dibromochloromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	45	NAV	ND	0.7 J	0.39 J	0.63 J	0.68 J	ND	ND	0.69
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
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Round No.	ESC		34	35	36	37	38	39	40	41
WELL ID			1122MW04	1122MW04	1122MW04	1122MW04	1122MW04	1122MW04	1122MW04	1122MW04
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/9/2008	1/23/2009	4/13/2009	7/20/2009	11/4/2009
ANALYTE / Lab ID			80006.07	80109.07	80226.07	80360.07	90021.07	90159.07	90302.07	90435.07
VOCs (µg/L)										
1,1-Dichloroethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	0.21 J	ND
Chloroform	140	NAV	ND	ND	3.96	3.42	2.77	ND	3.80	ND
Tetrachloroethene	45	NAV	ND	0.59 J	0.53 J	0.52 J	0.41 J	0.40 J	0.57	0.35 J
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	4

See Notes at End of Table

Table C-9
Groundwater Sampling Results
Building 1122, Site 59, Parcel 43
Fort Monmouth, New Jersey
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Round No.	ESC		34	35	36	37	38	39	40	41
WELL ID			1122MW05	1122MW05	1122MW05	1122MW05	1122MW05	1122MW05	1122MW05	1122MW05
Date Collected	FW-SW	SW-SW	1/8/2008	4/3/2008	7/10/2008	10/9/2008	1/23/2009	4/13/2009	7/20/2009	11/4/2009
ANALYTE / Lab ID			80006.08	80109.08	80226.08	80360.08	90021.08	90159.08	90302.08	90435.08
VOCs (µg/L)										
2-Butanone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	140	NAV	ND	ND	ND	ND	ND	ND	0.36 J	ND
Methyl *tert* -butyl ether	51000	18000	ND	ND	ND	ND	ND	ND	ND	ND
TICs	NAV	NAV	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

J - Estimated concentration

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

NAV - No Available Value

ND - Not Detected

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Sampling for SVOCs, Pesticides/PCBs, and Metals were discontinued
after the 10/7/04 sampling event as per NJDEP approval dated (November 2004)

Table C-10
Groundwater Sampling Results
Landfill CW-3A
Fort Monmouth, New Jersey
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Round No.	ESC		45	45	46	46	47	47	48	48	49
WELL ID			CW3AMW01	MW01 Duplicate	CW3AMW01	MW01 Duplicate	CW3AMW01	MW01 Duplicate	CW3AMW01	MW01 Duplicate	CW3AMW01
Date Collected	FW-SW	SW-SW	1/9/2008	1/9/2008	4/8/2008	4/8/2008	7/23/2008	7/23/2008	10/15/2008	10/15/2008	2/17/2009
ANALYTE/Lab ID			80011.03	80011.02	80116.03	80116.02	80249.03	80249.02	80366.03	80366.02	90055.03
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	ND	ND	ND	ND	7.12 ER
Arsenic	150	36	ND	ND	ND	ND	ND	ND	ND	2.42 ER	35.7
Barium	220	NAV	1.36 ER	1.24 ER	ND	ND	31.3	24.5	26.2	26.4	2.61 ER
Beryllium	3.6	NAV	0.177 ER	ND	ND	ND	0.108 ER	ND	0.217 ER	0.248 ER	ND
Cadmium	0.14	8.8	**0.202 ER**	ND	ND	ND	**1.14 ER**	**0.495 ER**	**0.676 ER**	**0.713 ER**	**0.221 ER**
Chromium	19	50	3.91 ER	69.7	ND	ND	1.02 ER	0.985 ER	4.09 ER	5.25	0.814 ER
Copper	6.5	3.1	ND	12.4	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	ND	ND	ND	1.62 ER	4.03 ER	**8.83**
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	4.71 ER	33.4	ND	ND	ND	ND	0.718 ER	1.1 ER	ND
Selenium	5	71	ND	ND	ND	ND	**9.63 ER**	10.5	ND	ND	**46.9**
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-10
Groundwater Sampling Results
Landfill CW-3A
Fort Monmouth, New Jersey
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Round No.	ESC		50	50	51	52
WELL ID			CW3AMW01	MW01 Duplicate	CW3AMW01	CW3AMW01
Date Collected	FW-SW	SW-SW	4/22/2009	4/22/2009	7/22/2009	10/7/2009
ANALYTE/Lab ID			90164.03	90164.02	90306.03	90407.03
Metals (µg/L)						
Antimony	80	NAV	13.4	8.08 ER	ND	ND
Arsenic	150	36	**49.3**	**40.6**	28.3	ND
Barium	220	NAV	13.6	14.4	83.5	56.0
Beryllium	3.6	NAV	ND	ND	ND	ND
Cadmium	0.14	8.8	ND	ND	**0.955 ER**	ND
Chromium	19	50	1.29 ER	0.479 ER	ND	ND
Copper	6.5	3.1	ND	ND	ND	2.84 ER
Lead	5.4	24	ND	2.13 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND
Nickel	34	22	0.676 ER	ND	6.82	4.48 ER
Selenium	5	71	**96.6**	**91.3**	**47.6**	**39.3**
Thallium	10	NAV	ND	ND	ND	ND

See Notes at End of Table

Table C-10
Groundwater Sampling Results
Landfill CW-3A
Fort Monmouth, New Jersey
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Round No.	ESC		45	46	47	48	49	50	51	52
WELL ID			CW3AMW02	CW3AMW02	CW3AMW02	CW3AMW02	CW3AMW02	CW3AMW02	CW3AMW02	CW3AMW02
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	7/23/2008	10/15/2008	2/17/2009	4/22/2009	7/22/2009	10/7/2009
ANALYTE/Lab ID			80011.04	80116.04	80249.04	80366.04	90055.04	90164.04	90306.04	90407.04
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	3.83 ER	18.7	1.22 ER	8.06 ER	ND
Arsenic	150	36	ND	9.13	**113**	32.6	**121**	**62.5**	**51.3**	**66.3**
Barium	220	NAV	**760**	**612**	**664**	**861**	**598**	**630**	**489**	**623**
Beryllium	3.6	NAV	0.152 ER	ND	0.135 ER	0.129 ER	ND	ND	ND	ND
Cadmium	0.14	8.8	**0.99 ER**	**6.29**	**4.32**	ND	ND	**5.87**	**2.04**	**2.54**
Chromium	19	50	ND	0.601 ER	0.852 ER	0.531 ER	0.395 ER	1.71 ER	ND	ND
Copper	6.5	3.1	ND	ND	ND	ND	ND	**4.14 ER**	1.35 ER	ND
Lead	5.4	24	ND	4.81 ER	4.99 ER	ND	**11.0**	ND	ND	3.41 ER
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	2.8 ER	ND	1.18 ER	ND	ND	ND	2.22 ER	0.886 ER
Selenium	5	71	ND	ND	3.2 ER	ND	**44.6**	**40.2**	ND	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-10
Groundwater Sampling Results
Landfill CW-3A
Fort Monmouth, New Jersey
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Round No.	ESC		45	46	47	48	49	50	51	51	52	52
WELL ID			CW3AMW03	CW3AMW03	CW3AMW03	CW3AMW03	CW3AMW03	CW3AMW03	CW3AMW03	MW03 Duplicate	CW3AMW03	MW03 Duplicate
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	7/23/2008	10/15/2008	2/17/2009	4/22/2009	7/22/2009	7/22/2009	10/7/2009	10/7/2009
ANALYTE/Lab ID			80011.05	80116.05	80249.05	80366.05	90055.05	90164.05	90306.05	90306.02	90407.05	90407.02
Metals (µg/L)												
Antimony	80	NAV	ND	ND	ND	18.7	17.8	17.7	ND	15.0	ND	6.79 ER
Arsenic	150	36	3.9 ER	ND	ND	ND	**92.6**	**61.4**	14.7	21.3	4.82 ER	5.10
Barium	220	NAV	144	114	80.8	180	88.4	127	87.7	97.1	97.3	92.3
Beryllium	3.6	NAV	0.17 ER	ND	0.1 ER	2.04	ND	ND	0.087 ER	0.193 ER	0.182 ER	0.209 ER
Cadmium	0.14	8.8	**0.239 ER**	**1.23 ER**	**0.313 ER**	**0.697 ER**	ND	**0.243 ER**	**0.574 ER**	**1.95 ER**	**2.04**	**1.79 ER**
Chromium	19	50	0.344 ER	0.857 ER	1.05 ER	**92**	3.91 ER	1.37 ER	3.09 ER	14.1	13.7	16.4
Copper	6.5	3.1	2.76 ER	ND	ND	**113**	**10**	ND	**6.55**	**88.3**	**21.9**	**35.1**
Lead	5.4	24	ND	0.758 ER	ND	**11**	**8.35**	ND	ND	**9.51**	**8.99**	**8.57**
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	6.33	0.385 ER	2.66 ER	45.3	ND	2.59 ER	7.48	10.6	12.8	11.9
Selenium	5	71	ND	ND	**8.14 ER**	ND	**80.6**	**132**	**19.8**	ND	ND	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-10
Groundwater Sampling Results
Landfill CW-3A
Fort Monmouth, New Jersey
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Round No.	ESC		45	46	47	48	49	49	50	51	52
WELL ID			CW3AMW04	CW3AMW04	CW3AMW04	CW3AMW04	CW3AMW04	MW04 Duplicate	CW3AMW04	CW3AMW04	CW3AMW04
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	7/23/2008	10/15/2008	2/17/2009	2/17/2009	4/22/2009	7/22/2009	10/7/2009
ANALYTE/Lab ID			80011.06	80116.06	80249.06	80366.06	90055.06	90055.02	90164.06	90306.06	90407.06
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	19.7	19.2	9.27 ER	6.72 ER	4.85 ER
Arsenic	150	36	ND	3.74 ER	ND	ND	**73.9**	**75.4**	**67.3**	31.0	2.30 ER
Barium	220	NAV	126	130	131	131	136	186	124	146	148
Beryllium	3.6	NAV	0.226 ER	ND	0.138 ER	0.299 ER	ND	ND	ND	ND	ND
Cadmium	0.14	8.8	**1.1 ER**	**4.26**	**1.42 ER**	**0.594 ER**	ND	ND	**2.51**	**2.07**	**1.43 ER**
Chromium	19	50	1.09 ER	0.71 ER	1.75 ER	1.09 ER	0.825 ER	0.874 ER	1.70 ER	ND	ND
Copper	6.5	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	2.93 ER	ND	ND	**8.07**	**9.82**	ND	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	34	22	6.92	2.3 ER	1.38 ER	3.67 ER	ND	ND	3.22 ER	3.99 ER	9.47
Selenium	5	71	ND	ND	**6.89 ER**	ND	**53.0**	**35.8**	**92.7**	**6.7**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

ER - Estimated Result

NAV - No Available Value

ND - Not Detected

µg/L - micrograms per liter

Sampling for VOCs and SVOCs were discontinued after the 11/1/04

sampling event

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum hardness detected in adjacent creek during BEE sampling activities.

Table C-11
Groundwater Sampling Results
Site CW-6
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	47	48	48	49	49	50	51	52	53
WELL ID			CW6MW01	CW6MW01	MW01 Duplicate	CW6MW01	MW01 Duplicate	CW6MW01	MW01 Duplicate	CW6MW01	CW6MW01	CW6MW01	CW6MW01
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	4/8/2008	7/23/2008	7/23/2008	10/15/2008	10/15/2008	3/6/2009	5/20/2009	8/27/2009	10/28/2009
ANALYTE / Lab ID			80012.03	80119.03	80119.02	80254.03	80254.02	80254.02	80369.02	90092.03	90206.03	90360.03	90431.03
VOCs (µg/L)													
2-Butanone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl *tert* -butyl ether	51000	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs (µg/L)													
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	23	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-*n* -octyl phthalate	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)													
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	2.22	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)													
Antimony	80	NAV	ND	ND	ND	ND	ND	1.20 ER	ND	15.3	ND	ND	ND
Arsenic	150	36	3.75 ER	ND	3.67 ER	11.00	10.20	10.20	ND	**64.9**	15.0	20.3	4.26 ER
Barium	220	NAV	12.40	11.90	11.80	10.40	10.50	9.78	7.37	25.3	8.31	10.1	17.4
Beryllium	3.6	NAV	0.221 ER	0.134 ER	0.133 ER	0.234 ER	0.206 ER	0.350 ER	0.302 ER	ND	ND	ND	ND
Cadmium	0.17	8.8	**0.259 ER**	ND	ND	**0.699 ER**	**0.617 ER**	**0.545 ER**	**0.280 ER**	**0.380 ER**	**0.427 ER**	ND	ND
Chromium	23	50	5.07	6.60	5.15	9.17	10.50	10.10	7.55	3.42 ER	1.06 ER	9.12	4.34 ER
Copper	8.1	3.1	**23.90**	**23.00**	**22.40**	**42.10**	**43.80**	**99.90**	**84.10**	**10.40**	ND	**80.20**	**22.10**
Lead	5.4	24	ND	2.19 ER	2.37 ER	**9.26**	**7.10**	**6.68**	3.15 ER	1.85 ER	ND	2.70 ER	3.29 ER
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.41 ER	ND
Nickel	42	22	4.14 ER	4.71 ER	4.60 ER	4.48 ER	4.74 ER	5.67	5.18	5.38	1.09 ER	8.37	6.90
Selenium	5	71	4.97 ER	ND	ND	**7.02 ER**	**5.78 ER**	**6.90 ER**	4.88 ER	**89.40**	ND	**24.20**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-11
Groundwater Sampling Results
Site CW-6
Fort Monmouth, New Jersey
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Round No.	ESC		46	46	47	48	49	50	51	52	53
WELL ID			CW6MW02	MW02 Duplicate	CW6MW02	CW6MW02	CW6MW02	CW6MW02	CW6MW02	CW6MW02	CW6MW02
Date Collected	FW-SW	SW-SW	1/9/2008	1/9/2008	4/8/2008	7/23/2008	10/15/2008	3/6/2009	5/20/2009	8/27/2009	10/28/2009
ANALYTE / Lab ID			20012.03	80012.02	80119.04	80254.04	80369.04	90092.04	90206.04	90360.04	90431.04
VOCs (µg/L)											
Acetone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs (µg/L)											
2,4-Dichlorophenol	11	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	23	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-*n*-butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)											
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.001	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)											
Antimony	80	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	150	36	12.40	12.60	16.10	16.40	19.20	40.3	25.3	26.1	**120**
Barium	220	NAV	59.20	58.90	58.30	66.60	63.90	57.2	62.50	60.6	54.8
Beryllium	3.6	NAV	1.50	1.54	1.28	0.89	1.37	1.45	1.85	0.870 ER	1.28
Cadmium	0.17	8.8	**0.720 ER**	**0.716 ER**	**1.65 ER**	**2.57**	**0.243**	ND	**0.643 ER**	**1.13 ER**	**0.559 ER**
Chromium	23	50	1.26 ER	1.29 ER	1.96 ER	5.76	2.46 ER	0.811 ER	0.547 ER	4.93 ER	2.06 ER
Copper	8.1	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.4	24	ND	ND	ND	3.47 ER	ND	5.21	2.31 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	0.14 ER	ND
Nickel	42	22	**25.5**	**24.8**	21.10	18.70	17.50	19.4	**28.3**	15.9	20.2
Selenium	5	71	ND	ND	ND	**5.50 ER**	3.18 ER	**24.4**	ND	**7.37 ER**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND	ND

See Notes at End of Table

Table C-11
Groundwater Sampling Results
Site CW-6
Fort Monmouth, New Jersey
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Round No.	ESC		46	47	48	49	50	50	51	51	52	52	53	53
WELL ID			CW6MW03	CW6MW03	CW6MW03	CW6MW03	CW6MW03	MW03 Duplicate	CW6MW03	MW03 Duplicate	CW6MW03	MW03 Duplicate	CW6MW03	MW03 Duplicate
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	7/23/2008	10/15/2008	3/6/2009	3/6/2009	5/20/2009	5/20/2009	8/27/2009	8/27/2009	10/28/2009	10/28/2009
ANALYTE / Lab ID			80012.05	80119.05	80254.05	80369.05	90092.05	90092.02	90206.05	90206.02	90360.05	90360.02	90431.05	90431.02
VOCs (µg/L)														
2-Butanone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs (µg/L)														
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-*n* -butyl phthalate	9.7	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)														
4,4'-DDE	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.0038	0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)														
Antimony	80	NAV	ND	ND	ND	ND	9.93 ER	17.9	ND	2.72 ER	ND	ND	ND	ND
Arsenic	150	36	ND	ND	ND	ND	64.4	63.8	18.7	18.1	17.3	19.2	1.39 ER	8.23
Barium	220	NAV	10.40	9.51	23.00	14.70	31.6	30.1	13.8	14.9	21.1	20.9	5.88	6.50
Beryllium	3.6	NAV	0.185 ER	ND	0.228 ER	0.248 ER	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.17	8.8	**0.683 ER**	**0.785 ER**	**0.924 ER**	ND	**1.13 ER**	**1.63 ER**	**0.297 ER**	**0.499 ER**	**0.675 ER**	**0.652 ER**	**0.938 ER**	**0.899 ER**
Chromium	23	50	0.860 ER	1.40 ER	5.21	2.15 ER	0.570 ER	0.508 ER	4.60 ER	4.67 ER	3.39 ER	1.45 ER	2.64 ER	3.09 ER
Copper	8.1	3.1	0.504 ER	ND	ND	ND	1.48 ER	0.701 ER	**46.6**	**47.5**	**3.89 ER**	1.76 ER	**3.42 ER**	**3.82 ER**
Lead	5.4	24	ND	ND	4.51 ER	ND	3.62 ER	ND	2.82 ER	3.62 ER	4.99 ER	3.43 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	42	22	3.61 ER	ND	1.70 ER	ND	ND	ND	7.12	7.39	1.85 ER	1.60 ER	3.20 ER	1.89 ER
Selenium	5	71	ND	ND	**9.99 ER**	4.41 ER	**95.9**	**79.3**	ND	ND	**27.6**	**32.2**	**10.1 ER**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND

See Notes at End of Table

Table C-11
Groundwater Sampling Results
Site CW-6
Fort Monmouth, New Jersey
Page 4 of 4

Round No.	ESC		46	47	48	49	50	51	52	53
WELL ID			CW6MW34	CW6MW34	CW6MW34	CW6MW34	CW6MW34	CW6MW34	CW6MW34	CW6MW34
Date Collected	FW-SW	SW-SW	1/9/2008	4/8/2008	7/23/2008	10/15/2008	3/6/2009	5/20/2009	8/27/2009	10/28/2009
ANALYTE / Lab ID			80012.06	80119.06	8025405	80369.06	90092.06	90206.06	90360.06	90431.06
VOCs (µg/L)										
2-Butanone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs (µg/L)										
Bis(2-ethylhexyl) phthalate	0.3	NAV	NA	NA	NA	NA	NA	NA	NA	NA
TICs	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides/PCBs (µg/L)										
4,4'-DDD	NAV	NAV	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	4.51E-09	NAV	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.0043	0.004	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	0.056	0.0087	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.0036	0.0038	NA	NA	NA	NA	NA	NA	NA	NA
Metals (µg/L)										
Antimony	80	NAV	ND	ND	ND	ND	3.29 ER	4.71 ER	ND	ND
Arsenic	150	36	ND	ND	ND	ND	**37.7**	9.28	7.56	9.04
Barium	220	NAV	35.10	52.00	22.60	23.90	61.0	31.1	30.1	27.5
Beryllium	3.6	NAV	0.462 ER	0.257 ER	0.354 ER	0.531	0.297 ER	0.151 ER	0.206 ER	0.198 ER
Cadmium	0.17	8.8	**0.583 ER**	**0.780 ER**	**0.730 ER**	**0.250 ER**	ND	**0.285 ER**	**0.981 ER**	ND
Chromium	23	50	1.56 ER	1.27 ER	3.87 ER	2.61 ER	1.62 ER	3.62 ER	3.17 ER	1.91 ER
Copper	8.1	3.1	ND	ND	ND	ND	ND	1.42 ER	ND	ND
Lead	5.4	24	ND	ND	ND	ND	ND	1.86 ER	ND	ND
Mercury	0.77	0.94	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	42	22	8.56	4.87 ER	1.82 ER	2.78 ER	4.53 ER	4.09 ER	3.23 ER	3.95 ER
Selenium	5	71	ND	ND	4.84 ER	3.77 ER	**48.0**	**5.15 ER**	**20.4**	ND
Thallium	10	NAV	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

(1)Low flow sampling method used to collect sample

Exceedances of freshwater surface water quality criteria are bold and shaded.

Exceedances of saltwater surface water quality criteria are bold with a bold border.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW - Fresh Water-Surface Water

SW-SW - Salt Water-Surface Water

ER - Estimated Result

NA - Not Analyzed

NAV - No Available Value

ND - Not Detected

PCB - Polychlorinated Biphenyl

SVOC - Semivolatile Organic Compound

TIC - Tentatively Identified Compound

VOC - Volatile Organic Compound

µg/L - micrograms per liter

Sampling for VOCs, SVOCs and Metals was discontinued after

the 11/1/04 sampling event as per NJDEP approval dated (November 2004)

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum hardness detected in adjacent creek during BEE sampling activities.

APPENDIX D

Baseline Ecological Evaluation Investigation Data Evaluated in the BEE

Table D-1
Analytes Detected in Main Post Background Surface Water Samples
Page 1 of 4

Analyte	Sample ID		M14-SW14				M14-SW14-Diss				M2-SW1				M2-SW1-Diss				M2-SW2			
	Sample Date		6/22/10				6/22/10				6/25/10				6/25/10				6/24/10			
	ESC																					
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																						
Chloroform	140	NAV	2.9	J		*0.34*	NT				0.34	U		*0.34*	NT				0.34	U		*0.34*
cis-1,2-Dichloroethene	NAV	NAV	1.3	J		*0.35*	NT				0.35	U		*0.35*	NT				1.9	J		*0.35*
Tetrachloroethene	45	NAV	0.27	U		*0.27*	NT				0.27	U		*0.27*	NT				1.3	J		*0.27*
SVOCs (ug/L)																						
Anthracene	0.035	NAV	0.12			*0.012*	NT				0.02	U		*0.02*	NT				0.012	U		*0.012*
Benzo(a)anthracene	0.025	NAV	0.23			*0.012*	NT				0.02	U		*0.02*	NT				0.012	U		*0.012*
Benzoic acid	NAV	NAV	2.1	U		*2.1*	NT				2	U		*2*	NT				2.1	U		*2.1*
1,2,4-Trichlorobenzene	30	NAV	0.56			*0.021*	NT				0.02	U		*0.02*	NT				0.02	U		*0.02*
Pesticides (ug/L)	None detected																					
PCBs (ug/L)	None detected																					
Metals (ug/L)																						
Aluminum	NAV	NAV	6.5	U		*6.5*	6.5	U		*6.5*	48.1	J		*6.5*	15.2	J		*6.5*	36.6	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	39.1	J		*4*	40.5	J		*4*	64.7			*4*	63.7			*4*	60.7			*4*
Calcium	NAV	NAV	22600			*31.8*	23000			*31.8*	31000			*31.8*	31200			*31.8*	29600			*31.8*
Iron	NAV	NAV	755			*20.4*	365			*20.4*	1450			*20.4*	350			*20.4*	1400			*20.4*
Lead	5.4	24	6.52			*2.6*	6.42			*2.6*	6.99			*2.6*	18.8			*2.6*	5.99	J		*2.6*
Magnesium	NAV	NAV	3550			*32.5*	3610			*32.5*	4660			*32.5*	4740			*32.5*	4490			*32.5*
Manganese	NAV	NAV	42.4			*1.7*	40.7			*1.7*	86.9			*1.7*	82.6			*1.7*	71.3			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*
Nickel	33	22	4.65	J		*4.2*	4.85	J		*4.2*	9.23	J		*4.2*	8.92	J		*4.2*	7.99	J		*4.2*
Potassium	NAV	NAV	2400			*38.8*	2450			*38.8*	3330			*38.8*	3360			*38.8*	3380			*38.8*
Sodium	NAV	NAV	24300			*13.9*	24700			*13.9*	53700			*13.9*	56200			*13.9*	52200			*13.9*
Thallium	10	NAV	2.4	U		*2.4*	3.33	J		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*
Zinc	85	81	47.6			*6.5*	48.5			*6.5*	50.4			*6.5*	40.4			*6.5*	59.2			*6.5*
Misc. (ug/L)																						
Hardness	NAV	NAV	71124			*105*	NT				96623			*105*	NT				92415			*105*

See Notes at end of Table

Table D-1
Analytes Detected in Main Post Background Surface Water Samples
Page 2 of 4

Analyte	Sample ID / Sample Date / ESC FW-SW	ESC SW-SW	M2-SW2-Diss 6/24/10				M3-SW12 6/22/10				M3-SW12-Diss 6/22/10				M3-SW13 6/25/10				M3-SW13-Diss 6/25/10			
			Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																						
Chloroform	140	NAV	NT				0.34	U		*0.34*	NT				0.34	U		*0.34*	NT			
cis-1,2-Dichloroethene	NAV	NAV	NT				0.35	U		*0.35*	NT				0.35	U		*0.35*	NT			
Tetrachloroethene	45	NAV	NT				0.27	U		*0.27*	NT				0.27	U		*0.27*	NT			
SVOCs (ug/L)																						
Anthracene	0.035	NAV	NT				0.012	U		*0.012*	NT				0.021	U		*0.021*	NT			
Benzo(a)anthracene	0.025	NAV	NT				0.23			*0.012*	NT				0.021	U		*0.021*	NT			
Benzoic acid	NAV	NAV	NT				2.1	U		*2.1*	NT				2.1	U		*2.1*	NT			
1,2,4-Trichlorobenzene	30	NAV	NT				0.021	U		*0.021*	NT				0.021	U		*0.021*	NT			
Pesticides (ug/L)	None detected																					
PCBs (ug/L)	None detected																					
Metals (ug/L)																						
Aluminum	NAV	NAV	11.4	J		*6.5*	78.6			*6.5*	6.5	U		*6.5*	45.1	J		*6.5*	6.63	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.67	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	63.1			*4*	47.2	J		*4*	46.3	J		*4*	38.7	J		*4*	35.8	J		*4*
Calcium	NAV	NAV	31100			*31.8*	35500			*31.8*	36700			*31.8*	35200			*31.8*	34900			*31.8*
Iron	NAV	NAV	212			*20.4*	2520			*20.4*	106			*20.4*	2090			*20.4*	277			*20.4*
Lead	5.4	24	8.67			*2.6*	9.59			*2.6*	10.6			*2.6*	11.2			*2.6*	12.9			*2.6*
Magnesium	NAV	NAV	4690			*32.5*	18100			*32.5*	18700			*32.5*	6130			*32.5*	6090			*32.5*
Manganese	NAV	NAV	69.9			*1.7*	86.1			*1.7*	86.9			*1.7*	55.4			*1.7*	52.6			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.09	J		*0.09*
Nickel	33	22	7.01	J		*4.2*	5.02	J		*4.2*	5.81	J		*4.2*	4.2	U		*4.2*	5.22	J		*4.2*
Potassium	NAV	NAV	3510			*38.8*	8680			*38.8*	8810			*38.8*	4430			*38.8*	4460			*38.8*
Sodium	NAV	NAV	54200			*13.9*	141000			*13.9*	148000			*13.9*	27400			*13.9*	27600			*13.9*
Thallium	10	NAV	2.4	U		*2.4*	4.88	J		*2.4*	5.13	J		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*
Zinc	85	81	50.9			*6.5*	53			*6.5*	44.6			*6.5*	41.7			*6.5*	38.1			*6.5*
Misc. (ug/L)																						
Hardness	NAV	NAV	NT				163253			*105*	NT				113133			*105*	NT			

See Notes at end of Table

Table D-1
Analytes Detected in Main Post Background Surface Water Samples
Page 3 of 4

Analyte	Sample ID / Sample Date / ESC FW-SW	ESC SW-SW	M8-SW11 6/21/10 Result	Lab Q	Val Q	MDL	M8-SW11-Diss 6/21/10 Result	Lab Q	Val Q	MDL	MP-SW1 6/25/10 Result	Lab Q	Val Q	MDL	MP-SW1-Diss 6/25/10 Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
Chloroform	140	NAV	0.34	U		*0.34*	NT				0.34	U		*0.34*	NT			
cis-1,2-Dichloroethene	NAV	NAV	0.35	U		*0.35*	NT				0.35	U		*0.35*	NT			
Tetrachloroethene	45	NAV	0.27	U		*0.27*	NT				0.27	U		*0.27*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.013	U		*0.013*	NT				0.021	U		*0.021*	NT			
Benzo(a)anthracene	0.025	NAV	0.013	U		*0.013*	NT				0.021	U		*0.021*	NT			
Benzoic acid	NAV	NAV	2.2	U		*2.2*	NT				12			*2.1*	NT			
1,2,4-Trichlorobenzene	30	NAV	0.021	U		*0.021*	NT				0.021	U		*0.021*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	34.3	J		*6.5*	6.5	U		*6.5*	56.6			*6.5*	12.6	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.73	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	33.5	J		*4*	31.4	J		*4*	37.2	J		*4*	31.8	J		*4*
Calcium	NAV	NAV	40700			*31.8*	38900			*31.8*	34700			*31.8*	31800			*31.8*
Iron	NAV	NAV	1510			*20.4*	387			*20.4*	2060			*20.4*	286			*20.4*
Lead	5.4	24	11.6			*2.6*	7.7			*2.6*	11.1			*2.6*	12.4			*2.6*
Magnesium	NAV	NAV	53800			*32.5*	51600			*32.5*	5920			*32.5*	5610			*32.5*
Manganese	NAV	NAV	106			*1.7*	101			*1.7*	55.9			*1.7*	48.5			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.11	J		*0.09*
Nickel	33	22	4.84	J		*4.2*	5.17	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Potassium	NAV	NAV	19900			*38.8*	19100			*38.8*	4330			*38.8*	4250			*38.8*
Sodium	NAV	NAV	433000			*13.9*	419000			*13.9*	26400			*13.9*	25800			*13.9*
Thallium	10	NAV	8.77	J		*2.4*	6.95	J		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*
Zinc	85	81	50.9			*6.5*	41.7			*6.5*	38.4			*6.5*	47.3			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	323391			*105*	NT				111125			*105*	NT			

See Notes at end of Table

Table D-1
Analytes Detected in Main Post Background Surface Water Samples
Page 4 of 4

Analyte	Sample ID / Sample Date	ESC	MP-SW2 6/25/10				MP-SW2-Diss 6/25/10				MP-SW3 6/25/10				MP-SW3-Diss 6/25/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
Chloroform	140	NAV	0.34	U		*0.34*	NT				0.34	U		*0.34*	NT			
cis-1,2-Dichloroethene	NAV	NAV	0.35	U		*0.35*	NT				3.3	J		*0.35*	NT			
Tetrachloroethene	45	NAV	0.27	U		*0.27*	NT				0.27	U		*0.27*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.052	J		*0.021*	NT				0.02	U		*0.02*	NT			
Benzo(a)anthracene	0.025	NAV	0.021	U		*0.021*	NT				0.02	U		*0.02*	NT			
Benzoic acid	NAV	NAV	2.1	U		*2.1*	NT				2	U		*2*	NT			
1,2,4-Trichlorobenzene	30	NAV	0.021	U		*0.021*	NT				0.02	U		*0.02*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	43.2	J		*6.5*	21.7	J		*6.5*	47.5	J		*6.5*	17.6	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	63.2			*4*	64.7			*4*	48.2	J		*4*	45.6	J		*4*
Calcium	NAV	NAV	29200			*31.8*	31000			*31.8*	27500			*31.8*	26900			*31.8*
Iron	NAV	NAV	1310			*20.4*	266			*20.4*	500			*20.4*	84.8			*20.4*
Lead	5.4	24	8.51			*2.6*	5.79	J		*2.6*	6.44			*2.6*	7.33			*2.6*
Magnesium	NAV	NAV	4450			*32.5*	4640			*32.5*	4080			*32.5*	4010			*32.5*
Manganese	NAV	NAV	90.7			*1.7*	88.8			*1.7*	36			*1.7*	32.1			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*
Nickel	33	22	9.22	J		*4.2*	8.67	J		*4.2*	15.8	J		*4.2*	7.37	J		*4.2*
Potassium	NAV	NAV	3120			*38.8*	3240			*38.8*	2730			*38.8*	2660			*38.8*
Sodium	NAV	NAV	51900			*13.9*	54300			*13.9*	26300			*13.9*	26200			*13.9*
Thallium	10	NAV	2.4	U		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*
Zinc	85	81	59.9			*6.5*	49.7			*6.5*	56.7			*6.5*	46.7			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	91126			*105*	NT				85389			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for nickel and zinc are based on minimum detected hardness in Main Post site and background samples (Appendix G)

Table D-2
Analytes Detected in Main Post Background Sediment Samples
Page 1 of 4

Analyte	Sample ID		M2-SD1				M2-SD2				M3-SD12				M3-SD13			
	Sample Date		6/25/10				6/24/10				6/21/10				6/25/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.02	J		*0.0039*	0.004	U		*0.004*	0.0041	U		*0.0041*	0.021	J		*0.0046*
Methylene chloride	0.159	NAV	0.0019	U		*0.0019*	0.0019	U		*0.0019*	0.0025	J		*0.0019*	0.0022	U		*0.0022*
Toluene	2.5	2.5	0.00084	U		*0.00084*	0.00084	U		*0.00084*	0.00087	U		*0.00087*	0.00098	U		*0.00098*
2-Butanone	NAV	NAV	0.0041	U		*0.0041*	0.0041	U		*0.0041*	0.0042	U		*0.0042*	0.0048	U		*0.0048*
SVOCs (mg/kg)																		
Acenaphthene	0.016	0.016	0.057	U		*0.057*	0.061	U		*0.061*	0.12	J		*0.013*	0.014	U		*0.014*
Acenaphthylene	0.044	0.044	0.051	U		*0.051*	0.054	U		*0.054*	0.011	U		*0.011*	0.013	U		*0.013*
Anthracene	0.22	0.085	0.11			*0.0024*	0.017	J		*0.0026*	0.14			*0.00054*	0.00061	U		*0.00061*
Benzo(a)anthracene	0.32	0.261	0.68			*0.0024*	0.11			*0.0019*	0.5			*0.0004*	0.00061	U		*0.00061*
Benzo(a)pyrene	0.37	0.43	0.58			*0.0024*	0.11			*0.0019*	0.51			*0.0004*	0.00061	U		*0.00061*
Benzo(b)fluoranthene	10.4	1.8	0.72	J		*0.066*	0.071	U		*0.071*	0.77			*0.015*	0.017	U		*0.017*
Benzo(g,h,i)perylene	0.17	0.17	0.41	J		*0.082*	0.088	U		*0.088*	0.38	J		*0.018*	0.021	U		*0.021*
Benzo(k)fluoranthene	0.24	0.24	0.28	J		*0.096*	0.1	U		*0.1*	0.28	J		*0.021*	0.024	U		*0.024*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.072	U		*0.072*	0.076	U		*0.076*	0.069	J		*0.016*	0.018	U		*0.018*
Butylbenzylphthalate	1.97	0.063	0.097	U		*0.097*	0.6	J		*0.1*	0.022	U		*0.022*	0.025	U		*0.025*
Chrysene	0.34	0.384	0.68	J		*0.092*	0.098	U		*0.098*	0.67			*0.02*	0.023	U		*0.023*
Dibenz(a,h)anthracene	0.06	0.063	0.058	U		*0.058*	0.062	U		*0.062*	0.088	J		*0.013*	0.015	U		*0.015*
Dibenzofuran	NAV	NAV	0.079	U		*0.079*	0.084	U		*0.084*	0.062	J		*0.018*	0.02	U		*0.02*
3,3'-Dichlorobenzidine	0.127	NAV	0.0024	U		*0.0024*	0.0026	U		*0.0026*	0.00054	U		*0.00054*	0.016			*0.00061*
Dimethylphthalate	NAV	NAV	0.55	J		*0.055*	0.43	J		*0.058*	0.47			*0.012*	0.66			*0.014*
Fluoranthene	0.75	0.6	1.4	J		*0.041*	0.043	U		*0.043*	1.7			*0.009*	0.01	U		*0.01*
Fluorene	0.19	0.019	0.077	U		*0.077*	0.082	U		*0.082*	0.13	J		*0.017*	0.019	U		*0.019*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.37	J		*0.068*	0.072	U		*0.072*	0.35	J		*0.015*	0.017	U		*0.017*
Phenanthrene	0.56	0.24	0.56	J		*0.055*	0.058	U		*0.058*	1.3			*0.012*	0.014	U		*0.014*
Pyrene	0.49	0.665	1.2	J		*0.049*	0.052	U		*0.052*	1.2			*0.011*	0.012	U		*0.012*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.0047	P		*0.00021*	0.0022	JP		*0.00022*	0.00023	U		*0.00023*	0.00026	U		*0.00026*
4,4'-DDE	0.005	0.0022	0.0017	JP		*0.00024*	0.00026	U		*0.00026*	0.00027	U		*0.00027*	0.00031	U		*0.00031*
PCBs (mg/kg)																		
Aroclor 1242	0.07	0.023	0.0026	U		*0.0026*	0.064			*0.0027*	0.0028	U		*0.0028*	0.0032	U		*0.0032*
Aroclor 1254	0.06	0.06	0.086	P		*0.0057*	0.0061	U		*0.0061*	0.0063	U		*0.0063*	0.0072	U		*0.0072*

See Notes at end of Table

Table D-2
Analytes Detected in Main Post Background Sediment Samples
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Analyte	Sample ID		M2-SD1				M2-SD2				M3-SD12				M3-SD13			
	Sample Date		6/25/10				6/24/10				6/21/10				6/25/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																		
Aluminum	25500	18000	2660			*0.91*	3280			*0.99*	3430			*0.92*	17600			*1.04*
Antimony	3	9.3	2.4	J		*0.6*	6.96			*0.66*	1.08	J		*0.61*	3.45			*0.69*
Arsenic	6	8.2	7.08			*0.36*	16.1			*0.39*	14			*0.36*	61.6			*0.41*
Barium	NAV	48	65.7			*0.43*	37.3			*0.47*	53.9			*0.44*	77.3			*0.49*
Beryllium	NAV	NAV	2.72			*0.06*	1.32			*0.07*	1.1			*0.07*	3.07			*0.07*
Cadmium	0.6	1.2	5.27			*0.06*	4.11			*0.07*	1.36			*0.07*	17.2			*0.07*
Calcium	NAV	NAV	446			*1.15*	638			*1.26*	2070			*1.17*	1.32	U		*1.32*
Chromium	26	81	57.5			*0.14*	60.3			*0.15*	45.8			*0.14*	125			*0.16*
Cobalt	50	10	13			*0.61*	11.2			*0.67*	3.32			*0.62*	6.3			*0.7*
Copper	16	34	60			*0.34*	165			*0.38*	13.1			*0.35*	0.4	U		*0.4*
Iron	NAV	NAV	72700			*1.43*	47300			*1.57*	41200			*1.46*	162000			*1.64*
Lead	31	47	945			*0.42*	44			*0.46*	31.8			*0.43*	30.4			*0.48*
Magnesium	NAV	NAV	1100			*4.94*	1220			*5.41*	1200			*5.02*	4650			*5.66*
Manganese	630	260	175			*0.2*	155			*0.22*	40.9			*0.21*	69.1			*0.23*
Mercury	0.2	0.15	0.026			*0.002*	0.073			*0.003*	0.026			*0.001*	0.02			*0.003*
Nickel	16	21	40.5			*0.5*	37.8			*0.54*	8.39			*0.5*	17.2			*0.57*
Potassium	NAV	NAV	1840			*3.77*	3000			*4.14*	3060			*3.84*	9790			*4.33*
Selenium	NAV	1	9.61			*0.44*	7.08			*0.48*	5.12			*0.45*	19			*0.51*
Silver	1	1	0.16	U		*0.16*	0.18	U		*0.18*	0.16	U		*0.16*	0.19	U		*0.19*
Sodium	NAV	NAV	229			*2.72*	159			*2.98*	155			*2.76*	312			*3.12*
Thallium	NAV	NAV	0.29	U		*0.29*	0.32	U		*0.32*	0.3	U		*0.3*	3.02			*0.33*
Vanadium	NAV	57	14.9			*0.64*	27.3			*0.7*	35.1			*0.65*	218			*0.73*
Zinc	120	150	243			*0.75*	169			*0.83*	160			*0.77*	117			*0.87*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	1200			*250*	900			*250*	2100			*250*	1700			*250*

See Notes at end of Table

Table D-2
Analytes Detected in Main Post Background Sediment Samples
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Analyte	Sample ID		M8-SD11				M14-SD14				MP-SD1				MP-SD2				MP-SD3			
	Sample Date		6/21/10				6/16/10				6/25/10				6/25/10				6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.038			*0.0041*	0.004	U		*0.004*	0.021	J		*0.0054*	0.34			*0.0068*	0.012	J		*0.004*
Methylene chloride	0.159	NAV	0.003	J		*0.0019*	0.0019	U		*0.0019*	0.0035	J		*0.0025*	0.0088	J		*0.0032*	0.0019	U		*0.0019*
Toluene	2.5	2.5	0.00086	U		*0.00086*	0.00085	U		*0.00085*	0.0011	U		*0.0011*	0.0014	U		*0.0014*	0.013			*0.00085*
2-Butanone	NAV	NAV	0.0094	J		*0.0042*	0.0041	U		*0.0041*	0.0055	U		*0.0055*	0.095			*0.007*	0.0041	U		*0.0041*
SVOCs (mg/kg)																						
Acenaphthene	0.016	0.016	0.013	U		*0.013*	0.013	U		*0.013*	0.016	U		*0.016*	0.11	J		*0.017*	0.062	U		*0.062*
Acenaphthylene	0.044	0.044	0.011	U		*0.011*	0.011	U		*0.011*	0.014	U		*0.014*	0.089	J		*0.016*	0.056	U		*0.056*
Anthracene	0.22	0.085	0.00053	U		*0.00053*	0.035			*0.00053*	0.00068	U		*0.00068*	0.21			*0.00074*	0.25			*0.0027*
Benzo(a)anthracene	0.32	0.261	0.018			*0.0004*	0.071			*0.00053*	0.00068	U		*0.00068*	0.44			*0.00074*	1.2			*0.0027*
Benzo(a)pyrene	0.37	0.43	0.025			*0.0004*	0.061			*0.00053*	0.00068	U		*0.00068*	0.19			*0.00074*	1.2			*0.0027*
Benzo(b)fluoranthene	10.4	1.8	0.015	U		*0.015*	0.066	J		*0.015*	0.018	U		*0.018*	0.54	J		*0.02*	1.8	J		*0.072*
Benzo(g,h,i)perylene	0.17	0.17	0.018	U		*0.018*	0.018	U		*0.018*	0.023	U		*0.023*	0.025	U		*0.025*	0.87	J		*0.09*
Benzo(k)fluoranthene	0.24	0.24	0.021	U		*0.021*	0.021	U		*0.021*	0.027	U		*0.027*	0.13	J		*0.029*	0.64	J		*0.1*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.016	U		*0.016*	0.016	U		*0.016*	0.02	U		*0.02*	0.022	U		*0.022*	0.078	U		*0.078*
Butylbenzylphthalate	1.97	0.063	0.021	U		*0.021*	0.021	U		*0.021*	0.027	U		*0.027*	0.03	U		*0.03*	0.11	U		*0.11*
Chrysene	0.34	0.384	0.02	U		*0.02*	0.064	J		*0.02*	0.026	U		*0.026*	0.91			*0.028*	1.7	J		*0.1*
Dibenz(a,h)anthracene	0.06	0.063	0.013	U		*0.013*	0.013	U		*0.013*	0.016	U		*0.016*	0.018	U		*0.018*	0.064	U		*0.064*
Dibenzofuran	NAV	NAV	0.017	U		*0.017*	0.017	U		*0.017*	0.022	U		*0.022*	0.082	J		*0.024*	0.086	U		*0.086*
3,3'-Dichlorobenzidine	0.127	NAV	0.00053	U		*0.00053*	0.00053	U		*0.00053*	0.00068	U		*0.00068*	0.00074	U		*0.00074*	0.0027	U		*0.0027*
Dimethylphthalate	NAV	NAV	0.48			*0.012*	0.28	J		*0.012*	0.61			*0.015*	0.79			*0.017*	0.71	J		*0.06*
Fluoranthene	0.75	0.6	0.064	J		*0.0089*	0.15	J		*0.0089*	0.011	U		*0.011*	4.0			*0.012*	4.5			*0.045*
Fluorene	0.19	0.019	0.017	U		*0.017*	0.017	U		*0.017*	0.021	U		*0.021*	0.32	J		*0.023*	0.084	U		*0.084*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.015	U		*0.015*	0.015	U		*0.015*	0.019	U		*0.019*	0.095	J		*0.021*	0.84	J		*0.074*
Phenanthrene	0.56	0.24	0.012	U		*0.012*	0.15	J		*0.012*	0.015	U		*0.015*	2.0			*0.017*	3.1			*0.06*
Pyrene	0.49	0.665	0.011	U		*0.011*	0.12	J		*0.011*	0.014	U		*0.014*	2.3			*0.015*	3.0			*0.053*
Pesticides (mg/kg)																						
4,4'-DDD	0.008	0.002	0.00023	U		*0.00023*	0.0022	JP		*0.00023*	0.00029	U		*0.00029*	0.00031	U		*0.00031*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.00027	U		*0.00027*	0.0034			*0.00027*	0.00034	U		*0.00034*	0.00037	U		*0.00037*	0.00027	U		*0.00027*
PCBs (mg/kg)																						
Aroclor 1242	0.07	0.023	0.0028	U		*0.0028*	0.0028	U		*0.0028*	0.0035	U		*0.0035*	0.0039	U		*0.0039*	0.0028	U		*0.0028*
Aroclor 1254	0.06	0.06	0.0062	U		*0.0062*	0.0063	U		*0.0063*	0.0079	U		*0.0079*	0.021	J		*0.0087*	0.0062	U		*0.0062*

See Notes at end of Table

Table D-2
Analytes Detected in Main Post Background Sediment Samples
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Analyte	Sample ID		M8-SD11				M14-SD14				MP-SD1				MP-SD2				MP-SD3			
	Sample Date		6/21/10				6/16/10				6/25/10				6/25/10				6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																						
Aluminum	25500	18000	4110			*0.97*	965			*0.69*	12800			*1.16*	11900			*1.28*	1660			*0.92*
Antimony	3	9.3	1.7	J		*0.65*	0.46	U		*0.46*	1.62	J		*0.77*	1.61	J		*0.85*	0.61	U		*0.61*
Arsenic	6	8.2	19.2			*0.38*	0.68	J		*0.27*	21.9			*0.45*	18.8			*0.5*	2.23			*0.36*
Barium	NAV	48	19			*0.46*	11.5			*0.33*	174			*0.55*	196			*0.61*	14.6			*0.44*
Beryllium	NAV	NAV	1.2			*0.07*	0.2	J		*0.05*	2.66			*0.08*	3.83			*0.09*	0.96			*0.07*
Cadmium	0.6	1.2	2.5			*0.07*	0.75			*0.05*	7.54			*0.08*	8.72			*0.09*	1.33			*0.07*
Calcium	NAV	NAV	1170			*1.23*	717			*0.88*	4310			*1.47*	1960			*1.63*	529			*1.17*
Chromium	26	81	53.3			*0.15*	9.24			*0.11*	116			*0.18*	94.3			*0.2*	27			*0.14*
Cobalt	50	10	5.98			*0.66*	1.05	J		*0.47*	12.1			*0.78*	16.8			*0.87*	1.6	J		*0.63*
Copper	16	34	0.37	U		*0.37*	1.88			*0.26*	0.44	U		*0.44*	22			*0.49*	3.93			*0.35*
Iron	NAV	NAV	58700			*1.53*	2960			*1.09*	93300			*1.83*	44300			*2.03*	9070			*1.46*
Lead	31	47	30.7			*0.45*	5.61			*0.32*	12.1			*0.54*	83.8			*0.6*	20.5			*0.43*
Magnesium	NAV	NAV	1510			*5.29*	192			*3.75*	4420			*6.3*	1390			*6.99*	425			*5.03*
Manganese	630	260	50.7			*0.22*	4.86			*0.16*	551			*0.26*	97.8			*0.29*	13.8			*0.21*
Mercury	0.2	0.15	0.055			*0.001*	0.002	U		*0.002*	0.034			*0.003*	0.424			*0.004*	0.021			*0.003*
Nickel	16	21	12.8			*0.53*	2.55			*0.38*	15.9			*0.63*	53.5			*0.7*	4.98			*0.5*
Potassium	NAV	NAV	2140			*4.04*	507			*2.86*	12000			*4.81*	2620			*5.34*	963			*3.84*
Selenium	NAV	1	7.73			*0.47*	0.95			*0.34*	12.4			*0.56*	7			*0.63*	1.73			*0.45*
Silver	1	1	0.17	U		*0.17*	0.12	U		*0.12*	0.21	U		*0.21*	11.2			*0.23*	0.16	U		*0.16*
Sodium	NAV	NAV	1230			*2.91*	28.6	J		*2.06*	192			*3.47*	366			*3.85*	69	J		*2.77*
Thallium	NAV	NAV	0.88	J		*0.31*	0.22	U		*0.22*	1.23	J		*0.37*	0.41	U		*0.41*	0.3	U		*0.3*
Vanadium	NAV	57	74			*0.68*	6.82			*0.48*	75.2			*0.81*	66			*0.9*	14.6			*0.65*
Zinc	120	150	149			*0.81*	31.4			*0.57*	107			*0.96*	423			*1.07*	62.5			*0.77*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	2900			*250*	1700			*250*	2100			*250*	6100			*250*	2400			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-3
Analytes Detected in Charles Wood Area Background Surface Water Samples

Analyte	Sample ID		CW3-SW7				CW3-SW7-Diss				CW6-SW6				CW6-SW6-Diss			
	Sample Date		6/28/10				6/28/10				6/24/10				6/24/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
Methyl-tert-butyl ether	51000	18000	3.8	J		*0.35*	NT				0.013	U		*0.013*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.11			*0.02*	NT				0.013	U		*0.013*	NT			
Pesticides (ug/L)																		
4,4'-DDD	NAV	NAV	0.008			*0.0007*	NT				0.0007	U		*0.0007*	NT			
PCBs (ug/L)																		
Aroclor 1242	0.014	0.03	0.007	U		*0.007*	NT				0.3			*0.007*	NT			
Metals (ug/L)																		
Aluminum	NAV	NAV	9500			*6.5*	119			*6.5*	146			*6.5*	14	J		*6.5*
Arsenic	150	36	20.7			*4.2*	6.83	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	131			*4*	73.8			*4*	80.8			*4*	81.3			*4*
Beryllium	3.6	NAV	0.8	J		*0.7*	0.7	U		*0.7*	0.7	U		*0.7*	0.7	U		*0.7*
Cadmium	0.14	8.8	2.07	J		*0.5*	0.5	U		*0.5*	1.13	J		*0.5*	0.8	J		*0.5*
Calcium	NAV	NAV	30300			*31.8*	29400			*31.8*	28400			*31.8*	28600			*31.8*
Chromium	19	50	55.5			*1.1*	2.55	J		*1.1*	1.1	U		*1.1*	1.1	U		*1.1*
Cobalt	24	NAV	7.94	J		*5.8*	5.8	U		*5.8*	29.4			*5.8*	28.7			*5.8*
Copper	6.5	3.1	9.99	J		*6.6*	6.6	U		*6.6*	6.6	U		*6.6*	6.6	U		*6.6*
Iron	NAV	NAV	38400			*20.4*	16200			*20.4*	2840			*20.4*	1440			*20.4*
Lead	5.4	24	69.7			*2.6*	2.6	U		*2.6*	7.94			*2.6*	6.32			*2.6*
Magnesium	NAV	NAV	14100			*32.5*	12300			*32.5*	5730			*32.5*	5900			*32.5*
Manganese	NAV	NAV	160			*1.7*	127			*1.7*	141			*1.7*	147			*1.7*
Mercury	0.77	0.94	0.41			*0.09*	0.1	J		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*
Nickel	34	22	14.5	J		*4.2*	4.2	U		*4.2*	32.6			*4.2*	31.2			*4.2*
Potassium	NAV	NAV	14300			*38.8*	12700			*38.8*	3370			*38.8*	3470			*38.8*
Sodium	NAV	NAV	119000			*13.9*	120000			*13.9*	66800			*13.9*	69900			*13.9*
Vanadium	12	NAV	60.1			*6.1*	6.91	J		*6.1*	6.1	U		*6.1*	6.1	U		*6.1*
Zinc	88	81	149			*6.5*	45.2			*6.5*	79.5			*6.5*	79.9			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	133738			*105*	NT				94486			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness in Charles Wood Area site and background samples (Appendix G).

Table D-4
Analytes Detected in Charles Wood Area Background Sediment Samples

Analyte	Sample ID		CW3-SD7				CW3-SD8				CW6-SD6			
	Sample Date		6/28/10				6/28/10				6/24/10			
	ESC													
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)														
Acetone	NAV	NAV	0.093	J		*0.02*	0.34			*0.015*	0.0039	U		*0.0039*
Methylene chloride	0.159	NAV	0.013	J		*0.0094*	0.0093	J		*0.0069*	0.0018	U		*0.0018*
Styrene	0.254	0.254	0.003	U		*0.003*	0.0022	U		*0.0022*	0.001	J		*0.00058*
Toluene	2.5	2.5	0.0043	U		*0.0043*	0.0031	U		*0.0031*	0.002	J		*0.00082*
2-Butanone	NAV	NAV	0.021	U		*0.021*	0.1	J		*0.015*	0.004	U		*0.004*
SVOCs (mg/kg)														
Acenaphthene	0.016	0.016	0.029	U		*0.029*	0.028	U		*0.028*	0.47	J		*0.061*
Acenaphthylene	0.044	0.044	0.026	U		*0.026*	0.025	U		*0.025*	1.6	J		*0.054*
Anthracene	0.22	0.085	0.011			*0.0012*	0.011			*0.0012*	0.3			*0.0026*
Benzo(a)anthracene	0.32	0.261	0.0012	U		*0.0012*	0.028			*0.0012*	1.0			*0.0019*
Benzo(a)pyrene	0.37	0.43	0.03			*0.0012*	0.034			*0.0012*	1.2			*0.0019*
Benzo(b)fluoranthene	10.4	1.8	0.034	U		*0.034*	0.033	U		*0.033*	2.1	J		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.042	U		*0.042*	0.041	U		*0.041*	0.89	J		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.049	U		*0.049*	0.047	U		*0.047*	0.74	J		*0.1*
Chrysene	0.34	0.384	0.047	U		*0.047*	0.046	U		*0.046*	1.9	J		*0.098*
Dibenzofuran	NAV	NAV	0.041	U		*0.041*	0.039	U		*0.039*	0.48	J		*0.084*
Dimethylphthalate	NAV	NAV	1.6			*0.028*	1.5			*0.027*	0.45	J		*0.058*
Fluoranthene	0.75	0.6	0.021	U		*0.021*	0.02	U		*0.02*	4.9			*0.043*
Fluorene	0.19	0.019	0.039	U		*0.039*	0.038	U		*0.038*	0.82	J		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.035	U		*0.035*	0.034	U		*0.034*	0.98	J		*0.072*
2-Methylnaphthalene	0.07	0.07	0.026	U		*0.026*	0.025	U		*0.025*	1.3	J		*0.054*
Naphthalene	0.16	0.16	0.036	U		*0.036*	0.035	U		*0.035*	4.4			*0.074*
Phenanthrene	0.56	0.24	0.028	U		*0.028*	0.027	U		*0.027*	8.3			*0.058*
Pyrene	0.49	0.665	0.025	U		*0.025*	0.024	U		*0.024*	3.3			*0.052*
Pesticides (mg/kg)														
4,4'-DDD	0.008	0.002	0.0031	J		*0.00053*	0.00051	U		*0.00051*	0.00022	U		*0.00022*
PCBs (mg/kg)	None detected													
Metals (mg/kg)														
Aluminum	25500	18000	10200			*2.26*	8680			*2.23*	860			*1.09*
Arsenic	6	8.2	4.84			*0.89*	5.43			*0.87*	0.68	J		*0.43*
Barium	NAV	48	101			*1.08*	140			*1.06*	4.41	J		*0.52*
Beryllium	NAV	NAV	1.14			*0.16*	1.09			*0.16*	0.38	J		*0.08*
Cadmium	0.6	1.2	1.08			*0.16*	0.78	J		*0.16*	0.38	J		*0.08*
Calcium	NAV	NAV	2480			*2.88*	2080			*2.84*	16.7	J		*1.38*
Chromium	26	81	60.7			*0.35*	97.3			*0.34*	75.8			*0.17*
Cobalt	50	10	3.0	J		*1.53*	3.74	J		*1.51*	8.94			*0.74*
Copper	16	34	7.02			*0.86*	7.09			*0.85*	2.49			*0.41*
Iron	NAV	NAV	14700			*3.58*	12200			*3.53*	9040			*1.72*
Lead	31	47	36			*1.05*	27			*1.03*	5.67			*0.5*
Magnesium	NAV	NAV	1900			*12.3*	1320			*12.1*	160			*5.92*
Manganese	630	260	35			*0.51*	69.1			*0.5*	4.36			*0.25*
Mercury	0.2	0.15	0.251			*0.006*	0.096			*0.006*	0.064			*0.002*
Nickel	16	21	11.5			*1.24*	9.51			*1.22*	56.2			*0.6*
Potassium	NAV	NAV	2000			*9.42*	1790			*9.28*	441			*4.53*
Selenium	NAV	1	3.15			*1.1*	4.15			*1.09*	1.82			*0.53*
Sodium	NAV	NAV	1290			*6.78*	4050			*6.68*	150			*3.26*
Vanadium	NAV	57	50.3			*1.59*	45.2			*1.56*	10.7			*0.76*
Zinc	120	150	84.9			*1.88*	58.6			*1.86*	15.3			*0.91*
Misc. (mg/kg)														
Total Organic Carbon	NAV	NAV	6900			*250*	8200			*250*	540			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-5
Analytes Detected in Charles Wood Area Downgradient Surface Water Samples

Analyte	Sample ID		CWA-SW1				CWA-SW1-Diss				CW6-SW5				CW6-SW5-Diss			
	Sample Date		6/24/10				6/24/10				6/24/10				6/24/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)																		
Hexachlorobutadiene	0.053	NAV	0.12			*0.022*	NT				0.022	U		*0.022*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)																		
Aroclor 1242	0.014	0.03	0.007	U		*0.007*	NT				0.13			*0.008*	NT			
Metals (ug/L)																		
Aluminum	NAV	NAV	58.4			*6.5*	11.4	J		*6.5*	130			*6.5*	16.3	J		*6.5*
Arsenic	150	36	10.2			*4.2*	7.47	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	76.1			*4*	58.5			*4*	69.4			*4*	65.6			*4*
Cadmium	0.17	8.8	0.5	U		*0.5*	0.5	U		*0.5*	0.52	J		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	45600			*31.8*	44500			*31.8*	30200			*31.8*	29600			*31.8*
Cobalt	24	NAV	5.8	U		*5.8*	5.8	U		*5.8*	16.6			*5.8*	16.5			*5.8*
Iron	NAV	NAV	10800			*20.4*	3660			*20.4*	2520			*20.4*	252			*20.4*
Lead	5.4	24	13.4			*2.6*	14			*2.6*	8.09			*2.6*	8.79			*2.6*
Magnesium	NAV	NAV	4540			*32.5*	4490			*32.5*	4830			*32.5*	4720			*32.5*
Manganese	NAV	NAV	591			*1.7*	564			*1.7*	113			*1.7*	109			*1.7*
Nickel	34	22	4.2	U		*4.2*	4.2	U		*4.2*	23			*4.2*	20.8			*4.2*
Potassium	NAV	NAV	5340			*38.8*	5290			*38.8*	3150			*38.8*	3100			*38.8*
Selenium	5	71	4.8	U		*4.8*	5.33	J		*4.8*	4.8	U		*4.8*	4.8	U		*4.8*
Sodium	NAV	NAV	36400			*13.9*	36100			*13.9*	55500			*13.9*	54700			*13.9*
Zinc	88	81	50.7			*6.5*	48.3			*6.5*	80.1			*6.5*	66.5			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	132498			*105*	NT				95205			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness in Charles Wood Area site and background samples (Appendix G).

Table D-6
Analytes Detected in Charles Wood Area Downgradient Sediment Samples

Analyte	Sample ID		CWA-SD1				CW6-SD5			
	Sample Date		6/24/10				6/24/10			
	ESC									
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)										
Acetone	NAV	NAV	0.021	J		*0.0051*	0.015	J		*0.004*
Methylene chloride	0.159	NAV	0.0032	J		*0.0024*	0.0019	U		*0.0019*
SVOCs (mg/kg)										
Acenaphthene	0.016	0.016	0.49	J		*0.079*	0.013	U		*0.013*
Anthracene	0.22	0.085	0.082			*0.0034*	0.0053			*0.00053*
Benzo(a)anthracene	0.32	0.261	0.031			*0.0025*	0.033			*0.0004*
Benzo(a)pyrene	0.37	0.43	0.02	J		*0.0025*	0.036			*0.0004*
Dimethylphthalate	NAV	NAV	0.53	J		*0.076*	0.43	J		*0.012*
Fluoranthene	0.75	0.6	0.057	U		*0.057*	0.093	J		*0.0089*
Phenanthrene	0.56	0.24	0.6	J		*0.076*	0.012	U		*0.012*
Pyrene	0.49	0.665	0.068	U		*0.068*	0.068	J		*0.011*
Pesticides (mg/kg)	None detected									
PCBs (mg/kg)										
Aroclor 1242	0.07	0.023	0.0035	U		*0.0035*	0.05			*0.0028*
Metals (mg/kg)										
Aluminum	25500	18000	4170			*1.14*	2170			*0.99*
Antimony	3	9.3	0.76	J		*0.76*	0.66	U		*0.66*
Arsenic	6	8.2	6.29			*0.45*	3.18			*0.39*
Barium	NAV	48	40.3			*0.54*	13.1			*0.47*
Beryllium	NAV	NAV	0.44			*0.08*	1.02			*0.07*
Cadmium	0.6	1.2	1.15			*0.08*	1.34			*0.07*
Calcium	NAV	NAV	5370			*1.45*	1.26	U		*1.26*
Chromium	26	81	32.8			*0.18*	50.2			*0.15*
Cobalt	50	10	3.36			*0.77*	5.82			*0.67*
Copper	16	34	15.6			*0.43*	4.63			*0.38*
Iron	NAV	NAV	14200			*1.8*	15700			*1.57*
Lead	31	47	32.4			*0.53*	13.4			*0.46*
Magnesium	NAV	NAV	1270			*6.19*	316			*5.41*
Manganese	630	260	59.6			*0.26*	4.9			*0.22*
Mercury	0.2	0.15	0.249			*0.003*	0.047			*0.003*
Nickel	16	21	8.06			*0.62*	29.7			*0.54*
Potassium	NAV	NAV	1560			*4.73*	871			*4.14*
Selenium	NAV	1	2.72			*0.55*	3.17			*0.48*
Sodium	NAV	NAV	238			*3.41*	133			*2.98*
Vanadium	NAV	57	24.1			*0.8*	19.9			*0.7*
Zinc	120	150	104			*0.95*	49.8			*0.83*
Misc. (mg/kg)										
Total Organic Carbon	NAV	NAV	3700			*250*	4700			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
J = Data indicates the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-7
Analytes Detected in Landfill M-2 Surface Water Samples

Analyte	Sample ID / Sample Date		M2-SW6 6/21/10				M2-SW6-Diss 6/21/10				M2-SW11 6/21/10				M2-SW11-Diss 6/21/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
cis-1,2-Dichloroethene	NAV	NAV	1.4	J		*0.35*	NT				1.6	J		*0.35*	NT			
Tetrachloroethene	45	NAV	0.79	J		*0.27*	NT				1.1	J		*0.27*	NT			
Trichloroethene	47	NAV	0.63	J		*0.28*	NT				0.73	J		*0.28*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.1	J		*0.012*	NT				0.11			*0.012*	NT			
Benzo(a)anthracene	0.025	NAV	0.23			*0.012*	NT				0.22			*0.012*	NT			
1,2,4-Trichlorobenzene	30	NAV	0.56			*0.021*	NT				0.02	U		*0.02*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	31.6	J		*6.5*	6.5	U		*6.5*	33	J		*6.5*	6.5	U		*6.5*
Barium	220	NAV	62.2			*4*	63			*4*	61.1			*4*	62.9			*4*
Calcium	NAV	NAV	30000			*31.8*	30600			*31.8*	29100			*31.8*	30000			*31.8*
Iron	NAV	NAV	1690			*20.4*	441			*20.4*	1740			*20.4*	399			*20.4*
Lead	5.4	24	6.36			*2.6*	7.86			*2.6*	6.2			*2.6*	10.1			*2.6*
Magnesium	NAV	NAV	4520			*32.5*	4620			*32.5*	4340			*32.5*	4510			*32.5*
Manganese	NAV	NAV	84.7			*1.7*	84.2			*1.7*	81.1			*1.7*	80.6			*1.7*
Nickel	41	22	8.8	J		*4.2*	8.79	J		*4.2*	9.27	J		*4.2*	8.64	J		*4.2*
Potassium	NAV	NAV	3410			*38.8*	3510			*38.8*	3270			*38.8*	3420			*38.8*
Sodium	NAV	NAV	50100			*13.9*	51600			*13.9*	49200			*13.9*	51700			*13.9*
Thallium	10	NAV	2.4	U		*2.4*	2.4	U		*2.4*	2.4	U		*2.4*	2.41	J		*2.4*
Zinc	104	81	68.1			*6.5*	37.5			*6.5*	44.7			*6.5*	46.3			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	93487			*105*	NT				90432			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID		M2-SD3				M2-SD4				M2-SD5				M2-SD6				M2-SD7			
	Sample Date		6/24/10				6/24/10				6/24/10				6/24/10				6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.026	J		*0.004*	0.0039	U		*0.0039*	0.0087	J		*0.004*	0.033	J		*0.0042*	0.015	J		*0.0039*
Methylene chloride	0.159	NAV	0.0033	J		*0.0019*	0.0026	J		*0.0018*	0.0019	U		*0.0019*	0.0033	J		*0.002*	0.0018	U		*0.0018*
2-Butanone	NAV	NAV	0.0041	U		*0.0041*	0.004	U		*0.004*	0.0041	U		*0.0041*	0.0043	U		*0.0043*	0.004	U		*0.004*
SVOCs (mg/kg)																						
Anthracene	0.22	0.085	0.027			*0.0027*	0.017	J		*0.0026*	0.016	J		*0.0027*	0.014	J		*0.0027*	0.025			*0.00052*
Benzo(a)anthracene	0.32	0.261	0.12			*0.002*	0.091			*0.0019*	0.086			*0.002*	0.075			*0.002*	0.12			*0.00052*
Benzo(a)pyrene	0.37	0.43	0.1			*0.002*	0.084			*0.0019*	0.078			*0.002*	0.066			*0.002*	0.12			*0.00052*
Benzo(b)fluoranthene	10.4	1.8	0.072	U		*0.072*	0.071	U		*0.071*	0.072	U		*0.072*	0.074	U		*0.074*	0.27	J		*0.014*
Benzo(g,h,i)perylene	0.17	0.17	0.09	U		*0.09*	0.087	U		*0.087*	0.09	U		*0.09*	0.092	U		*0.092*	0.17	J		*0.017*
Benzo(k)fluoranthene	0.24	0.24	0.1	U		*0.1*	0.1	U		*0.1*	0.1	U		*0.1*	0.11	U		*0.11*	0.14	J		*0.02*
Benzoic acid	NAV	NAV	0.44	U		*0.44*	0.43	U		*0.43*	0.44	U		*0.44*	0.45	U		*0.45*	0.7	J		*0.086*
bis(2-Ethylhexyl)phthalate	0.182	0.182	0.078	U		*0.078*	0.076	U		*0.076*	0.078	U		*0.078*	0.08	U		*0.08*	0.14	J		*0.015*
Butylbenzylphthalate	1.97	0.063	0.11	U		*0.11*	0.1	U		*0.1*	0.11	U		*0.11*	0.11	U		*0.11*	0.07	J		*0.021*
Chrysene	0.34	0.384	0.1	U		*0.1*	0.098	U		*0.098*	0.1	U		*0.1*	0.1	U		*0.1*	0.24	J		*0.02*
Dibenz(a,h)anthracene	0.06	0.063	0.064	U		*0.064*	0.062	U		*0.062*	0.064	U		*0.064*	0.065	U		*0.065*	0.1	J		*0.012*
Dimethylphthalate	NAV	NAV	0.59	J		*0.06*	0.56	J		*0.058*	0.49	J		*0.06*	0.55	J		*0.061*	0.57			*0.012*
Di-n-butylphthalate	1.114	0.058	0.17	U		*0.17*	0.17	U		*0.17*	0.17	U		*0.17*	0.18	U		*0.18*	0.06	J		*0.034*
Di-n-octylphthalate	NAV	NAV	0.025	U		*0.025*	0.025	U		*0.025*	0.025	U		*0.025*	0.026	U		*0.026*	0.073	J		*0.0049*
2,4-Dinitrophenol	0.00621	NAV	0.23	U		*0.23*	0.22	U		*0.22*	0.23	U		*0.23*	0.23	U		*0.23*	1.1			*0.044*
Fluoranthene	0.75	0.6	0.36	J		*0.045*	0.043	U		*0.043*	0.045	U		*0.045*	0.046	U		*0.046*	0.44			*0.0087*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.074	U		*0.074*	0.072	U		*0.072*	0.074	U		*0.074*	0.076	U		*0.076*	0.16	J		*0.014*
Pentachlorophenol	23	0.017	0.15	U		*0.15*	0.15	U		*0.15*	0.15	U		*0.15*	0.16	U		*0.16*	0.35	J		*0.03*
Phenanthrene	0.56	0.24	0.06	U		*0.06*	0.058	U		*0.058*	0.06	U		*0.06*	0.061	U		*0.061*	0.24	J		*0.012*
Pyrene	0.49	0.665	0.053	U		*0.053*	0.052	U		*0.052*	0.053	U		*0.053*	0.055	U		*0.055*	0.37	J		*0.01*
Pesticides (mg/kg)																						
alpha-Chlordane	0.007	0.007	0.00019	U		*0.00019*	0.00018	U		*0.00018*	0.00019	U		*0.00019*	0.00019	U		*0.00019*	0.00018	U		*0.00018*
4,4'-DDD	0.008	0.002	0.00023	U		*0.00023*	0.0015	JP		*0.00022*	0.00023	U		*0.00023*	0.0039	P		*0.00023*	0.00022	U		*0.00022*
4,4'-DDE	0.005	0.0022	0.00027	U		*0.00027*	0.00026	U		*0.00026*	0.00027	U		*0.00027*	0.0017	JP		*0.00027*	0.00026	U		*0.00026*
4,4'-DDT	0.008	0.001	0.00019	U		*0.00019*	0.00018	U		*0.00018*	0.00019	U		*0.00019*	0.00019	U		*0.00019*	0.00018	U		*0.00018*
PCBs (mg/kg)																						
Aroclor 1242	0.07	0.023	0.032			*0.0028*	0.03	P		*0.0027*	0.023	J		*0.0028*	0.12			*0.0029*	0.027			*0.0027*
Aroclor 1254	0.06	0.06	0.0062	U		*0.0062*	0.0061	U		*0.0061*	0.0062	U		*0.0062*	0.0064	U		*0.0064*	0.025			*0.0061*
Aroclor 1260	0.005	0.005	0.005	U		*0.005*	0.0048	U		*0.0048*	0.005	U		*0.005*	0.0051	U		*0.0051*	0.0048	U		*0.0048*

See Notes at end of Table

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID / Sample Date		M2-SD3 6/24/10				M2-SD4 6/24/10				M2-SD5 6/24/10				M2-SD6 6/24/10				M2-SD7 6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																						
Aluminum	25500	18000	2840			*0.88*	4090			*0.74*	3310			*1.01*	3710			*0.9*	4050			*1.09*
Antimony	3	9.3	0.77	J		*0.59*	0.88	J		*0.49*	0.78	J		*0.67*	1.04	J		*0.6*	0.96	J		*0.72*
Arsenic	6	8.2	2.92			*0.35*	4.6			*0.29*	5.34			*0.4*	3.3			*0.36*	3.6			*0.43*
Barium	NAV	48	38.4			*0.42*	48.7			*0.35*	55			*0.48*	34.4			*0.43*	64.5			*0.52*
Beryllium	NAV	NAV	0.91			*0.06*	1.43			*0.05*	1.17			*0.07*	1.17			*0.06*	1.32			*0.08*
Cadmium	0.6	1.2	1.54			*0.06*	2.12			*0.05*	1.93			*0.07*	2.03			*0.06*	1.55			*0.08*
Calcium	NAV	NAV	937			*1.12*	372			*0.94*	428			*1.29*	710			*1.15*	1120			*1.38*
Chromium	26	81	31.8			*0.14*	48.5			*0.11*	42.5			*0.16*	42.4			*0.14*	43.3			*0.17*
Cobalt	50	10	4.6			*0.6*	6.19			*0.5*	6.92			*0.69*	10.7			*0.61*	4.98			*0.74*
Copper	16	34	2.43			*0.34*	1.85			*0.28*	3.4			*0.38*	22.5			*0.34*	0.89	J		*0.41*
Iron	NAV	NAV	20300			*1.4*	25800			*1.17*	24400			*1.6*	23800			*1.43*	22800			*1.72*
Lead	31	47	19.6			*0.41*	52.8			*0.34*	31.2			*0.47*	40.3			*0.42*	35.4			*0.5*
Magnesium	NAV	NAV	1100			*4.81*	1570			*4.04*	1140			*5.51*	1560			*4.93*	1550			*5.92*
Manganese	630	260	17.6			*0.2*	14.9			*0.17*	17.1			*0.23*	14.3			*0.2*	13.6			*0.25*
Mercury	0.2	0.15	0.067			*0.003*	0.081			*0.002*	0.149			*0.003*	0.21			*0.003*	0.11			*0.003*
Nickel	16	21	9.37			*0.48*	13.1			*0.41*	12.7			*0.55*	29.2			*0.5*	10.8			*0.59*
Potassium	NAV	NAV	2870			*3.68*	4160			*3.09*	3130			*4.21*	4310			*3.77*	4170			*4.52*
Selenium	NAV	1	3.4			*0.43*	3.79			*0.36*	3.78			*0.49*	3.57			*0.44*	3.4			*0.53*
Sodium	NAV	NAV	152			*2.65*	114			*2.22*	148			*3.03*	143			*2.71*	153			*3.26*
Thallium	NAV	NAV	0.28	U		*0.28*	0.24	U		*0.24*	0.32	U		*0.32*	0.29	U		*0.29*	0.35	U		*0.35*
Vanadium	NAV	57	16.4			*0.62*	19			*0.52*	21.4			*0.71*	18.4			*0.63*	19.4			*0.76*
Zinc	120	150	96			*0.74*	107			*0.62*	103			*0.84*	99.5			*0.75*	91.6			*0.9*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	2400			*250*	1300			*250*	2000			*250*	2900			*250*	1400			*250*

See Notes at end of Table

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID / Sample Date		M2-SD8 6/25/10				DUP-SD05 6/25/10				M2-SD9 6/25/10				M2-SD10 6/25/10				M2-SD11 6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.097			*0.0046*	0.021	J		*0.0052*	0.004	U		*0.004*	0.053			*0.0064*	0.0052	U		*0.0052*
Methylene chloride	0.159	NAV	0.0035	J		*0.0022*	0.0025	U		*0.0025*	0.0019	U		*0.0019*	0.005	J		*0.003*	0.0038	J		*0.0025*
2-Butanone	NAV	NAV	0.024	J		*0.0047*	0.0054	U		*0.0054*	0.0041	U		*0.0041*	0.017	J		*0.0066*	0.0054	U		*0.0054*
SVOCs (mg/kg)																						
Anthracene	0.22	0.085	0.00061	U		*0.00061*	0.011			*0.00068*	0.02			*0.00052*	0.0031	U		*0.0031*	0.018			*0.00053*
Benzo(a)anthracene	0.32	0.261	0.0031	J		*0.00061*	0.073			*0.00068*	0.1			*0.00052*	0.016	J		*0.0031*	0.12			*0.00053*
Benzo(a)pyrene	0.37	0.43	0.0031	J		*0.00061*	0.049			*0.00068*	0.091			*0.00052*	0.016	J		*0.0031*	0.11			*0.00053*
Benzo(b)fluoranthene	10.4	1.8	0.017	U		*0.017*	0.018	U		*0.018*	0.13	J		*0.014*	0.085	U		*0.085*	0.19	J		*0.014*
Benzo(g,h,i)perylene	0.17	0.17	0.021	U		*0.021*	0.023	U		*0.023*	0.066	J		*0.018*	0.11	U		*0.11*	0.095	J		*0.018*
Benzo(k)fluoranthene	0.24	0.24	0.024	U		*0.024*	0.027	U		*0.027*	0.021	U		*0.021*	0.12	U		*0.12*	0.07	J		*0.021*
Benzoic acid	NAV	NAV	0.1	U		*0.1*	0.11	U		*0.11*	0.087	U		*0.087*	0.51	U		*0.51*	0.088	U		*0.088*
bis(2-Ethylhexyl)phthalate	0.182	0.182	0.018	U		*0.018*	0.02	U		*0.02*	0.015	U		*0.015*	0.092	U		*0.092*	0.016	U		*0.016*
Butylbenzylphthalate	1.97	0.063	0.025	U		*0.025*	0.027	U		*0.027*	0.021	U		*0.021*	0.12	U		*0.12*	0.021	U		*0.021*
Chrysene	0.34	0.384	0.023	U		*0.023*	0.026	U		*0.026*	0.12	J		*0.02*	0.12	U		*0.12*	0.17	J		*0.02*
Dibenz(a,h)anthracene	0.06	0.063	0.015	U		*0.015*	0.016	U		*0.016*	0.013	U		*0.013*	0.075	U		*0.075*	0.013	U		*0.013*
Dimethylphthalate	NAV	NAV	0.65			*0.014*	0.65			*0.015*	0.61			*0.012*	0.72	J		*0.07*	0.58			*0.012*
Di-n-butylphthalate	1.114	0.058	0.04	U		*0.04*	0.044	U		*0.044*	0.034	U		*0.034*	0.2	U		*0.2*	0.035	U		*0.035*
Di-n-octylphthalate	NAV	NAV	0.0058	U		*0.0058*	0.0064	U		*0.0064*	0.005	U		*0.005*	0.03	U		*0.03*	0.005	U		*0.005*
2,4-Dinitrophenol	0.00621	NAV	0.052	U		*0.052*	0.057	U		*0.057*	0.044	U		*0.044*	0.26	U		*0.26*	0.045	U		*0.045*
Fluoranthene	0.75	0.6	0.01	U		*0.01*	0.12	J		*0.011*	0.24	J		*0.0088*	0.052	U		*0.052*	0.38	J		*0.0089*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.017	U		*0.017*	0.019	U		*0.019*	0.067	J		*0.015*	0.087	U		*0.087*	0.098	J		*0.015*
Pentachlorophenol	23	0.017	0.035	U		*0.035*	0.039	U		*0.039*	0.03	U		*0.03*	0.18	U		*0.18*	0.03	U		*0.03*
Phenanthrene	0.56	0.24	0.014	U		*0.014*	0.015	U		*0.015*	0.083	J		*0.012*	0.07	U		*0.07*	0.18	J		*0.012*
Pyrene	0.49	0.665	0.012	U		*0.012*	0.11	J		*0.014*	0.18	J		*0.01*	0.062	U		*0.062*	0.27	J		*0.011*
Pesticides (mg/kg)																						
alpha-Chlordane	0.007	0.007	0.00021	U		*0.00021*	0.00024	U		*0.00024*	0.00019	U		*0.00019*	0.00022	U		*0.00022*	0.00019	U		*0.00019*
4,4'-DDD	0.008	0.002	0.00026	U		*0.00026*	0.00029	U		*0.00029*	0.0036			*0.00023*	0.00027	U		*0.00027*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.00031	U		*0.00031*	0.00034	U		*0.00034*	0.0015	J		*0.00027*	0.00031	U		*0.00031*	0.00027	U		*0.00027*
4,4'-DDT	0.008	0.001	0.00021	U		*0.00021*	0.00024	U		*0.00024*	0.0018	J		*0.00019*	0.00022	U		*0.00022*	0.00019	U		*0.00019*
PCBs (mg/kg)																						
Aroclor 1242	0.07	0.023	0.0032	U		*0.0032*	0.0036	U		*0.0036*	0.018	J		*0.0028*	0.0033	U		*0.0033*	0.0028	U		*0.0028*
Aroclor 1254	0.06	0.06	0.0072	U		*0.0072*	0.0079	U		*0.0079*	0.0062	U		*0.0062*	0.0073	U		*0.0073*	0.027			*0.0062*
Aroclor 1260	0.005	0.005	0.01	J		*0.0057*	0.04			*0.0063*	0.005	U		*0.005*	0.0058	U		*0.0058*	0.005	U		*0.005*

See Notes at end of Table

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID / Sample Date		M2-SD8 6/25/10				DUP-SD05 6/25/10				M2-SD9 6/25/10				M2-SD10 6/25/10				M2-SD11 6/25/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																						
Aluminum	25500	18000	5660			*1.01*	10400			*1.04*	3570			*0.72*	6570			*1.02*	3980			*0.66*
Antimony	3	9.3	0.96	J		*0.68*	1.41	J		*0.69*	0.74	J		*0.48*	0.68	U		*0.68*	0.7	J		*0.44*
Arsenic	6	8.2	6			*0.4*	5.65			*0.41*	3.93			*0.28*	4.55			*0.4*	3.35			*0.26*
Barium	NAV	48	78.3			*0.48*	117			*0.49*	45.3			*0.34*	92			*0.49*	33.6			*0.31*
Beryllium	NAV	NAV	1.41			*0.07*	2.12			*0.07*	1.18			*0.05*	1.6			*0.07*	1.2			*0.05*
Cadmium	0.6	1.2	2.16			*0.07*	2.76			*0.07*	1.73			*0.05*	2.21			*0.07*	1.54			*0.05*
Calcium	NAV	NAV	1880			*1.29*	2490			*1.32*	1110			*0.91*	3090			*1.3*	670			*0.84*
Chromium	26	81	67.7			*0.16*	125			*0.16*	37.2			*0.11*	65.5			*0.16*	43.2			*0.1*
Cobalt	50	10	6.44			*0.69*	3.74			*0.71*	5.06			*0.49*	5.32			*0.69*	4.37			*0.45*
Copper	16	34	0.39	U		*0.39*	0.4	U		*0.4*	1.94			*0.27*	2.16			*0.39*	0.25	U		*0.25*
Iron	NAV	NAV	21800			*1.6*	35500			*1.65*	24600			*1.14*	20800			*1.62*	21700			*1.05*
Lead	31	47	6.66			*0.47*	6.95			*0.48*	15.4			*0.33*	9.76			*0.48*	23.5			*0.31*
Magnesium	NAV	NAV	1810			*5.52*	3940			*5.67*	1440			*3.91*	1460			*5.58*	1600			*3.6*
Manganese	630	260	45.5			*0.23*	54.2			*0.24*	29.5			*0.16*	38.4			*0.23*	9.74			*0.15*
Mercury	0.2	0.15	0.128			*0.003*	0.122			*0.003*	0.064			*0.002*	0.199			*0.003*	0.056			*0.003*
Nickel	16	21	15.9			*0.55*	11.4			*0.57*	8.98			*0.39*	15.4			*0.56*	8.73			*0.36*
Potassium	NAV	NAV	4060			*4.22*	9050			*4.33*	3960			*2.99*	2320			*4.27*	4420			*2.75*
Selenium	NAV	1	4.55			*0.49*	6.24			*0.51*	3.85			*0.35*	4.57			*0.5*	3.18			*0.32*
Sodium	NAV	NAV	85.8	J		*3.04*	244			*3.12*	109			*2.15*	147			*3.07*	105			*1.98*
Thallium	NAV	NAV	0.33	U		*0.33*	0.39	J		*0.33*	0.28	J		*0.23*	0.33	U		*0.33*	0.29	J		*0.21*
Vanadium	NAV	57	32.3			*0.71*	48.3			*0.73*	24.7			*0.5*	40.4			*0.72*	16.7			*0.46*
Zinc	120	150	73.2			*0.84*	72.6			*0.87*	83.4			*0.6*	67.1			*0.85*	68.7			*0.55*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	6500			*250*	2400			*250*	1100			*250*	4100			*250*	1800			*250*

See Notes at end of Table

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID		M2-SD12				M2-SD13				M2-SD14			
	Sample Date		6/25/10				6/25/10				6/24/10			
	ESC		Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
	FW-SED	SW-SED												
VOCs (mg/kg)														
Acetone	NAV	NAV	0.18			*0.0079*	0.0088	J		*0.004*	0.0041	U		*0.0041*
Methylene chloride	0.159	NAV	0.0099	J		*0.0037*	0.0019	U		*0.0019*	0.0023	J		*0.0019*
2-Butanone	NAV	NAV	0.055	J		*0.0081*	0.0041	U		*0.0041*	0.0042	U		*0.0042*
SVOCs (mg/kg)														
Anthracene	0.22	0.085	0.0011	U		*0.0011*	0.057			*0.0026*	0.043			*0.0027*
Benzo(a)anthracene	0.32	0.261	0.007	J		*0.0011*	0.29			*0.0026*	0.19			*0.002*
Benzo(a)pyrene	0.37	0.43	0.0053	J		*0.0011*	0.27			*0.0026*	0.2			*0.002*
Benzo(b)fluoranthene	10.4	1.8	0.029	U		*0.029*	0.39	J		*0.072*	0.073	U		*0.073*
Benzo(g,h,i)perylene	0.17	0.17	0.035	U		*0.035*	0.089	U		*0.089*	0.091	U		*0.091*
Benzo(k)fluoranthene	0.24	0.24	0.041	U		*0.041*	0.1	U		*0.1*	0.11	U		*0.11*
Benzoic acid	NAV	NAV	0.17	U		*0.17*	0.43	U		*0.43*	0.44	U		*0.44*
bis(2-Ethylhexyl)phthalate	0.182	0.182	0.031	U		*0.031*	0.28	J		*0.077*	0.079	U		*0.079*
Butylbenzylphthalate	1.97	0.063	0.042	U		*0.042*	0.1	U		*0.1*	0.11	U		*0.11*
Chrysene	0.34	0.384	0.04	U		*0.04*	0.37	J		*0.099*	0.1	U		*0.1*
Dibenz(a,h)anthracene	0.06	0.063	0.025	U		*0.025*	0.063	U		*0.063*	0.065	U		*0.065*
Dimethylphthalate	NAV	NAV	1.1			*0.024*	0.58	J		*0.059*	0.36	J		*0.061*
Di-n-butylphthalate	1.114	0.058	0.069	U		*0.069*	0.17	U		*0.17*	0.18	U		*0.18*
Di-n-octylphthalate	NAV	NAV	0.01	U		*0.01*	0.025	U		*0.025*	0.026	U		*0.026*
2,4-Dinitrophenol	0.00621	NAV	0.089	U		*0.089*	0.22	U		*0.22*	0.23	U		*0.23*
Fluoranthene	0.75	0.6	0.018	U		*0.018*	0.92	J		*0.044*	0.42	J		*0.045*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.029	U		*0.029*	0.073	U		*0.073*	0.075	U		*0.075*
Pentachlorophenol	23	0.017	0.06	U		*0.06*	0.15	U		*0.15*	0.15	U		*0.15*
Phenanthrene	0.56	0.24	0.024	U		*0.024*	0.059	U		*0.059*	0.061	U		*0.061*
Pyrene	0.49	0.665	0.021	U		*0.021*	0.71	J		*0.052*	0.33	J		*0.054*
Pesticides (mg/kg)														
alpha-Chlordane	0.007	0.007	0.00037	U		*0.00037*	0.0012	JP		*0.00018*	0.00019	U		*0.00019*
4,4'-DDD	0.008	0.002	0.00045	U		*0.00045*	0.0017	JP		*0.00022*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.00052	U		*0.00052*	0.0012	JP		*0.00026*	0.00027	U		*0.00027*
4,4'-DDT	0.008	0.001	0.00037	U		*0.00037*	0.00018	U		*0.00018*	0.00019	U		*0.00019*
PCBs (mg/kg)														
Aroclor 1242	0.07	0.023	0.0055	U		*0.0055*	0.0028	U		*0.0028*	0.0028	U		*0.0028*
Aroclor 1254	0.06	0.06	0.012	U		*0.012*	0.064			*0.0061*	0.0063	U		*0.0063*
Aroclor 1260	0.005	0.005	0.0098	U		*0.0098*	0.0049	U		*0.0049*	0.005	U		*0.005*

See Notes at end of Table

Table D-8
Analytes Detected in Landfill M-2 Sediment Samples
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Analyte	Sample ID		M2-SD12				M2-SD13				M2-SD14			
	Sample Date		6/25/10				6/25/10				6/24/10			
	ESC		Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
	FW-SED	SW-SED												
Metals (mg/kg)														
Aluminum	25500	18000	12800			*2.12*	3730			*0.9*	3630			*0.98*
Antimony	3	9.3	1.41	U		*1.41*	0.75	J		*0.6*	0.83	J		*0.65*
Arsenic	6	8.2	8.09			*0.83*	3.83			*0.35*	3.49			*0.38*
Barium	NAV	48	356			*1.01*	41			*0.43*	38.1			*0.46*
Beryllium	NAV	NAV	2.35			*0.15*	1.18			*0.06*	1.14			*0.07*
Cadmium	0.6	1.2	2.09			*0.15*	1.59			*0.06*	1.44			*0.07*
Calcium	NAV	NAV	3730			*2.7*	795			*1.14*	1230			*1.24*
Chromium	26	81	111			*0.33*	37.7			*0.14*	42			*0.15*
Cobalt	50	10	2.72	J		*1.44*	5.58			*0.61*	5.28			*0.66*
Copper	16	34	0.81	U		*0.81*	1.43			*0.34*	0.37	U		*0.37*
Iron	NAV	NAV	33500			*3.36*	21700			*1.42*	22200			*1.55*
Lead	31	47	7.36			*0.98*	24			*0.42*	19.7			*0.45*
Magnesium	NAV	NAV	3300			*11.6*	1250			*4.89*	1590			*5.32*
Manganese	630	260	18			*0.48*	24.5			*0.2*	26.6			*0.22*
Mercury	0.2	0.15	0.041			*0.005*	0.076			*0.002*	0.045			*0.002*
Nickel	16	21	14.4			*1.16*	10.5			*0.49*	8.85			*0.53*
Potassium	NAV	NAV	5820			*8.83*	3100			*3.73*	4170			*4.07*
Selenium	NAV	1	6.6			*1.03*	3.34			*0.44*	3.6			*0.48*
Sodium	NAV	NAV	894			*6.36*	165			*2.69*	216			*2.93*
Thallium	NAV	NAV	0.68	U		*0.68*	0.29	U		*0.29*	0.31	U		*0.31*
Vanadium	NAV	57	42.9			*1.49*	18.4			*0.63*	18.2			*0.69*
Zinc	120	150	71.2			*1.77*	82.1			*0.75*	83.9			*0.81*
Misc. (mg/kg)														
Total Organic Carbon	NAV	NAV	5800			*250*	1800			*250*	2000			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-9
Analytes Detected in Landfill M-3 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	M3-SW3 6/21/10				M3-SW3-Diss 6/21/10				M3-SW6 6/21/10				M3-SW6-Diss 6/21/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	31.9	J		*6.5*	15.6	J		*6.5*	49.4	J		*6.5*	6.5	U		*6.5*
Arsenic	150	36	6.03	J		*4.2*	4.2	U		*4.2*	5.01	J		*4.2*	4.2	U		*4.2*
Barium	220	NAV	72.8			*4*	74.7			*4*	56.3			*4*	55.1			*4*
Calcium	NAV	NAV	56200			*31.8*	59600			*31.8*	41900			*31.8*	43100			*31.8*
Iron	NAV	NAV	1960			*20.4*	63.8			*20.4*	2370			*20.4*	140			*20.4*
Lead	5.4	24	8.11			*2.6*	9.15			*2.6*	9.96			*2.6*	9.54			*2.6*
Magnesium	NAV	NAV	90300			*32.5*	100000			*32.5*	38300			*32.5*	39700			*32.5*
Manganese	NAV	NAV	178			*1.7*	181			*1.7*	134			*1.7*	134			*1.7*
Nickel	100	22	7.43	J		*4.2*	6.62	J		*4.2*	7.34	J		*4.2*	5.66	J		*4.2*
Potassium	NAV	NAV	32100			*38.8*	35200			*38.8*	16100			*38.8*	16600			*38.8*
Sodium	NAV	NAV	727000			*13.9*	814000			*13.9*	328000			*13.9*	339000			*13.9*
Thallium	10	NAV	8.66	J		*2.4*	7.53	J		*2.4*	7.89	J		*2.4*	5.6	J		*2.4*
Zinc	257	81	52.7			*6.5*	36.3			*6.5*	44.3			*6.5*	44.4			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	512017			*105*	NT				262570			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
ESC = Ecological Screening Criteria (see Section 3.3)
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD1				M3-SD2				M3-SD3				M3-SD4			
	Sample Date		6/18/10				6/18/10				6/18/10				6/18/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.077	J		*0.01*	0.079	J		*0.014*	0.048	J		*0.0084*	0.013	J		*0.0044*
Chlorobenzene	0.291	NAV	0.0017	U		*0.0017*	0.0023	U		*0.0023*	0.0014	U		*0.0014*	0.00072	U		*0.00072*
1,2-Dichlorobenzene	0.294	0.013	0.0021	U		*0.0021*	0.0029	U		*0.0029*	0.0017	U		*0.0017*	0.00089	U		*0.00089*
Methylene chloride	0.159	NAV	0.029	B		*0.0047*	0.032	B		*0.0066*	0.025	B		*0.004*	0.017	B		*0.002*
Styrene	0.254	NAV	0.0015	U		*0.0015*	0.0053	J		*0.0021*	0.0013	U		*0.0013*	0.00065	U		*0.00065*
2-Butanone	NAV	NAV	0.032	J		*0.01*	0.031	J		*0.014*	0.015	J		*0.0087*	0.0045	U		*0.0045*
Carbon disulfide	NAV	NAV	0.0035	U		*0.0035*	0.0055	J		*0.0049*	0.003	U		*0.003*	0.0015	U		*0.0015*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.0095			*0.00095*	0.0083	J		*0.0011*	0.0071			*0.00085*	0.01			*0.00055*
Benzo(a)anthracene	0.32	0.261	0.042			*0.00071*	0.052			*0.00083*	0.048			*0.00064*	0.063			*0.00041*
Benzo(a)pyrene	0.37	0.43	0.059			*0.00071*	0.079			*0.00083*	0.068			*0.00064*	0.078			*0.00041*
Benzo(b)fluoranthene	10.4	1.8	0.026	U		*0.026*	0.03	U		*0.03*	0.096	J		*0.023*	0.16	J		*0.015*
Benzo(g,h,i)perylene	0.17	0.17	0.032	U		*0.032*	0.037	U		*0.037*	0.029	U		*0.029*	0.087	J		*0.018*
Benzo(k)fluoranthene	0.24	0.24	0.037	U		*0.037*	0.044	U		*0.044*	0.033	U		*0.033*	0.071	J		*0.021*
Benzoic acid	NAV	NAV	0.92	U		*0.92*	1.1	U		*1.1*	0.82	U		*0.82*	0.53	U		*0.53*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.028	U		*0.028*	0.033	U		*0.033*	0.025	U		*0.025*	0.06	J		*0.016*
Chrysene	0.34	0.384	0.036	U		*0.036*	0.042	U		*0.042*	0.032	U		*0.032*	0.12	J		*0.021*
Dimethylphthalate	NAV	NAV	0.7	J		*0.021*	0.81	J		*0.025*	0.58	J		*0.019*	0.44	J		*0.012*
2,4-Dinitrophenol	0.00621	NAV	0.08	U		*0.08*	0.094	U		*0.094*	0.072	U		*0.072*	0.046	U		*0.046*
Fluoranthene	0.75	0.6	0.016	U		*0.016*	0.019	U		*0.019*	0.14	J		*0.014*	0.27	J		*0.0091*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.026	U		*0.026*	0.031	U		*0.031*	0.024	U		*0.024*	0.07	J		*0.015*
Phenanthrene	0.56	0.24	0.021	U		*0.021*	0.025	U		*0.025*	0.019	U		*0.019*	0.12	J		*0.012*
Pyrene	0.49	0.665	0.019	U		*0.019*	0.022	U		*0.022*	0.11	J		*0.017*	0.21	J		*0.011*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.0004	U		*0.0004*	0.00047	U		*0.00047*	0.00037	U		*0.00037*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.00048	U		*0.00048*	0.00055	U		*0.00055*	0.00043	U		*0.00043*	0.00027	U		*0.00027*
4,4'-DDT	0.008	0.001	0.00033	U		*0.00033*	0.00039	U		*0.00039*	0.0003	U		*0.0003*	0.00019	U		*0.00019*
PCBs (mg/kg)	None detected																	

See Notes at end of Table

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD1				M3-SD2				M3-SD3				M3-SD4			
	Sample Date		6/18/10				6/18/10				6/18/10				6/18/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																		
Aluminum	25500	18000	9960			*1.84*	9130			*1.75*	10900			*1.63*	5370			*0.93*
Antimony	3	9.3	2.94	J		*1.23*	1.92	J		*1.17*	2.6	J		*1.08*	1.69	J		*0.62*
Arsenic	6	8.2	18.8			*0.72*	18			*0.69*	18.3			*0.64*	20.2			*0.37*
Barium	NAV	48	58.2			*0.88*	55.6			*0.83*	55.4			*0.77*	50.3			*0.44*
Beryllium	NAV	NAV	1.74			*0.13*	1.8			*0.13*	2.04			*0.12*	1.52			*0.07*
Cadmium	0.6	1.2	2.6			*0.13*	4.4			*0.13*	4.78			*0.12*	2.79			*0.07*
Calcium	NAV	NAV	2580			*2.35*	3620			*2.23*	2990			*2.07*	1590			*1.19*
Chromium	26	81	96.5			*0.29*	86.5			*0.27*	106			*0.25*	60.3			*0.14*
Cobalt	50	10	11.6			*1.25*	12.5			*1.19*	11.4			*1.1*	4.38			*0.63*
Copper	16	34	48.9			*0.7*	25.2			*0.67*	23.2			*0.62*	0.35	U		*0.35*
Iron	NAV	NAV	49800			*2.92*	64000			*2.78*	72900			*2.58*	60400			*1.48*
Lead	31	47	154			*0.86*	90.8			*0.81*	92.5			*0.76*	40.6			*0.43*
Magnesium	NAV	NAV	4330			*10*	4400			*9.56*	5120			*8.87*	2470			*5.08*
Manganese	630	260	53			*0.42*	82			*0.4*	94.5			*0.37*	37.3			*0.21*
Mercury	0.2	0.15	0.295			*0.005*	0.266			*0.005*	0.187			*0.004*	0.057			*0.003*
Nickel	16	21	24			*1.01*	30			*0.96*	29.8			*0.89*	11.1			*0.51*
Potassium	NAV	NAV	6750			*7.68*	5940			*7.3*	7150			*6.78*	6040			*3.88*
Selenium	NAV	1	7.6			*0.9*	8.01			*0.86*	8.85			*0.79*	7.11			*0.45*
Silver	1	1	2.14			*0.33*	1.65			*0.31*	1.14			*0.29*	0.23	J		*0.17*
Sodium	NAV	NAV	2890			*5.53*	3470			*5.26*	3230			*4.88*	807			*2.8*
Thallium	NAV	NAV	0.77	J		*0.59*	1	J		*0.56*	1.44	J		*0.52*	0.55	J		*0.3*
Vanadium	NAV	57	72.7			*1.29*	74.9			*1.23*	90.2			*1.14*	49.5			*0.65*
Zinc	120	150	233			*1.54*	337			*1.46*	352			*1.36*	149			*0.78*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	14000			*250*	13000			*250*	15000			*250*	4900			*250*

See Notes at end of Table

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD5				M3-SD6				M3-SD7				M3-SD8			
	Sample Date		6/18/10				6/18/10				6/18/10				6/21/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.009	J		*0.0045*	0.022	J		*0.0059*	0.041	J		*0.0073*	0.043	J		*0.0075*
Chlorobenzene	0.291	NAV	0.00074	U		*0.00074*	0.00098	U		*0.00098*	0.016			*0.0012*	0.0012	U		*0.0012*
1,2-Dichlorobenzene	0.294	0.013	0.00092	U		*0.00092*	0.0012	U		*0.0012*	0.0053	J		*0.0015*	0.0015	U		*0.0015*
Methylene chloride	0.159	NAV	0.015	B		*0.0021*	0.02	B		*0.0028*	0.026	B		*0.0034*	0.0035	U		*0.0035*
Styrene	0.254	NAV	0.00067	U		*0.00067*	0.00088	U		*0.00088*	0.0011	U		*0.0011*	0.0011	U		*0.0011*
2-Butanone	NAV	NAV	0.0046	U		*0.0046*	0.0099	J		*0.0061*	0.016	J		*0.0075*	0.0077	U		*0.0077*
Carbon disulfide	NAV	NAV	0.0016	U		*0.0016*	0.0021	U		*0.0021*	0.0026	U		*0.0026*	0.0026	U		*0.0026*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.0099			*0.0006*	0.0044	J		*0.00059*	0.008			*0.0008*	0.0063			*0.00075*
Benzo(a)anthracene	0.32	0.261	0.07			*0.00045*	0.031			*0.00044*	0.037			*0.0006*	0.047			*0.00056*
Benzo(a)pyrene	0.37	0.43	0.09			*0.00045*	0.061			*0.00044*	0.079			*0.0006*	0.056			*0.00056*
Benzo(b)fluoranthene	10.4	1.8	0.12	J		*0.016*	0.016	U		*0.016*	0.022	U		*0.022*	0.083	J		*0.02*
Benzo(g,h,i)perylene	0.17	0.17	0.074	J		*0.02*	0.02	U		*0.02*	0.027	U		*0.027*	0.025	U		*0.025*
Benzo(k)fluoranthene	0.24	0.24	0.023	U		*0.023*	0.023	U		*0.023*	0.031	U		*0.031*	0.03	U		*0.03*
Benzoic acid	NAV	NAV	0.58	U		*0.58*	0.57	U		*0.57*	0.77	U		*0.77*	1.1	J		*0.73*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.072	J		*0.018*	0.017	U		*0.017*	0.024	U		*0.024*	0.022	U		*0.022*
Chrysene	0.34	0.384	0.099	J		*0.022*	0.022	U		*0.022*	0.03	U		*0.03*	0.028	U		*0.028*
Dimethylphthalate	NAV	NAV	0.48	J		*0.013*	0.35	J		*0.013*	0.57	J		*0.018*	0.65			*0.017*
2,4-Dinitrophenol	0.00621	NAV	0.56			*0.05*	0.05	U		*0.05*	0.068	U		*0.068*	0.064	U		*0.064*
Fluoranthene	0.75	0.6	0.18	J		*0.01*	0.084	J		*0.0098*	0.11	J		*0.013*	0.11	J		*0.013*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.071	J		*0.017*	0.016	U		*0.016*	0.022	U		*0.022*	0.021	U		*0.021*
Phenanthrene	0.56	0.24	0.064	J		*0.013*	0.013	U		*0.013*	0.018	U		*0.018*	0.017	U		*0.017*
Pyrene	0.49	0.665	0.15	J		*0.012*	0.064	J		*0.012*	0.084	J		*0.016*	0.091	J		*0.015*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.00025	U		*0.00025*	0.00025	U		*0.00025*	0.00034	U		*0.00034*	0.00033	U		*0.00033*
4,4'-DDE	0.005	0.0022	0.0003	U		*0.0003*	0.00029	U		*0.00029*	0.0004	U		*0.0004*	0.00038	U		*0.00038*
4,4'-DDT	0.008	0.001	0.00021	U		*0.00021*	0.00021	U		*0.00021*	0.00028	U		*0.00028*	0.00027	U		*0.00027*
PCBs (mg/kg)	None detected																	

See Notes at end of Table

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD5				M3-SD6				M3-SD7				M3-SD8			
	Sample Date		6/18/10				6/18/10				6/18/10				6/21/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																		
Aluminum	25500	18000	6510			*0.82*	5760			*0.7*	8380			*1.03*	5940			*1.6*
Antimony	3	9.3	1.43	J		*0.54*	2.6			*0.46*	2.22	J		*0.69*	2.44	J		*1.07*
Arsenic	6	8.2	18			*0.32*	17.4			*0.27*	15.4			*0.41*	22			*0.63*
Barium	NAV	48	44.9			*0.39*	66.5			*0.33*	135			*0.49*	164			*0.76*
Beryllium	NAV	NAV	1.57			*0.06*	1.41			*0.05*	1.98			*0.07*	1.47			*0.11*
Cadmium	0.6	1.2	3.7			*0.06*	3.25			*0.05*	2.75			*0.07*	2.51			*0.11*
Calcium	NAV	NAV	1670			*1.04*	1420			*0.89*	2160			*1.32*	2830			*2.04*
Chromium	26	81	67.1			*0.13*	59			*0.11*	85.3			*0.16*	66.1			*0.25*
Cobalt	50	10	6.08			*0.55*	5.66			*0.47*	8.78			*0.7*	6.04			*1.09*
Copper	16	34	3.23			*0.31*	0.82	J		*0.27*	4.42			*0.39*	12.4			*0.61*
Iron	NAV	NAV	60800			*1.29*	58300			*1.1*	52500			*1.64*	60200			*2.53*
Lead	31	47	46.1			*0.38*	35.6			*0.32*	93.8			*0.48*	104			*0.74*
Magnesium	NAV	NAV	2950			*4.45*	2600			*3.8*	3560			*5.64*	2120			*8.72*
Manganese	630	260	50.4			*0.18*	32.9			*0.16*	40.5			*0.23*	96.5			*0.36*
Mercury	0.2	0.15	0.051			*0.003*	0.183			*0.003*	0.149			*0.004*	0.141			*0.004*
Nickel	16	21	15.5			*0.45*	10.2			*0.38*	20.4			*0.57*	15.7			*0.88*
Potassium	NAV	NAV	5890			*3.4*	6100			*2.9*	8870			*4.31*	4300			*6.67*
Selenium	NAV	1	6.83			*0.4*	6.79			*0.34*	6.34			*0.51*	7.42			*0.78*
Silver	1	1	0.53			*0.15*	0.23	J		*0.12*	0.5	J		*0.18*	0.29	J		*0.29*
Sodium	NAV	NAV	1090			*2.45*	1020			*2.09*	784			*3.1*	999			*4.8*
Thallium	NAV	NAV	0.72	J		*0.26*	0.68	J		*0.22*	0.85	J		*0.33*	0.66	J		*0.51*
Vanadium	NAV	57	57.6			*0.57*	40.8			*0.49*	59.3			*0.73*	56.3			*1.12*
Zinc	120	150	180			*0.68*	127			*0.58*	180			*0.86*	281			*1.33*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	2100			*250*	2900			*250*	5700			*250*	3000			*250*

See Notes at end of Table

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD9				M3-SD10				DUP-SD04				M3-SD11			
	Sample Date		6/21/10				6/21/10				6/21/10				6/21/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.02	J		*0.004*	0.004	U		*0.004*	0.0042	U		*0.0042*	0.004	U		*0.004*
Chlorobenzene	0.291	NAV	0.00067	U		*0.00067*	0.00066	U		*0.00066*	0.00069	U		*0.00069*	0.00067	U		*0.00067*
1,2-Dichlorobenzene	0.294	0.013	0.00083	U		*0.00083*	0.00082	U		*0.00082*	0.00086	U		*0.00086*	0.00083	U		*0.00083*
Methylene chloride	0.159	NAV	0.0027	J		*0.0019*	0.0025	J		*0.0019*	0.002	U		*0.002*	0.0019	U		*0.0019*
Styrene	0.254	NAV	0.0006	U		*0.0006*	0.0006	U		*0.0006*	0.00062	U		*0.00062*	0.0006	U		*0.0006*
2-Butanone	NAV	NAV	0.0041	U		*0.0041*	0.0041	U		*0.0041*	0.0043	U		*0.0043*	0.0042	U		*0.0042*
Carbon disulfide	NAV	NAV	0.0014	U		*0.0014*	0.0014	U		*0.0014*	0.0015	U		*0.0015*	0.0014	U		*0.0014*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.008			*0.00053*	0.0092			*0.00052*	0.023			*0.00054*	0.0066			*0.00053*
Benzo(a)anthracene	0.32	0.261	0.036			*0.0004*	0.042			*0.00039*	0.1			*0.0004*	0.043			*0.0004*
Benzo(a)pyrene	0.37	0.43	0.038			*0.0004*	0.046			*0.00039*	0.1			*0.0004*	0.051			*0.0004*
Benzo(b)fluoranthene	10.4	1.8	0.063	J		*0.015*	0.074	J		*0.014*	0.18	J		*0.015*	0.098	J		*0.014*
Benzo(g,h,i)perylene	0.17	0.17	0.018	U		*0.018*	0.018	U		*0.018*	0.076	J		*0.018*	0.018	U		*0.018*
Benzo(k)fluoranthene	0.24	0.24	0.021	U		*0.021*	0.021	U		*0.021*	0.021	U		*0.021*	0.021	U		*0.021*
Benzoic acid	NAV	NAV	0.51	U		*0.51*	0.2	U		*0.2*	0.52	U		*0.52*	0.51	U		*0.51*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	5.5	D		*0.031*	0.015	U		*0.015*	0.016	U		*0.016*	0.016	U		*0.016*
Chrysene	0.34	0.384	0.055	J		*0.02*	0.059	J		*0.02*	0.15	J		*0.02*	0.081	J		*0.02*
Dimethylphthalate	NAV	NAV	0.41	J		*0.012*	0.5			*0.012*	0.45			*0.012*	0.48			*0.012*
2,4-Dinitrophenol	0.00621	NAV	0.045	U		*0.045*	0.044	U		*0.044*	0.046	U		*0.046*	0.045	U		*0.045*
Fluoranthene	0.75	0.6	0.11	J		*0.0089*	0.12	J		*0.0088*	0.31	J		*0.009*	0.15	J		*0.0089*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.015	U		*0.015*	0.015	U		*0.015*	0.062	J		*0.015*	0.015	U		*0.015*
Phenanthrene	0.56	0.24	0.012	U		*0.012*	0.063	J		*0.012*	0.17	J		*0.012*	0.061	J		*0.012*
Pyrene	0.49	0.665	0.09	J		*0.011*	0.1	J		*0.01*	0.26	J		*0.011*	0.12	J		*0.011*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.002	JP		*0.00023*	0.0095			*0.00022*	0.00023	U		*0.00023*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.0014	J		*0.00027*	0.0021	J		*0.00026*	0.00027	U		*0.00027*	0.00027	U		*0.00027*
4,4'-DDT	0.008	0.001	0.00019	U		*0.00019*	0.18			*0.0018*	0.00019	U		*0.00019*	0.00019	U		*0.00019*
PCBs (mg/kg)	None detected																	

See Notes at end of Table

Table D-10
Analytes Detected in Landfill M-3 Sediment Samples
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Analyte	Sample ID		M3-SD9				M3-SD10				DUP-SD04				M3-SD11			
	Sample Date		6/21/10				6/21/10				6/21/10				6/21/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																		
Aluminum	25500	18000	3600			*1*	3790			*1.03*	4460			*0.89*	3420			*1.05*
Antimony	3	9.3	0.97	J		*0.67*	1.1	J		*0.69*	1.09	J		*0.59*	1.17	J		*0.7*
Arsenic	6	8.2	16.6			*0.39*	17.2			*0.4*	17.8			*0.35*	17.8			*0.41*
Barium	NAV	48	142			*0.48*	58.9			*0.49*	58.2			*0.42*	57.1			*0.5*
Beryllium	NAV	NAV	1.07			*0.07*	1.12			*0.07*	1.3			*0.06*	1.1			*0.07*
Cadmium	0.6	1.2	1.59			*0.07*	1.89			*0.07*	2.42			*0.06*	1.75			*0.07*
Calcium	NAV	NAV	2040			*1.27*	1710			*1.31*	1930			*1.13*	1620			*1.33*
Chromium	26	81	43.2			*0.15*	45.1			*0.16*	51.8			*0.14*	42.2			*0.16*
Cobalt	50	10	3.29			*0.68*	3.85			*0.7*	4.17			*0.6*	3.28			*0.71*
Copper	16	34	370			*0.38*	0.39	U		*0.39*	0.34	U		*0.34*	0.4	U		*0.4*
Iron	NAV	NAV	41900			*1.58*	48100			*1.63*	53800			*1.4*	49300			*1.66*
Lead	31	47	33.9			*0.46*	40			*0.48*	34.3			*0.41*	25.8			*0.49*
Magnesium	NAV	NAV	1270			*5.44*	1600			*5.62*	1790			*4.83*	1150			*5.7*
Manganese	630	260	35.3			*0.23*	46.3			*0.23*	46.7			*0.2*	31.8			*0.24*
Mercury	0.2	0.15	0.035			*0.002*	0.046			*0.002*	0.041			*0.001*	0.048			*0.002*
Nickel	16	21	7.83			*0.55*	8.94			*0.56*	9.76			*0.48*	8.14			*0.57*
Potassium	NAV	NAV	2980			*4.16*	3110			*4.29*	3510			*3.69*	3110			*4.36*
Selenium	NAV	1	5.07			*0.49*	6.1			*0.5*	6.13			*0.43*	6.13			*0.51*
Silver	1	1	0.18	U		*0.18*	0.18	U		*0.18*	0.16	U		*0.16*	0.19	U		*0.19*
Sodium	NAV	NAV	497			*2.99*	995			*3.09*	1000			*2.66*	459			*3.14*
Thallium	NAV	NAV	0.32	U		*0.32*	0.51	J		*0.33*	0.48	J		*0.28*	0.55	J		*0.34*
Vanadium	NAV	57	39.8			*0.7*	45.6			*0.72*	47.2			*0.62*	42.3			*0.73*
Zinc	120	150	113			*0.83*	127			*0.86*	127			*0.74*	127			*0.87*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	2100			*250*	1700			*250*	1800			*250*	2100			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
MRL = Method Reporting Limit
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-11
Analytes Detected in Landfill M-4 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	M4-SW4 6/21/10				M4-SW4-Diss 6/21/10			
		FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)											
cis-1,2-Dichloroethene		NAV	NAV	1.1	J		*0.35*	NT			
Tetrachloroethene		45	NAV	0.6	J		*0.27*	NT			
SVOCs (ug/L)											
Anthracene		0.035	NAV	0.1	J		*0.012*	NT			
Benzo(a)anthracene		0.025	NAV	0.23			*0.012*	NT			
Benzoic acid		NAV	NAV	22			*2*	NT			
1,2,4-Trichlorobenzene		30	NAV	0.54			*0.021*	NT			
Pesticides (ug/L)	None detected										
PCBs (ug/L)	None detected										
Metals (ug/L)											
Aluminum		NAV	NAV	68.2			*6.5*	6.5	U		*6.5*
Barium		220	NAV	63.3			*4*	57.2			*4*
Calcium		NAV	NAV	30700			*31.8*	28700			*31.8*
Iron		NAV	NAV	2610			*20.4*	507			*20.4*
Lead		5.4	24	11.2			*2.6*	5.92	J		*2.6*
Magnesium		NAV	NAV	5680			*32.5*	5280			*32.5*
Manganese		NAV	NAV	93.6			*1.7*	85.9			*1.7*
Nickel		44	22	8.85	J		*4.2*	7.84	J		*4.2*
Potassium		NAV	NAV	3890			*38.8*	3660			*38.8*
Sodium		NAV	NAV	59900			*13.9*	55900			*13.9*
Thallium		10	NAV	2.89	J		*2.4*	2.88	J		*2.4*
Zinc		114	81	54.1			*6.5*	38.9			*6.5*
Misc. (ug/L)											
Hardness		NAV	NAV	99928			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-12
Analytes Detected in Landfill M-4 Sediment Samples

Analyte	Sample ID		M4-SD1				M4-SD2				M4-SD3				M4-SD4					M4-SD5				M4-SD6			
	Sample Date		6/22/10				6/22/10				6/22/10				6/22/10					6/22/10				6/22/10			
	ESC																										
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	MRL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																											
Acetone	NAV	NAV	0.017	J		*0.0038*	0.01	J		*0.0037*	0.015	J		*0.0038*	0.014	J		*0.004*		0.0097	J		*0.004*	0.0039	U		*0.0039*
Methylene chloride	0.159	NAV	0.0019	J		*0.0018*	0.0024	J		*0.0018*	0.0021	J		*0.0018*	0.0019	U		*0.0019*		0.0019	U		*0.0019*	0.0018	U		*0.0018*
SVOCs (mg/kg)																											
Acenaphthene	0.016	0.016	0.012	U		*0.012*	0.012	U		*0.012*	0.059	U		*0.059*	0.12	J		*0.012*		0.012	U		*0.012*	0.061	U		*0.061*
Anthracene	0.22	0.085	0.049			*0.001*	0.012			*0.00099*	0.029			*0.0025*	0.15			*0.0011*		0.013			*0.0011*	0.03			*0.0026*
Benzo(a)anthracene	0.32	0.261	0.17			*0.00075*	0.046			*0.00074*	0.1			*0.0019*	0.31			*0.0008*		0.052			*0.00079*	0.11			*0.0019*
Benzo(a)pyrene	0.37	0.43	0.14			*0.00075*	0.053			*0.00074*	0.12			*0.0019*	0.27			*0.0008*		0.056			*0.00079*	0.13			*0.0019*
Benzo(b)fluoranthene	10.4	1.8	0.17	J		*0.014*	0.055	J		*0.013*	0.069	U		*0.069*	0.3	J		*0.014*		0.063	J		*0.014*	0.071	U		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.085	J		*0.017*	0.017	U		*0.017*	0.085	U		*0.085*	0.15	J		*0.018*		0.018	U		*0.018*	0.087	U		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.075	J		*0.02*	0.019	U		*0.019*	0.099	U		*0.099*	0.13	J		*0.021*		0.021	U		*0.021*	0.1	U		*0.1*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.015	U		*0.015*	0.057	J		*0.015*	0.074	U		*0.074*	0.016	U		*0.016*		0.016	U		*0.016*	0.076	U		*0.076*
Chrysene	0.34	0.384	0.15	J		*0.019*	0.019	U		*0.019*	0.095	U		*0.095*	0.3	J		*0.02*		0.02	U		*0.02*	0.098	U		*0.098*
Dimethylphthalate	NAV	NAV	0.57			*0.011*	0.51			*0.011*	0.76	J		*0.057*	0.53			*0.012*		1.1			*0.012*	0.79	J		*0.058*
Fluoranthene	0.75	0.6	0.32	J		*0.0084*	0.075	J		*0.0083*	0.042	U		*0.042*	0.7			*0.0089*		0.078	J		*0.0088*	0.043	U		*0.043*
Fluorene	0.19	0.019	0.016	U		*0.016*	0.016	U		*0.016*	0.08	U		*0.08*	0.097	J		*0.017*		0.017	U		*0.017*	0.082	U		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.074	J		*0.014*	0.014	U		*0.014*	0.07	U		*0.07*	0.14	J		*0.015*		0.015	U		*0.015*	0.072	U		*0.072*
Phenanthrene	0.56	0.24	0.17	J		*0.011*	0.011	U		*0.011*	0.057	U		*0.057*	0.62			*0.012*		0.012	U		*0.012*	0.058	U		*0.058*
Pyrene	0.49	0.665	0.3	J		*0.01*	0.087	J		*0.0099*	0.05	U		*0.05*	0.65			*0.011*		0.093	J		*0.011*	0.052	U		*0.052*
Pesticides (mg/kg)																											
4,4'-DDD	0.008	0.002	0.00021	U		*0.00021*	0.0025	JP		*0.00021*	0.0062	P		*0.00021*	0.002	J		*0.00023*		0.00022	U		*0.00022*	0.00022	U		*0.00022*
4,4'-DDE	0.005	0.0022	0.00025	U		*0.00025*	0.00025	U		*0.00025*	0.0022	J		*0.00025*	0.0012	J		*0.00027*		0.00026	U		*0.00026*	0.00026	U		*0.00026*
4,4'-DDT	0.008	0.001	0.00017	U		*0.00017*	0.00017	U		*0.00017*	0.00018	U		*0.00018*	0.0016	J		*0.00019*		0.00018	U		*0.00018*	0.00018	U		*0.00018*
PCBs (mg/kg)																											
Aroclor 1232	0.07	0.023	0.006	U		*0.006*	0.0059	U		*0.0059*	0.0061	U		*0.0061*	0.0064	U		*0.0064*		0.0063	U		*0.0063*	0.093			*0.0062*
Aroclor 1242	0.07	0.023	0.023	P		*0.0026*	0.055	P		*0.0026*	0.075	P		*0.0027*	0.0028	U		*0.0028*		0.0028	U		*0.0028*	0.0027	U		*0.0027*
Aroclor 1260	0.005	0.005	0.01	JP		*0.0047*	0.012	J		*0.0046*	0.036			*0.0047*	0.023	J		*0.005*		0.026			*0.0049*	0.0048	U		*0.0048*
Metals (mg/kg)																											
Aluminum	25500	18000	3670			*1.05*	2620			*0.7*	4460			*0.91*	2790			*0.83*		6560			*1.07*	4140			*0.79*
Antimony	3	9.3	1.06	J		*0.7*	0.6	J		*0.47*	1.02	J		*0.61*	0.95	J		*0.55*		2.56	J		*0.72*	0.65	J		*0.53*
Arsenic	6	8.2	3.92			*0.41*	2.44			*0.28*	3.86			*0.36*	4.13			*0.32*		10.2			*0.42*	5.22			*0.31*
Barium	NAV	48	18.6			*0.5*	14.9			*0.33*	31.6			*0.44*	17.3			*0.39*		45.3			*0.51*	37.7			*0.38*
Beryllium	NAV	NAV	1.14			*0.08*	0.76			*0.05*	1.16			*0.07*	0.72			*0.06*		1.34			*0.08*	1.5			*0.06*
Cadmium	0.6	1.2	1.17			*0.08*	1.02			*0.05*	1.26			*0.07*	0.93			*0.06*		1.45			*0.08*	1.49			*0.06*
Calcium	NAV	NAV	778			*1.34*	639			*0.89*	1620			*1.16*	1050			*1.05*		4240			*1.37*	884			*1.01*
Chromium	26	81	45.5			*0.16*	29			*0.11*	38.2			*0.14*	30.6			*0.13*		66.7			*0.17*	49.8			*0.12*
Cobalt	50	10	24.6			*0.72*	13.9			*0.48*	16.4			*0.62*	24.4			*0.56*		4.66			*0.73*	6.63			*0.54*
Copper	16	34	9.23			*0.4*	8.05			*0.27*	10.2			*0.35*	19.7			*0.31*		6.34			*0.41*	4.58			*0.3*
Iron	NAV	NAV	21000			*1.67*	13600			*1.11*	22600			*1.45*	12600			*1.31*		27700			*1.7*	29300			*1.26*
Lead	31	47	65.1			*0.49*	26.5			*0.33*	35.8			*0.42*	40.3			*0.38*		52.3			*0.5*	34			*0.37*
Magnesium	NAV	NAV	1870			*5.75*	1380			*3.83*	2210			*4.99*	1450			*4.51*		2550			*5.86*	2020			*4.33*
Manganese	630	260	17.9			*0.24*	17.5			*0.16*	37.3			*0.21*	20.1			*0.19*		47.1			*0.24*	24.4			*0.18*
Mercury	0.2	0.15	0.193			*0.003*	0.058			*0.002*	0.073			*0.002*	0.123			*0.002*		0.188			*0.003*	0.257			*0.003*
Nickel	16	21	14.6			*0.58*	13.6			*0.38*	16.2			*0.5*	9.29			*0.45*		11.2			*0.59*	14.3			*0.43*
Potassium	NAV	NAV	3820			*4.39*	2490			*2.93*	3020			*3.81*	2300			*3.44*		4700			*4.48*	4290			*3.31*
Selenium	NAV	1	2.47			*0.51*	1.85			*0.34*	2.6			*0.45*	1.63			*0.4*		3.67			*0.52*	3.48			*0.39*
Silver	1	1	0.25	J		*0.19*	0.2	J		*0.13*	0.25	J		*0.16*	0.37	J		*0.15*		0.67			*0.19*	0.19	J		*0.14*
Sodium	NAV	NAV	941			*3.16*	762			*2.11*	628			*2.74*	230			*2.48*		482			*3.22*	559			*2.38*
Thallium	NAV	NAV	0.38	J		*0.34*	0.24	J		*0.23*	0.32	J		*0.29*	0.35	J		*0.27*		0.35	U		*0.35*	0.43	J		*0.26*
Vanadium	NAV	57	22.8			*0.74*	16.5			*0.49*	24.5			*0.64*	17.3			*0.58*		35.3			*0.75*	20.6			*0.56*
Zinc	120	150	92.2			*0.88*	69.6			*0.59*	94.6			*0.76*	98.1			*0.69*		109			*0.9*	110			*0.66*
Misc. (mg/kg)																											
Total Organic Carbon	NAV	NAV	2100			*250*	900			*250*	1700			*250*	1800			*250*		4100			*250*	1500			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-13
Analytes Detected in Landfill M-5 Surface Water Samples

Analyte	Sample ID / Sample Date		M5-SW4 6/18/10				M5-SW4-Diss 6/18/10			
	ESC									
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)										
cis-1,2-Dichloroethene	NAV	NAV	0.97	J		*0.35*	NT			
Tetrachloroethene	45	NAV	0.69	J		*0.27*	NT			
SVOCs (ug/L)										
Benzo(a)pyrene	0.014	NAV	0.53			*0.009*	NT			
3,3'-Dichlorobenzidine	4.5	NAV	0.4			*0.02*	NT			
Pesticides (ug/L)	None detected									
PCBs (ug/L)	None detected									
Metals (ug/L)										
Aluminum	NAV	NAV	70.8			*6.5*	6.5	U		*6.5*
Arsenic	150	36	5.38	J		*4.2*	4.2	U		*4.2*
Barium	220	NAV	61.9			*4*	64			*4*
Calcium	NAV	NAV	33400			*31.8*	35400			*31.8*
Iron	NAV	NAV	3000			*20.4*	1580			*20.4*
Lead	5.4	24	7.27			*2.6*	8.5			*2.6*
Magnesium	NAV	NAV	20100			*32.5*	23300			*32.5*
Manganese	NAV	NAV	108			*1.7*	113			*1.7*
Nickel	68	22	8.83	J		*4.2*	9.16	J		*4.2*
Potassium	NAV	NAV	8910			*38.8*	10200			*38.8*
Sodium	NAV	NAV	182000			*13.9*	211000			*13.9*
Thallium	10	NAV	4.49	J		*2.4*	4.44	J		*2.4*
Zinc	175	81	41			*6.5*	49.1			*6.5*
Misc. (ug/L)										
Hardness	NAV	NAV	166087			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.

Exceedances of saltwater surface water quality criteria have a bold border.

U = The compound was not detected at the indicated concentration.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

MDL = Method Detection Limit

NAV = No Available Value

NT = Not Tested

PCB = Polychlorinated Biphenyl

SVOC = Semivolatile Organic Compound

VOC = Volatile Organic Compound

ug/L = micrograms per liter

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-14
Analytes Detected in Landfill M-5 Sediment Samples
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Analyte	Sample ID		M5-SD1				M5-SD2				M5-SD3				M5-SD4			
	Sample Date		6/17/10				6/18/10				6/18/10				6/18/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.022	J		*0.0089*	0.0038	U		*0.0038*	0.0039	U		*0.0039*	0.0069	J		*0.0037*
Methylene chloride	0.159	NAV	0.0093	J		*0.0042*	0.004	J		*0.0018*	0.0096	B		*0.0019*	0.005	J		*0.0017*
Styrene	0.254	NAV	0.0013	U		*0.0013*	0.0028	J		*0.00057*	0.0032	J		*0.00059*	0.0019	J		*0.00055*
2-Butanone	NAV	NAV	0.0091	U		*0.0091*	0.004	U		*0.004*	0.0041	U		*0.0041*	0.0038	U		*0.0038*
Carbon disulfide	NAV	NAV	0.0031	U		*0.0031*	0.0014	U		*0.0014*	0.0014	U		*0.0014*	0.0013	U		*0.0013*
SVOCs (mg/kg)																		
Acenaphthylene	0.044	0.044	0.025	U		*0.025*	0.021	U		*0.021*	0.022	U		*0.022*	0.15	J		*0.021*
Anthracene	0.22	0.085	0.044			*0.0012*	0.074			*0.001*	0.15			*0.001*	0.2			*0.00099*
Benzo(a)anthracene	0.32	0.261	0.34			*0.00088*	0.16			*0.00077*	0.18			*0.00078*	0.26			*0.00074*
Benzo(a)pyrene	0.37	0.43	0.31			*0.00088*	0.14			*0.00077*	0.25			*0.00078*	0.2			*0.00074*
Benzo(b)fluoranthene	10.4	1.8	0.3	J		*0.032*	0.21	J		*0.028*	0.32	J		*0.028*	0.22	J		*0.027*
Benzo(g,h,i)perylene	0.17	0.17	0.15	J		*0.04*	0.11	J		*0.034*	0.17	J		*0.035*	0.13	J		*0.033*
Benzo(k)fluoranthene	0.24	0.24	0.13	J		*0.046*	0.04	U		*0.04*	0.041	U		*0.041*	0.039	U		*0.039*
Chrysene	0.34	0.384	0.29	J		*0.044*	0.19	J		*0.039*	0.29	J		*0.039*	0.34	J		*0.037*
Dimethylphthalate	NAV	NAV	0.92	J		*0.026*	0.28	J		*0.023*	0.28	J		*0.023*	0.32	J		*0.022*
Fluoranthene	0.75	0.6	0.59	J		*0.02*	0.34	J		*0.017*	0.67	J		*0.017*	0.49	J		*0.016*
Fluorene	0.19	0.019	0.037	U		*0.037*	0.032	U		*0.032*	0.033	U		*0.033*	0.27	J		*0.031*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.15	J		*0.033*	0.028	U		*0.028*	0.17	J		*0.029*	0.12	J		*0.027*
2-Methylnaphthalene	0.07	0.07	0.025	U		*0.025*	0.021	U		*0.021*	0.022	U		*0.022*	0.4	J		*0.021*
Naphthalene	0.16	0.16	0.034	U		*0.034*	0.029	U		*0.029*	0.03	U		*0.03*	0.26	J		*0.028*
Phenanthrene	0.56	0.24	0.12	J		*0.026*	0.19	J		*0.023*	0.36	J		*0.023*	0.96			*0.022*
Pyrene	0.49	0.665	0.46	J		*0.023*	0.32	J		*0.02*	0.58	J		*0.021*	0.7	J		*0.02*
Pesticides (mg/kg)																		
alpha-Chlordane	0.007	0.007	0.00041	U		*0.00041*	0.0011	JP		*0.00018*	0.0019	J		*0.00018*	0.0013	JP		*0.00017*
4,4'-DDD	0.008	0.002	0.0036	JP		*0.0005*	0.0048			*0.00022*	0.016			*0.00022*	0.00021	U		*0.00021*
4,4'-DDE	0.005	0.0022	0.00059	U		*0.00059*	0.003			*0.00026*	0.0072			*0.00026*	0.0044	P		*0.00025*
4,4'-DDT	0.008	0.001	0.00041	U		*0.00041*	0.0015	JP		*0.00018*	0.0021	JP		*0.00018*	0.0018	J		*0.00017*
PCBs (mg/kg)	None detected																	
Metals (mg/kg)																		
Aluminum	25500	18000	16600			*1.74*	2400			*0.91*	2550			*0.72*	2190			*0.71*
Antimony	3	9.3	1.92	J		*1.16*	0.64	J		*0.61*	1.13	J		*0.48*	0.59	J		*0.47*
Arsenic	6	8.2	11			*0.68*	3.92			*0.36*	2.74			*0.28*	2.65			*0.28*
Barium	NAV	48	27			*0.83*	17.6			*0.43*	12.5			*0.34*	11.3			*0.34*
Beryllium	NAV	NAV	3.14			*0.12*	0.96			*0.07*	0.88			*0.05*	0.69			*0.05*
Cadmium	0.6	1.2	6.65			*0.12*	0.72			*0.07*	1.16			*0.05*	1.01			*0.05*
Calcium	NAV	NAV	3550			*2.21*	599			*1.16*	747			*0.92*	1000			*0.9*
Chromium	26	81	119			*0.27*	25			*0.14*	29.2			*0.11*	28.3			*0.11*
Cobalt	50	10	8.17			*1.18*	4.44			*0.62*	9.55			*0.49*	13.3			*0.48*
Copper	16	34	0.66	U		*0.66*	3.96			*0.35*	15.3			*0.27*	9.62			*0.27*
Iron	NAV	NAV	88300			*2.75*	17800			*1.45*	10300			*1.14*	12700			*1.12*
Lead	31	47	15			*0.81*	27.7			*0.42*	41.6			*0.33*	27.3			*0.33*
Magnesium	NAV	NAV	9070			*9.48*	1110			*4.98*	1060			*3.92*	1010			*3.86*
Manganese	630	260	111			*0.39*	13.7			*0.21*	8.65			*0.16*	20.9			*0.16*
Mercury	0.2	0.15	0.006	U		*0.006*	0.111			*0.003*	0.085			*0.002*	0.098			*0.002*
Nickel	16	21	27.6			*0.95*	8.3			*0.5*	13.9			*0.39*	15.1			*0.39*
Potassium	NAV	NAV	10500			*7.24*	2030			*3.8*	2020			*3*	1560			*2.95*
Selenium	NAV	1	13.2			*0.85*	2.46			*0.45*	1.33			*0.35*	1.5			*0.35*
Silver	1	1	0.31	U		*0.31*	0.17	J		*0.16*	0.37	J		*0.13*	0.24	J		*0.13*
Sodium	NAV	NAV	4800			*5.21*	926			*2.74*	506			*2.16*	704			*2.13*
Thallium	NAV	NAV	0.75	J		*0.56*	0.29	U		*0.29*	0.24	J		*0.23*	0.23	U		*0.23*
Vanadium	NAV	57	71.6			*1.22*	12.8			*0.64*	16.9			*0.51*	14			*0.5*
Zinc	120	150	150			*1.45*	81			*0.76*	111			*0.6*	70.7			*0.59*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	9400			*250*	3300			*250*	2100			*250*	2800			*250*

See Notes at end of Table

Table D-14
Analytes Detected in Landfill M-5 Sediment Samples
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Analyte	Sample ID / Sample Date		M5-SD5 6/18/10				DUP-SD03 6/18/10				M5-SD6 6/18/10			
	ESC													
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)														
Acetone	NAV	NAV	0.11	J		*0.014*	0.023	J		*0.007*	0.0039	U		*0.0039*
Methylene chloride	0.159	NAV	0.032	B		*0.0067*	0.012	JB		*0.0033*	0.0095	B		*0.0018*
Styrene	0.254	NAV	0.0021	U		*0.0021*	0.001	U		*0.001*	0.0055	J		*0.00058*
2-Butanone	NAV	NAV	0.041	J		*0.015*	0.0099	J		*0.0072*	0.004	U		*0.004*
Carbon disulfide	NAV	NAV	0.0074	J		*0.005*	0.0025	U		*0.0025*	0.0014	U		*0.0014*
SVOCs (mg/kg)														
Acenaphthylene	0.044	0.044	0.029	U		*0.029*	0.015	U		*0.015*	0.054	U		*0.054*
Anthracene	0.22	0.085	0.016			*0.0014*	0.0007	U		*0.0007*	0.23			*0.0026*
Benzo(a)anthracene	0.32	0.261	0.049			*0.001*	0.011			*0.00052*	0.032			*0.0019*
Benzo(a)pyrene	0.37	0.43	0.072			*0.001*	0.13			*0.00052*	0.35			*0.0019*
Benzo(b)fluoranthene	10.4	1.8	0.037	U		*0.037*	0.019	U		*0.019*	0.071	U		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.046	U		*0.046*	0.024	U		*0.024*	0.087	U		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.054	U		*0.054*	0.027	U		*0.027*	0.1	U		*0.1*
Chrysene	0.34	0.384	0.052	U		*0.052*	0.026	U		*0.026*	0.098	U		*0.098*
Dimethylphthalate	NAV	NAV	0.99	J		*0.031*	0.53	J		*0.016*	0.33	J		*0.058*
Fluoranthene	0.75	0.6	0.023	U		*0.023*	0.012	U		*0.012*	0.043	U		*0.043*
Fluorene	0.19	0.019	0.043	U		*0.043*	0.022	U		*0.022*	0.082	U		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.038	U		*0.038*	0.019	U		*0.019*	0.072	U		*0.072*
2-Methylnaphthalene	0.07	0.07	0.029	U		*0.029*	0.015	U		*0.015*	0.054	U		*0.054*
Naphthalene	0.16	0.16	0.04	U		*0.04*	0.02	U		*0.02*	0.074	U		*0.074*
Phenanthrene	0.56	0.24	0.031	U		*0.031*	0.016	U		*0.016*	0.058	U		*0.058*
Pyrene	0.49	0.665	0.027	U		*0.027*	0.014	U		*0.014*	0.052	U		*0.052*
Pesticides (mg/kg)														
alpha-Chlordane	0.007	0.007	0.00048	U		*0.00048*	0.00024	U		*0.00024*	0.0011	J		*0.00018*
4,4'-DDD	0.008	0.002	0.00058	U		*0.00058*	0.0003	U		*0.0003*	0.002	JP		*0.00022*
4,4'-DDE	0.005	0.0022	0.00069	U		*0.00069*	0.00035	U		*0.00035*	0.0017	JP		*0.00026*
4,4'-DDT	0.008	0.001	0.00048	U		*0.00048*	0.00024	U		*0.00024*	0.0011	JP		*0.00018*
PCBs (mg/kg)	None detected													
Metals (mg/kg)														
Aluminum	25500	18000	4290			*1.89*	6270			*1.36*	2300			*0.97*
Antimony	3	9.3	1.26	U		*1.26*	1.48	J		*0.9*	0.65	U		*0.65*
Arsenic	6	8.2	43.5			*0.74*	12.3			*0.53*	4.22			*0.38*
Barium	NAV	48	50.7			*0.9*	36.2			*0.65*	32.4			*0.46*
Beryllium	NAV	NAV	1.72			*0.13*	1.24			*0.1*	1.04			*0.07*
Cadmium	0.6	1.2	1.72			*0.13*	2.89			*0.1*	0.79			*0.07*
Calcium	NAV	NAV	1760			*2.4*	1950			*1.73*	863			*1.24*
Chromium	26	81	48			*0.29*	58.6			*0.21*	22.8			*0.15*
Cobalt	50	10	5.06			*1.28*	9.51			*0.92*	4.86			*0.66*
Copper	16	34	0.72	U		*0.72*	19.8			*0.52*	4.21			*0.37*
Iron	NAV	NAV	51400			*2.99*	39300			*2.15*	21000			*1.54*
Lead	31	47	12.1			*0.88*	62.4			*0.63*	20.8			*0.45*
Magnesium	NAV	NAV	1410			*10.3*	2820			*7.4*	1320			*5.3*
Manganese	630	260	37.1			*0.43*	52.1			*0.31*	26.3			*0.22*
Mercury	0.2	0.15	0.045			*0.006*	0.155			*0.003*	0.06			*0.002*
Nickel	16	21	11.7			*1.03*	19.3			*0.74*	8.28			*0.53*
Potassium	NAV	NAV	1500			*7.86*	3910			*5.65*	1680			*4.05*
Selenium	NAV	1	7.74			*0.92*	4.93			*0.66*	2.49			*0.47*
Silver	1	1	0.34	U		*0.34*	1.29			*0.24*	0.17	U		*0.17*
Sodium	NAV	NAV	971			*5.66*	1790			*4.07*	406			*2.92*
Thallium	NAV	NAV	0.61	U		*0.61*	0.64	J		*0.44*	0.31	U		*0.31*
Vanadium	NAV	57	38.3			*1.32*	48.7			*0.95*	14.5			*0.68*
Zinc	120	150	57.9			*1.57*	203			*1.13*	89.8			*0.81*
Misc. (mg/kg)														
Total Organic Carbon	NAV	NAV	13000			*250*	6300			*250*	1000			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-15
Analytes Detected in Landfill M-8 Surface Water Samples
Page 1 of 2

Analyte	Sample ID		M8-SW3				M8-SW3-Diss				M8-SW7			
	Sample Date		6/17/10				6/17/10				6/23/10			
	ESC													
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)														
Dimethylphthalate	NAV	NAV	0.23	U		*0.23*	NT				10	J		*0.23*
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	149			*6.5*	15.6	J		*6.5*	105			*6.5*
Arsenic	150	36	5.46	J		*4.2*	5.25	J		*4.2*	4.2	U		*4.2*
Barium	220	NAV	50.2			*4*	51.6			*4*	76			*4*
Calcium	NAV	NAV	166000			*31.8*	173000			*31.8*	68500			*31.8*
Iron	NAV	NAV	1120			*20.4*	103			*20.4*	2190			*20.4*
Lead	5.4	24	5.79	J		*2.6*	4.76	J		*2.6*	8.7			*2.6*
Magnesium	NAV	NAV	527000			*32.5*	548000			*32.5*	133000			*32.5*
Manganese	NAV	NAV	91.6			*1.7*	83.4			*1.7*	142			*1.7*
Mercury	0.77	0.94	0.1	J		*0.09*	0.11	J		*0.09*	0.09	U		*0.09*
Nickel	89	22	8.25	J		*4.2*	6.08	J		*4.2*	7.71	J		*4.2*
Potassium	NAV	NAV	176000			*38.8*	181000			*38.8*	43700			*38.8*
Sodium	NAV	NAV	3990000			*139*	4050000			*139*	975000			*13.9*
Thallium	10	NAV	8.18	J		*2.4*	6.57	J		*2.4*	2.77	J		*2.4*
Zinc	230	81	47.7			*6.5*	49.7			*6.5*	45.5			*6.5*
Misc. (ug/L)														
Hardness	NAv	NAV	2590449			*105*	NT				798413			*117*

See Notes at end of Table

Table D-15
Analytes Detected in Landfill M-8 Surface Water Samples
Page 2 of 2

Analyte	Sample ID / Sample Date		M8-SW7-Diss 6/23/10				M8-SW12 6/23/10				M8-SW12-Diss 6/22/10			
	ESC													
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)														
Dimethylphthalate	NAV	NAV	NT				0.23	U		*0.23*	NT			
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	7.99	J		*6.5*	50.4			*6.5*	11.5	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	72.9			*4*	65.7			*4*	66.3			*4*
Calcium	NAV	NAV	70000			*31.8*	38800			*31.8*	41700			*31.8*
Iron	NAV	NAV	187			*20.4*	1920			*20.4*	412			*20.4*
Lead	5.4	24	10.1			*2.6*	9.56			*2.6*	9.83			*2.6*
Magnesium	NAV	NAV	135000			*32.5*	32100			*32.5*	35400			*32.5*
Manganese	NAV	NAV	141			*1.7*	97.4			*1.7*	99			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*
Nickel	89	22	8.94	J		*4.2*	7.19	J		*4.2*	7.93	J		*4.2*
Potassium	NAV	NAV	41600			*38.8*	11900			*38.8*	12400			*38.8*
Sodium	NAV	NAV	919000			*13.9*	257000			*13.9*	266000			*13.9*
Thallium	10	NAV	6.71	J		*2.4*	3.99	J		*2.4*	2.92	J		*2.4*
Zinc	230	81	62.1			*6.5*	47.4			*6.5*	36			*6.5*
Misc. (ug/L)														
Hardness	NAv	NAV	NT				254462			*117*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-16
Analytes Detected in Landfill M-8 Sediment Samples
Page 1 of 3

Analyte	Sample ID		M8-SD1				M8-SD2				M8-SD3				M8-SD4			
	Sample Date		6/23/10				6/17/10				6/17/10				6/17/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.1			*0.011*	0.021	J		*0.0048*	0.14			*0.013*	0.051	J		*0.0077*
Chlorobenzene	0.291	NAV	0.0018	U		*0.0018*	0.0008	U		*0.0008*	0.0022	U		*0.0022*	0.0013	U		*0.0013*
1,4-Dichlorobenzene	0.318	0.110	0.0015	U		*0.0015*	0.00066	U		*0.00066*	0.0018	U		*0.0018*	0.001	U		*0.001*
Methylene chloride	0.159	NAV	0.0065	J		*0.0052*	0.0038	J		*0.0023*	0.017	J		*0.0061*	0.0073	J		*0.0036*
Toluene	2.5	2.5	0.0024	U		*0.0024*	0.001	U		*0.001*	0.0074	J		*0.0028*	0.0016	U		*0.0016*
2-Butanone	NAV	NAV	0.025	J		*0.011*	0.005	U		*0.005*	0.051	J		*0.013*	0.021	J		*0.0079*
Carbon disulfide	NAV	NAV	0.0039	U		*0.0039*	0.0017	U		*0.0017*	0.0046	U		*0.0046*	0.0027	U		*0.0027*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.0011	U		*0.0011*	0.0006	U		*0.0006*	0.001	U		*0.001*	0.02			*0.00081*
Benzo(a)anthracene	0.32	0.261	0.00079	U		*0.00079*	0.006			*0.00045*	0.015			*0.00077*	0.098			*0.00061*
Benzo(a)pyrene	0.37	0.43	0.00079	U		*0.00079*	0.0065			*0.00045*	0.015			*0.00077*	0.09			*0.00061*
Benzo(b)fluoranthene	10.4	1.8	0.029	U		*0.029*	0.016	U		*0.016*	0.028	U		*0.028*	0.11	J		*0.022*
Chrysene	0.34	0.384	0.04	U		*0.04*	0.022	U		*0.022*	0.039	U		*0.039*	0.12	J		*0.031*
Dimethylphthalate	NAV	NAV	0.95			*0.024*	0.5			*0.013*	1			*0.023*	0.67	J		*0.018*
Fluoranthene	0.75	0.6	0.018	U		*0.018*	0.01	U		*0.01*	0.017	U		*0.017*	0.23	J		*0.014*
Phenanthrene	0.56	0.24	0.024	U		*0.024*	0.013	U		*0.013*	0.023	U		*0.023*	0.12	J		*0.018*
Pyrene	0.49	0.665	0.021	U		*0.021*	0.012	U		*0.012*	0.02	U		*0.02*	0.19	J		*0.016*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.00046	U		*0.00046*	0.00025	U		*0.00025*	0.00043	U		*0.00043*	0.00035	U		*0.00035*
4,4'-DDE	0.005	0.0022	0.00054	U		*0.00054*	0.0003	U		*0.0003*	0.00051	U		*0.00051*	0.00042	U		*0.00042*
PCBs (mg/kg)																		
Aroclor 1242	0.07	0.023	0.0057	U		*0.0057*	0.0031	U		*0.0031*	0.0054	U		*0.0054*	0.0044	U		*0.0044*
Aroclor 1260	0.005	0.005	0.01	U		*0.01*	0.0056	U		*0.0056*	0.0095	U		*0.0095*	0.0077	U		*0.0077*
Metals (mg/kg)																		
Aluminum	25500	18000	14800			*2.24*	6210			*0.81*	15400			*1.69*	10000			*1.03*
Antimony	3	9.3	2.08	J		*1.49*	0.95	J		*0.54*	2.82	J		*1.12*	1.91	J		*0.69*
Arsenic	6	8.2	18.9			*0.88*	4.36			*0.32*	16.2			*0.66*	9.3			*0.41*
Barium	NAV	48	21.6			*1.07*	14.3			*0.38*	63			*0.8*	103			*0.49*
Beryllium	NAV	NAV	3.1			*0.16*	1.6			*0.06*	2.9			*0.12*	2.17			*0.07*
Cadmium	0.6	1.2	4.15			*0.16*	3.01			*0.06*	6.62			*0.12*	6.85			*0.07*
Calcium	NAV	NAV	3330			*2.85*	350			*1.03*	2370			*2.15*	1570			*1.31*
Chromium	26	81	125			*0.35*	58.3			*0.12*	131			*0.26*	97.4			*0.16*
Cobalt	50	10	7.38			*1.52*	11.1			*0.55*	42.1			*1.14*	115			*0.7*
Copper	16	34	0.85	U		*0.85*	7.95			*0.31*	57.2			*0.64*	64.5			*0.39*
Iron	NAV	NAV	84100			*3.55*	37000			*1.28*	69800			*2.67*	54900			*1.63*
Lead	31	47	14.8			*1.04*	43.1			*0.37*	167			*0.78*	179			*0.48*
Magnesium	NAV	NAV	6530			*12.2*	2850			*4.4*	5940			*9.2*	4620			*5.62*
Manganese	630	260	81.7			*0.51*	20.6			*0.18*	140			*0.38*	78			*0.23*
Mercury	0.2	0.15	0.022	J		*0.005*	0.155			*0.003*	0.37			*0.005*	0.323			*0.004*
Nickel	16	21	24.6			*1.23*	20.7			*0.44*	60.5			*0.92*	39.4			*0.56*
Potassium	NAV	NAV	10200			*9.33*	6240			*3.37*	10800			*7.03*	7920			*4.3*
Selenium	NAV	1	8.74			*1.09*	5.49			*0.39*	11.1			*0.82*	8.6			*0.5*
Silver	1	1	0.4	U		*0.4*	0.14	U		*0.14*	0.3	U		*0.3*	5.85			*0.18*
Sodium	NAV	NAV	1880			*6.72*	2040			*2.42*	4360			*5.06*	3780			*3.09*
Thallium	NAV	NAV	1	J		*0.72*	0.26	U		*0.26*	0.95	J		*0.54*	0.55	J		*0.33*
Vanadium	NAV	57	67.1			*1.57*	37.9			*0.57*	99.1			*1.18*	60.9			*0.72*
Zinc	120	150	132			*1.87*	158			*0.67*	389			*1.41*	279			*0.86*
Misc.																		
Total Organic Carbon	NAV	NAV	6300			*250*	4800			*250*	13000			*250*	16000			*250*

See Notes at end of Table

Table D-16
Analytes Detected in Landfill M-8 Sediment Samples
Page 2 of 3

Analyte	Sample ID		M8-SD5				M8-SD6				M8-SD7				M8-SD8			
	Sample Date		6/17/10				6/23/10				6/23/10				6/17/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.081			*0.0087*	0.011	J		*0.0039*	0.0061	U		*0.0061*	0.063	J		*0.011*
Chlorobenzene	0.291	NAV	0.025			*0.0014*	0.00064	U		*0.00064*	0.001	U		*0.001*	0.0019	U		*0.0019*
1,4-Dichlorobenzene	0.318	0.110	0.0057	J		*0.0012*	0.00052	U		*0.00052*	0.00083	U		*0.00083*	0.0015	U		*0.0015*
Methylene chloride	0.159	NAV	0.01	J		*0.0041*	0.0018	U		*0.0018*	0.0029	U		*0.0029*	0.0053	U		*0.0053*
Toluene	2.5	2.5	0.0018	U		*0.0018*	0.00082	U		*0.00082*	0.0013	U		*0.0013*	0.0024	U		*0.0024*
2-Butanone	NAV	NAV	0.03	J		*0.0089*	0.004	U		*0.004*	0.0063	U		*0.0063*	0.023	J		*0.012*
Carbon disulfide	NAV	NAV	0.003	U		*0.003*	0.0014	U		*0.0014*	0.0021	U		*0.0021*	0.004	U		*0.004*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.0065			*0.00078*	0.017			*0.001*	0.0083			*0.00077*	0.0011	U		*0.0011*
Benzo(a)anthracene	0.32	0.261	0.018			*0.00059*	0.11			*0.00076*	0.04			*0.00057*	0.021			*0.00081*
Benzo(a)pyrene	0.37	0.43	0.014			*0.00059*	0.11			*0.00076*	0.053			*0.00057*	0.021			*0.00081*
Benzo(b)fluoranthene	10.4	1.8	0.021	U		*0.021*	0.15	J		*0.028*	0.021	U		*0.021*	0.029	U		*0.029*
Chrysene	0.34	0.384	0.03	U		*0.03*	0.13	J		*0.038*	0.029	U		*0.029*	0.041	U		*0.041*
Dimethylphthalate	NAV	NAV	0.63	J		*0.018*	0.33	J		*0.023*	0.55	J		*0.017*	0.74	J		*0.024*
Fluoranthene	0.75	0.6	0.013	U		*0.013*	0.24	J		*0.017*	0.013	U		*0.013*	0.018	U		*0.018*
Phenanthrene	0.56	0.24	0.018	U		*0.018*	0.12	J		*0.023*	0.017	U		*0.017*	0.024	U		*0.024*
Pyrene	0.49	0.665	0.016	U		*0.016*	0.22	J		*0.02*	0.015	U		*0.015*	0.022	U		*0.022*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.00033	U		*0.00033*	0.0023	JP		*0.00021*	0.00033	U		*0.00033*	0.00046	U		*0.00046*
4,4'-DDE	0.005	0.0022	0.00039	U		*0.00039*	0.00025	U		*0.00025*	0.00038	U		*0.00038*	0.00054	U		*0.00054*
PCBs (mg/kg)																		
Aroclor 1242	0.07	0.023	0.0041	U		*0.0041*	0.05	P		*0.0027*	0.004	U		*0.004*	0.0057	U		*0.0057*
Aroclor 1260	0.005	0.005	0.0073	U		*0.0073*	0.011	J		*0.0047*	0.0071	U		*0.0071*	0.01	U		*0.01*
Metals (mg/kg)																		
Aluminum	25500	18000	7420			*1.14*	4770			*0.73*	6720			*1*	12400			*2.26*
Antimony	3	9.3	1.26	J		*0.76*	1.04	J		*0.49*	1.62	J		*0.67*	3.05	J		*1.51*
Arsenic	6	8.2	6.3			*0.45*	14.9			*0.29*	10.4			*0.39*	15.4			*0.89*
Barium	NAV	48	92.6			*0.54*	25.6			*0.35*	24			*0.48*	66			*1.08*
Beryllium	NAV	NAV	1.77			*0.08*	1.55			*0.05*	1.69			*0.07*	2.94			*0.16*
Cadmium	0.6	1.2	5.22			*0.08*	2.47			*0.05*	3.76			*0.07*	5.7			*0.16*
Calcium	NAV	NAV	1520			*1.45*	2520			*0.93*	2110			*1.27*	1360			*2.88*
Chromium	26	81	78.6			*0.18*	50.7			*0.11*	68.5			*0.15*	101			*0.35*
Cobalt	50	10	116			*0.77*	6.08			*0.49*	27			*0.68*	29.5			*1.53*
Copper	16	34	42			*0.43*	1.12			*0.28*	21.7			*0.38*	59.7			*0.86*
Iron	NAV	NAV	38200			*1.8*	45400			*1.15*	40500			*1.58*	77900			*3.58*
Lead	31	47	120			*0.53*	31.3			*0.34*	94.8			*0.46*	154			*1.05*
Magnesium	NAV	NAV	2810			*6.21*	3320			*3.97*	3420			*5.45*	4290			*12.3*
Manganese	630	260	49.6			*0.26*	28.9			*0.16*	37.1			*0.23*	364			*0.51*
Mercury	0.2	0.15	0.38			*0.003*	0.1			*0.002*	0.742			*0.004*	0.853			*0.005*
Nickel	16	21	24.3			*0.62*	12.7			*0.4*	32.6			*0.55*	39.1			*1.24*
Potassium	NAV	NAV	5720			*4.75*	5220			*3.03*	5250			*4.16*	5760			*9.41*
Selenium	NAV	1	6.45			*0.56*	4.84			*0.36*	4.81			*0.49*	13.8			*1.1*
Silver	1	1	3.86			*0.2*	0.13	U		*0.13*	1.78			*0.18*	0.4	U		*0.4*
Sodium	NAV	NAV	2020			*3.42*	1490			*2.18*	2280			*3*	3810			*6.77*
Thallium	NAV	NAV	0.44	J		*0.37*	0.58	J		*0.23*	0.97	J		*0.32*	0.73	U		*0.73*
Vanadium	NAV	57	46.3			*0.8*	42.1			*0.51*	46.3			*0.7*	82.2			*1.59*
Zinc	120	150	211			*0.95*	131			*0.61*	194			*0.83*	415			*1.88*
Misc.																		
Total Organic Carbon	NAV	NAV	11000			*250*	820			*250*	4100			*250*	10000			*250*

See Notes at end of Table

Table D-16
Analytes Detected in Landfill M-8 Sediment Samples
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Analyte	Sample ID / Sample Date	ESC	M8-SD9 6/17/10				DUP-SD02 6/17/10				M8-SD10 6/17/10				M8-SD12 6/17/10			
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.028	J		*0.0045*	0.015	J		*0.0046*	0.04			*0.0046*	0.0037	U		*0.0037*
Chlorobenzene	0.291	NAV	0.00075	U		*0.00075*	0.00075	U		*0.00075*	0.00076	U		*0.00076*	0.00061	U		*0.00061*
1,4-Dichlorobenzene	0.318	0.110	0.00062	U		*0.00062*	0.00062	U		*0.00062*	0.00063	U		*0.00063*	0.0005	U		*0.0005*
Methylene chloride	0.159	NAV	0.0058	J		*0.0021*	0.0032	J		*0.0021*	0.0092			*0.0022*	0.004	J		*0.0017*
Toluene	2.5	2.5	0.00096	U		*0.00096*	0.00096	U		*0.00096*	0.00098	U		*0.00098*	0.00079	U		*0.00079*
2-Butanone	NAV	NAV	0.0047	U		*0.0047*	0.0047	U		*0.0047*	0.014	J		*0.0048*	0.0038	U		*0.0038*
Carbon disulfide	NAV	NAV	0.0019	J		*0.0016*	0.0016	U		*0.0016*	0.0023	J		*0.0016*	0.0013	U		*0.0013*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.001	U		*0.001*	0.00059	U		*0.00059*	0.0052			*0.00056*	0.0066			*0.00049*
Benzo(a)anthracene	0.32	0.261	0.001	U		*0.001*	0.0044	J		*0.00044*	0.026			*0.00042*	0.045			*0.00037*
Benzo(a)pyrene	0.37	0.43	0.001	U		*0.001*	0.0039	J		*0.00044*	0.024			*0.00042*	0.041			*0.00037*
Benzo(b)fluoranthene	10.4	1.8	0.016	U		*0.016*	0.016	U		*0.016*	0.015	U		*0.015*	0.056	J		*0.013*
Chrysene	0.34	0.384	0.023	U		*0.023*	0.022	U		*0.022*	0.021	U		*0.021*	0.068	J		*0.019*
Dimethylphthalate	NAV	NAV	0.55			*0.014*	0.44	J		*0.013*	0.52			*0.013*	0.44			*0.011*
Fluoranthene	0.75	0.6	0.01	U		*0.01*	0.0098	U		*0.0098*	0.0094	U		*0.0094*	0.11	J		*0.0083*
Phenanthrene	0.56	0.24	0.014	U		*0.014*	0.013	U		*0.013*	0.013	U		*0.013*	0.057	J		*0.011*
Pyrene	0.49	0.665	0.012	U		*0.012*	0.012	U		*0.012*	0.011	U		*0.011*	0.11	J		*0.0099*
Pesticides (mg/kg)																		
4,4'-DDD	0.008	0.002	0.00026	U		*0.00026*	0.00025	U		*0.00025*	0.0021	JP		*0.00024*	0.0033			*0.00021*
4,4'-DDE	0.005	0.0022	0.0003	U		*0.0003*	0.0003	U		*0.0003*	0.0013	J		*0.00028*	0.0015	JP		*0.00025*
PCBs (mg/kg)																		
Aroclor 1242	0.07	0.023	0.0032	U		*0.0032*	0.0031	U		*0.0031*	0.17			*0.0029*	0.0026	U		*0.0026*
Aroclor 1260	0.005	0.005	0.0056	U		*0.0056*	0.0056	U		*0.0056*	0.0052	U		*0.0052*	0.0046	U		*0.0046*
Metals (mg/kg)																		
Aluminum	25500	18000	3790			*0.8*	3580			*0.86*	3650			*1.02*	2410			*0.6*
Antimony	3	9.3	0.84	J		*0.53*	0.84	J		*0.58*	1.65	J		*0.68*	0.5	J		*0.4*
Arsenic	6	8.2	5.85			*0.31*	4.25			*0.34*	3.62			*0.4*	1.25			*0.24*
Barium	NAV	48	65.9			*0.38*	39.4			*0.41*	59.6			*0.49*	16.8			*0.29*
Beryllium	NAV	NAV	0.75			*0.06*	0.7			*0.06*	1.2			*0.07*	0.89			*0.04*
Cadmium	0.6	1.2	1.41			*0.06*	1.48			*0.06*	2.53			*0.07*	1.15			*0.04*
Calcium	NAV	NAV	601			*1.01*	488			*1.1*	480			*1.3*	255			*0.76*
Chromium	26	81	32.1			*0.12*	29.9			*0.13*	39			*0.16*	23.4			*0.09*
Cobalt	50	10	13.9			*0.54*	18.2			*0.59*	77.9			*0.69*	10.9			*0.41*
Copper	16	34	19.2			*0.3*	13.3			*0.33*	14.4			*0.39*	5.34			*0.23*
Iron	NAV	NAV	17300			*1.26*	19100			*1.37*	24500			*1.62*	17100			*0.95*
Lead	31	47	60.4			*0.37*	39.3			*0.4*	64			*0.47*	20.4			*0.28*
Magnesium	NAV	NAV	1260			*4.34*	1180			*4.71*	1620			*5.58*	1220			*3.27*
Manganese	630	260	40.1			*0.18*	36.2			*0.2*	32.3			*0.23*	13			*0.14*
Mercury	0.2	0.15	0.469			*0.003*	0.272			*0.003*	0.665			*0.003*	0.027			*0.002*
Nickel	16	21	6.87			*0.44*	6.42			*0.47*	22.3			*0.56*	8.48			*0.33*
Potassium	NAV	NAV	1860			*3.31*	1820			*3.6*	2830			*4.26*	2600			*2.5*
Selenium	NAV	1	3.43			*0.39*	3.61			*0.42*	4.15			*0.5*	2.64			*0.29*
Silver	1	1	0.14	U		*0.14*	0.15	U		*0.15*	0.18	U		*0.18*	0.11	U		*0.11*
Sodium	NAV	NAV	1030			*2.39*	940			*2.59*	1270			*3.07*	767			*1.8*
Thallium	NAV	NAV	0.33	J		*0.26*	0.28	U		*0.28*	0.33	U		*0.33*	0.19	U		*0.19*
Vanadium	NAV	57	22.8			*0.56*	23.1			*0.61*	22.7			*0.72*	12.6			*0.42*
Zinc	120	150	112			*0.66*	87.9			*0.72*	155			*0.85*	75.2			*0.5*
Misc.																		
Total Organic Carbon	NAV	NAV	6700			*250*	7500			*250*	4900			*250*	2700			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-17
Analytes Detected in Landfill M-14 Surface Water Samples
Page 1 of 2

Analyte	Sample ID		M14-SW3				M14-SW3-Diss				M14-SW8				M14-SW8-Diss				M14-SW12			
	Sample Date		6/22/10				6/22/10				6/15/10				6/15/10				6/28/10			
	ESC																					
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																						
Chloroform	140	NAV	1.3	J		*0.34*	NT				0.34	U		*0.34*	NT				0.34	U		*0.34*
cis-1,2-Dichloroethene	NAV	NAV	0.87	J		*0.35*	NT				1.8	J		*0.35*	NT				0.35	U		*0.35*
SVOCs (ug/L)																						
Anthracene	0.035	NAV	0.1	J		*0.012*	NT				0.012	U		*0.012*	NT				0.02	U		*0.02*
Benzo(a)anthracene	0.025	NAV	0.012	U		*0.012*	NT				0.012	U		*0.012*	NT				0.02	U		*0.02*
Benzo(a)pyrene	0.014	NAV	0.009	U		*0.009*	NT				0.009	U		*0.009*	NT				0.02	U		*0.02*
3,3'-Dichlorobenzidine	4.5	NAV	0.021	U		*0.021*	NT				0.02	U		*0.02*	NT				0.02	U		*0.02*
1,2,4-Trichlorobenzene	30	NAV	0.021	U		*0.021*	NT				0.02	U		*0.02*	NT				0.02	U		*0.02*
Pesticides (ug/L)	None detected																					
PCBs (ug/L)	None detected																					
Metals (ug/L)																						
Aluminum	NAV	NAV	52.6			*6.5*	6.5	U		*6.5*	18.1	J		*6.5*	35.5	J		*6.5*	92.9			*6.5*
Arsenic	150	36	6.32	J		*4.2*	4.55	J		*4.2*	12.6			*4.2*	11.1			*4.2*	4.2	U		*4.2*
Barium	220	NAV	46	J		*4*	47.6	J		*4*	38.2	J		*4*	38	J		*4*	35.1	J		*4*
Cadmium	0.14	8.8	0.5	U		*0.5*	0.5	U		*0.5*	0.67	J		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	37100			*31.8*	38800			*31.8*	23100			*31.8*	23900			*31.8*	241000			*31.8*
Iron	NAV	NAV	1260			*20.4*	364			*20.4*	780			*20.4*	1910			*20.4*	583			*20.4*
Lead	5.4	24	7.26			*2.6*	8.92			*2.6*	4.17	J		*2.6*	5.9	J		*2.6*	4.19	J		*2.6*
Magnesium	NAV	NAV	58700			*32.5*	60800			*32.5*	14300			*32.5*	19900			*32.5*	782000			*32.5*
Manganese	NAV	NAV	71.3			*1.7*	71.4			*1.7*	75			*1.7*	73.8			*1.7*	109			*1.7*
Nickel	34	22	5.93	J		*4.2*	6.16	J		*4.2*	6.73	J		*4.2*	6.55	J		*4.2*	4.34	J		*4.2*
Potassium	NAV	NAV	20800			*38.8*	20700			*38.8*	6170			*38.8*	8120			*38.8*	303000			*38.8*
Sodium	NAV	NAV	468000			*13.9*	480000			*13.9*	122000			*13.9*	171000			*13.9*	6530000			*139*
Thallium	10	NAV	6.09	J		*2.4*	7.37	J		*2.4*	13.3	J		*2.4*	13	J		*2.4*	2.4	U		*2.4*
Zinc	86	81	52.4			*6.5*	50.5			*6.5*	57.8			*6.5*	56.9			*6.5*	32.3			*6.5*
Misc. (ug/L)																						
Hardness	NAV	NAV	334377			*105*	NT				116480			*105*	NT				3821579			*105*

See Notes at end of Table

Table D-17
Analytes Detected in Landfill M-14 Surface Water Samples
Page 2 of 2

Analyte	Sample ID / Sample Date	ESC	M14-SW12-Diss 6/28/10				M14-SW13 6/22/10				M14-SW13-Diss 6/22/10				DUP-SW02 6/22/10				DUP-SW02-Diss 6/22/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																						
Chloroform	140	NAV	NT				2.3	J		*0.34*	NT				2.2	J		*0.34*	NT			
cis-1,2-Dichloroethene	NAV	NAV	NT				1.2	J		*0.35*	NT				1.2	J		*0.35*	NT			
SVOCs (ug/L)																						
Anthracene	0.035	NAV	NT				0.12			*0.012*	NT				0.13			*0.012*	NT			
Benzo(a)anthracene	0.025	NAV	NT				0.23			*0.012*	NT				0.24			*0.012*	NT			
Benzo(a)pyrene	0.014	NAV	NT				0.009	U		*0.009*	NT				0.31			*0.009*	NT			
3,3'-Dichlorobenzidine	4.5	NAV	NT				0.021	U		*0.021*	NT				0.56			*0.021*	NT			
1,2,4-Trichlorobenzene	30	NAV	NT				0.57			*0.021*	NT				0.57			*0.021*	NT			
Pesticides (ug/L)	None detected																					
PCBs (ug/L)	None detected																					
Metals (ug/L)																						
Aluminum	NAV	NAV	21.4	J		*6.5*	10.6	J		*6.5*	6.5	U		*6.5*	11.2	J		*6.5*	6.5	U		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	31.4	J		*4*	39.5	J		*4*	40.3	J		*4*	40.8	J		*4*	40.8	J		*4*
Cadmium	0.14	8.8	0.5	U		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	241000			*31.8*	23000			*31.8*	23400			*31.8*	23100			*31.8*	23200			*31.8*
Iron	NAV	NAV	70.8			*20.4*	1250			*20.4*	558			*20.4*	1230			*20.4*	514			*20.4*
Lead	5.4	24	2.6	U		*2.6*	4.6	J		*2.6*	6.84			*2.6*	4.43	J		*2.6*	4.97	J		*2.6*
Magnesium	NAV	NAV	797000			*32.5*	3650			*32.5*	3780			*32.5*	3740			*32.5*	3780			*32.5*
Manganese	NAV	NAV	98.4			*1.7*	46.3			*1.7*	44.6			*1.7*	47.5			*1.7*	44.5			*1.7*
Nickel	34	22	4.29	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.35	J		*4.2*	5.38	J		*4.2*
Potassium	NAV	NAV	295000			*38.8*	2530			*38.8*	2520			*38.8*	2500			*38.8*	2480			*38.8*
Sodium	NAV	NAV	6610000			*139*	26000			*13.9*	26200			*13.9*	25700			*13.9*	26000			*13.9*
Thallium	10	NAV	2.4	U		*2.4*	2.4	U		*2.4*	2.77	J		*2.4*	3.18	J		*2.4*	3.03	J		*2.4*
Zinc	86	81	37.7			*6.5*	45.5			*6.5*	37.3			*6.5*	40.2			*6.5*	52.9			*6.5*
Misc. (ug/L)																						
Hardness	NAV	NAV	NT				72349			*105*	NT				73128			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
Page 1 of 6

Analyte	Sample ID		M14-SD1				M14-SD2				M14-SD3				M14-SD4				M14-SD5			
	Sample Date		6/15/10				6/15/10				6/15/10				6/15/10				6/15/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.0039	U		*0.0039*	0.0039	U		*0.0039*	0.0082	J		*0.004*	0.0098	J		*0.0039*	0.0067	J		*0.0039*
Methylene chloride	0.159	NAV	0.0018	U		*0.0018*	0.0019	J		*0.0018*	0.0019	U		*0.0019*	0.0018	U		*0.0018*	0.0023	J		*0.0018*
2-Butanone	NAV	NAV	0.004	U		*0.004*	0.004	U		*0.004*	0.0041	U		*0.0041*	0.004	U		*0.004*	0.004	U		*0.004*
Carbon disulfide	NAV	NAV	0.0014	U		*0.0014*	0.0014	U		*0.0014*	0.0016	J		*0.0014*	0.0014	U		*0.0014*	0.0026	J		*0.0014*
SVOCs (mg/kg)																						
Acenaphthene	0.016	0.016	0.06	U		*0.06*	0.061	U		*0.061*	0.062	U		*0.062*	0.061	U		*0.061*	0.061	U		*0.061*
Anthracene	0.22	0.085	0.0064			*0.00051*	0.018			*0.00052*	0.03			*0.00053*	0.011			*0.00052*	0.016			*0.00052*
Benzo(a)anthracene	0.32	0.261	0.064			*0.00038*	0.085			*0.00039*	0.28			*0.0004*	0.066			*0.00039*	0.12			*0.00039*
Benzo(a)pyrene	0.37	0.43	0.058			*0.00038*	0.079			*0.00039*	0.22			*0.0004*	0.057			*0.00039*	0.13			*0.00039*
Benzo(b)fluoranthene	10.4	1.8	0.07	U		*0.07*	0.071	U		*0.071*	0.32	J		*0.072*	0.071	U		*0.071*	0.071	U		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.086	U		*0.086*	0.087	U		*0.087*	0.09	U		*0.09*	0.087	U		*0.087*	0.087	U		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.1	U		*0.1*	0.1	U		*0.1*	0.1	U		*0.1*	0.1	U		*0.1*	0.1	U		*0.1*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.84	J		*0.075*	0.076	U		*0.076*	0.078	U		*0.078*	0.076	U		*0.076*	0.076	U		*0.076*
Chrysene	0.34	0.384	0.097	U		*0.097*	0.098	U		*0.098*	0.39	J		*0.1*	0.098	U		*0.098*	0.098	U		*0.098*
Dimethylphthalate	NAV	NAV	0.46	J		*0.058*	0.57	J		*0.058*	0.46	J		*0.06*	0.58	J		*0.058*	0.51	J		*0.058*
Fluoranthene	0.75	0.6	0.043	U		*0.043*	0.043	U		*0.043*	0.7	J		*0.044*	0.043	U		*0.043*	0.3	J		*0.043*
Fluorene	0.19	0.019	0.081	U		*0.081*	0.082	U		*0.082*	0.084	U		*0.084*	0.082	U		*0.082*	0.082	U		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.071	U		*0.071*	0.072	U		*0.072*	0.074	U		*0.074*	0.072	U		*0.072*	0.072	U		*0.072*
Phenanthrene	0.56	0.24	0.058	U		*0.058*	0.058	U		*0.058*	0.06	U		*0.06*	0.058	U		*0.058*	0.058	U		*0.058*
Pyrene	0.49	0.665	0.051	U		*0.051*	0.052	U		*0.052*	0.66	J		*0.053*	0.052	U		*0.052*	0.29	J		*0.052*
Pesticides (mg/kg)																						
alpha-Chlordane	0.007	0.007	0.00018	U		*0.00018*	0.00018	U		*0.00018*	0.00019	U		*0.00019*	0.00018	U		*0.00018*	0.00018	U		*0.00018*
4,4'-DDD	0.008	0.002	0.004	P		*0.00022*	0.00022	U		*0.00022*	0.0031			*0.00023*	0.0016	J		*0.00022*	0.0041			*0.00022*
4,4'-DDE	0.005	0.0022	0.0031			*0.00026*	0.00026	U		*0.00026*	0.0022	J		*0.00027*	0.00026	U		*0.00026*	0.0025			*0.00026*
4,4'-DDT	0.008	0.001	0.00018	U		*0.00018*	0.00018	U		*0.00018*	0.00019	U		*0.00019*	0.00018	U		*0.00018*	0.00018	U		*0.00018*
PCBs (mg/kg)																						
Aroclor 1254	0.06	0.06	0.006	U		*0.006*	0.23			*0.0061*	0.0062	U		*0.0062*	0.0061	U		*0.0061*	0.0061	U		*0.0061*

See Notes at end of Table

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
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Analyte	Sample ID		M14-SD1				M14-SD2				M14-SD3				M14-SD4				M14-SD5			
	Sample Date		6/15/10				6/15/10				6/15/10				6/15/10				6/15/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																						
Aluminum	25500	18000	1220			*1.08*	1430			*0.85*	1490			*0.96*	2230			*0.93*	1810			*0.99*
Antimony	3	9.3	0.72	U		*0.72*	0.58	J		*0.57*	0.64	U		*0.64*	0.62	U		*0.62*	0.66	U		*0.66*
Arsenic	6	8.2	0.73	J		*0.42*	1.49			*0.33*	1.25			*0.38*	3.43			*0.37*	1.76			*0.39*
Barium	NAV	48	2.38	J		*0.51*	3.21	J		*0.4*	3.59	J		*0.46*	7.07			*0.45*	3.42	J		*0.47*
Beryllium	NAV	NAV	0.3	J		*0.08*	0.35			*0.06*	0.31	J		*0.07*	0.56			*0.07*	0.39			*0.07*
Cadmium	0.6	1.2	0.46			*0.08*	0.52			*0.06*	0.48			*0.07*	0.91			*0.07*	0.83			*0.07*
Calcium	NAV	NAV	382			*1.38*	516			*1.08*	518			*1.23*	1110			*1.19*	652			*1.26*
Chromium	26	81	14.5			*0.17*	17.9			*0.13*	17.3			*0.15*	27.3			*0.14*	20.5			*0.15*
Cobalt	50	10	1.21	J		*0.73*	1.42	J		*0.58*	1.24	J		*0.65*	1.58	J		*0.63*	1.17	J		*0.67*
Copper	16	34	5.79			*0.41*	12.9			*0.32*	8.68			*0.37*	20.3			*0.36*	11.1			*0.38*
Iron	NAV	NAV	5070			*1.71*	6200			*1.35*	5770			*1.53*	10600			*1.48*	8730			*1.56*
Lead	31	47	6.93			*0.5*	10			*0.39*	9.31			*0.45*	22.7			*0.43*	15.9			*0.46*
Magnesium	NAV	NAV	715			*5.89*	829			*4.63*	766			*5.26*	1040			*5.1*	1040			*5.39*
Manganese	630	260	5.92			*0.24*	9.55			*0.19*	8.51			*0.22*	13.2			*0.21*	7.83			*0.22*
Mercury	0.2	0.15	0.016			*0.003*	0.021			*0.002*	0.02			*0.002*	0.025			*0.002*	0.019			*0.002*
Nickel	16	21	2.56	J		*0.59*	3.04			*0.47*	2.89			*0.53*	4.97			*0.51*	2.69			*0.54*
Potassium	NAV	NAV	1250			*4.5*	1260			*3.54*	1190			*4.02*	2040			*3.9*	1750			*4.12*
Selenium	NAV	1	1.07	J		*0.53*	0.95	J		*0.41*	1.09	J		*0.47*	1.79			*0.46*	1.37			*0.48*
Silver	1	1	0.19	U		*0.19*	0.15	U		*0.15*	0.17	U		*0.17*	0.41	J		*0.17*	0.26	J		*0.18*
Sodium	NAV	NAV	1530			*3.24*	1340			*2.55*	1300			*2.89*	471			*2.8*	1600			*2.96*
Vanadium	NAV	57	8.11			*0.76*	12.1			*0.6*	10.3			*0.68*	12			*0.66*	13.1			*0.69*
Zinc	120	150	38.4			*0.9*	45.1			*0.71*	40.2			*0.8*	74.5			*0.78*	51.3			*0.82*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	540			*250*	1600			*250*	770			*250*	1200			*250*	870			*250*

See Notes at end of Table

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
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Analyte	Sample ID / Sample Date / ESC FW-SED	ESC SW-SED	M14-SD6 6/15/10				M14-SD7 6/15/10				M14-SD8 6/15/10				M14-SD9 6/16/10				M14-SD10 6/16/10			
			Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.0038	U		*0.0038*	0.0086	J		*0.0039*	0.0038	U		*0.0038*	0.0037	U		*0.0037*	0.0097	J		*0.0039*
Methylene chloride	0.159	NAV	0.0018	U		*0.0018*	0.0018	U		*0.0018*	0.0018	U		*0.0018*	0.0017	U		*0.0017*	0.0018	U		*0.0018*
2-Butanone	NAV	NAV	0.0039	U		*0.0039*	0.004	U		*0.004*	0.0039	U		*0.0039*	0.0038	U		*0.0038*	0.004	U		*0.004*
Carbon disulfide	NAV	NAV	0.0015	J		*0.0013*	0.0014	U		*0.0014*	0.0013	U		*0.0013*	0.0013	U		*0.0013*	0.0014	U		*0.0014*
SVOCs (mg/kg)																						
Acenaphthene	0.016	0.016	0.059	U		*0.059*	0.061	U		*0.061*	0.059	U		*0.059*	0.057	U		*0.057*	0.061	U		*0.061*
Anthracene	0.22	0.085	0.097			*0.0005*	0.053			*0.00052*	0.17			*0.0005*	0.045			*0.0024*	0.6			*0.0026*
Benzo(a)anthracene	0.32	0.261	0.55			*0.00038*	0.31			*0.00039*	0.7			*0.00037*	0.35			*0.0024*	0.83			*0.0026*
Benzo(a)pyrene	0.37	0.43	0.47			*0.00038*	0.28			*0.00039*	0.63			*0.00037*	0.28			*0.0024*	0.68			*0.0026*
Benzo(b)fluoranthene	10.4	1.8	0.55	J		*0.069*	0.38	J		*0.071*	0.74	J		*0.068*	0.42	J		*0.066*	0.79	J		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.085	U		*0.085*	0.087	U		*0.087*	0.36	J		*0.084*	0.082	U		*0.082*	0.32	J		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.099	U		*0.099*	0.1	U		*0.1*	0.27	J		*0.098*	0.096	U		*0.096*	0.31	J		*0.1*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.074	U		*0.074*	0.076	U		*0.076*	0.074	U		*0.074*	0.072	U		*0.072*	0.076	U		*0.076*
Chrysene	0.34	0.384	0.53	J		*0.095*	0.39	J		*0.098*	0.72	J		*0.094*	0.45	J		*0.092*	0.83	J		*0.098*
Dimethylphthalate	NAV	NAV	0.48	J		*0.057*	0.48	J		*0.058*	0.49	J		*0.056*	0.46	J		*0.055*	0.32	J		*0.058*
Fluoranthene	0.75	0.6	1	J		*0.042*	0.78	J		*0.043*	1.5	J		*0.042*	0.84	J		*0.041*	2.2			*0.043*
Fluorene	0.19	0.019	0.079	U		*0.079*	0.082	U		*0.082*	0.079	U		*0.079*	0.077	U		*0.077*	0.32	J		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.07	U		*0.07*	0.072	U		*0.072*	0.34	J		*0.069*	0.068	U		*0.068*	0.36	J		*0.072*
Phenanthrene	0.56	0.24	0.38	J		*0.057*	0.45	J		*0.058*	0.79	J		*0.056*	0.38	J		*0.055*	1.9	J		*0.058*
Pyrene	0.49	0.665	0.9	J		*0.05*	0.67	J		*0.052*	1.4	J		*0.05*	0.84	J		*0.049*	1.5	J		*0.052*
Pesticides (mg/kg)																						
alpha-Chlordane	0.007	0.007	0.0014	JP		*0.00018*	0.0029	JP		*0.00018*	0.00017	U		*0.00017*	0.0014	JP		*0.00017*	0.0018	JP		*0.00018*
4,4'-DDD	0.008	0.002	0.0072	P		*0.00022*	0.008			*0.00022*	0.0077			*0.00021*	0.0091	P		*0.00021*	0.0053			*0.00022*
4,4'-DDE	0.005	0.0022	0.003			*0.00026*	0.0027			*0.00026*	0.0071			*0.00025*	0.0048			*0.00024*	0.0028			*0.00026*
4,4'-DDT	0.008	0.001	0.00018	U		*0.00018*	0.00018	U		*0.00018*	0.013			*0.00017*	0.0042	P		*0.00017*	0.0016	J		*0.00018*
PCBs (mg/kg)																						
Aroclor 1254	0.06	0.06	0.006	U		*0.006*	0.0061	U		*0.0061*	0.0058	U		*0.0058*	0.0057	U		*0.0057*	0.0061	U		*0.0061*

See Notes at end of Table

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
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Analyte	Sample ID / Sample Date / ESC		M14-SD6 6/15/10				M14-SD7 6/15/10				M14-SD8 6/15/10				M14-SD9 6/16/10				M14-SD10 6/16/10			
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)																						
Aluminum	25500	18000	1530			*0.86*	1840			*0.81*	1380			*0.9*	869			*1.02*	1550			*0.86*
Antimony	3	9.3	0.57	U		*0.57*	0.54	U		*0.54*	0.6	U		*0.6*	0.68	U		*0.68*	0.57	U		*0.57*
Arsenic	6	8.2	1.08			*0.34*	1.47			*0.32*	2.75			*0.35*	1.13	J		*0.4*	1.8			*0.34*
Barium	NAV	48	3.71	J		*0.41*	8.48			*0.39*	3.23	J		*0.43*	3.47	J		*0.49*	5.91			*0.41*
Beryllium	NAV	NAV	0.29	J		*0.06*	0.35			*0.06*	0.28	J		*0.06*	0.18	J		*0.07*	0.42			*0.06*
Cadmium	0.6	1.2	0.5			*0.06*	0.38			*0.06*	0.55			*0.06*	0.41			*0.07*	1.08			*0.06*
Calcium	NAV	NAV	1140			*1.09*	1110			*1.03*	406			*1.14*	411			*1.3*	491			*1.09*
Chromium	26	81	17.2			*0.13*	20.9			*0.13*	11.5			*0.14*	7.47			*0.16*	18.6			*0.13*
Cobalt	50	10	1.3	J		*0.58*	1.5			*0.55*	1.42	J		*0.61*	1.42	J		*0.69*	1.85			*0.58*
Copper	16	34	13.7			*0.33*	43.2			*0.31*	3.62			*0.34*	10.2			*0.39*	5.57			*0.33*
Iron	NAV	NAV	6200			*1.36*	7250			*1.28*	5040			*1.42*	4250			*1.62*	6030			*1.35*
Lead	31	47	9.12			*0.4*	16.1			*0.38*	9.35			*0.42*	7.54			*0.48*	17.5			*0.4*
Magnesium	NAV	NAV	1020			*4.67*	950			*4.42*	674			*4.89*	434			*5.58*	658			*4.67*
Manganese	630	260	15.2			*0.19*	11			*0.18*	6.94			*0.2*	9.39			*0.23*	12.7			*0.19*
Mercury	0.2	0.15	0.039			*0.002*	0.032			*0.002*	0.01	J		*0.002*	0.003	J		*0.002*	0.012	J		*0.003*
Nickel	16	21	2.78			*0.47*	3.66			*0.44*	2.74			*0.49*	2.44			*0.56*	3.37			*0.47*
Potassium	NAV	NAV	948			*3.57*	1360			*3.37*	1020			*3.73*	372			*4.26*	899			*3.57*
Selenium	NAV	1	1.04			*0.42*	1.39			*0.4*	0.78	J		*0.44*	0.94	J		*0.5*	1.19			*0.42*
Silver	1	1	0.18	J		*0.15*	0.27	J		*0.14*	0.16	U		*0.16*	0.18	U		*0.18*	0.26	J		*0.15*
Sodium	NAV	NAV	1170			*2.57*	1130			*2.43*	990			*2.69*	415			*3.07*	390			*2.57*
Vanadium	NAV	57	10.4			*0.6*	11.2			*0.57*	9.57			*0.63*	7.5			*0.72*	9.87			*0.6*
Zinc	120	150	37.5			*0.71*	39			*0.67*	34.9			*0.75*	29.7			*0.85*	50.7			*0.71*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	710			*250*	1100			*250*	720			*250*	2900			*250*	3000			*250*

See Notes at end of Table

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
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Analyte	Sample ID		M14-SD11				M14-SD12				M14-SD13			
	Sample Date		6/16/10				6/28/10				6/16/10			
	ESC													
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)														
Acetone	NAV	NAV	0.17	J		*0.025*	0.091	J		*0.028*	0.013	J		*0.0043*
Methylene chloride	0.159	NAV	0.012	U		*0.012*	0.013	J		*0.013*	0.002	U		*0.002*
2-Butanone	NAV	NAV	0.071	J		*0.026*	0.029	U		*0.029*	0.0044	U		*0.0044*
Carbon disulfide	NAV	NAV	0.016	J		*0.0088*	0.0098	U		*0.0098*	0.0015	U		*0.0015*
SVOCs (mg/kg)														
Acenaphthene	0.016	0.016	0.047	U		*0.047*	0.055	U		*0.055*	0.64	J		*0.062*
Anthracene	0.22	0.085	0.002	U		*0.002*	0.022			*0.0023*	0.0026	U		*0.0026*
Benzo(a)anthracene	0.32	0.261	0.002	U		*0.002*	0.0023	U		*0.0023*	0.031			*0.0026*
Benzo(a)pyrene	0.37	0.43	0.002	U		*0.002*	0.063			*0.0023*	0.026			*0.0026*
Benzo(b)fluoranthene	10.4	1.8	0.054	U		*0.054*	0.064	U		*0.064*	0.072	U		*0.072*
Benzo(g,h,i)perylene	0.17	0.17	0.067	U		*0.067*	0.079	U		*0.079*	0.089	U		*0.089*
Benzo(k)fluoranthene	0.24	0.24	0.078	U		*0.078*	0.092	U		*0.092*	0.1	U		*0.1*
bis(2-Ethylhexyl)phthalate	0.182	0.18216	0.059	U		*0.059*	0.069	U		*0.069*	0.078	U		*0.078*
Chrysene	0.34	0.384	0.075	U		*0.075*	0.089	U		*0.089*	0.099	U		*0.099*
Dimethylphthalate	NAV	NAV	1	J		*0.045*	2.4			*0.053*	0.37	J		*0.059*
Fluoranthene	0.75	0.6	0.033	U		*0.033*	0.039	U		*0.039*	0.044	U		*0.044*
Fluorene	0.19	0.019	0.063	U		*0.063*	0.074	U		*0.074*	0.083	U		*0.083*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.055	U		*0.055*	0.065	U		*0.065*	0.073	U		*0.073*
Phenanthrene	0.56	0.24	0.045	U		*0.045*	0.053	U		*0.053*	0.059	U		*0.059*
Pyrene	0.49	0.665	0.04	U		*0.04*	0.047	U		*0.047*	0.053	U		*0.053*
Pesticides (mg/kg)														
alpha-Chlordane	0.007	0.007	0.0007	U		*0.0007*	0.00082	U		*0.00082*	0.00018	U		*0.00018*
4,4'-DDD	0.008	0.002	0.00085	U		*0.00085*	0.001	U		*0.001*	0.0047			*0.00022*
4,4'-DDE	0.005	0.0022	0.001	U		*0.001*	0.0012	U		*0.0012*	0.0018	J		*0.00026*
4,4'-DDT	0.008	0.001	0.0007	U		*0.0007*	0.00082	U		*0.00082*	0.0014	J		*0.00018*
PCBs (mg/kg)														
Aroclor 1254	0.06	0.06	0.023	U		*0.023*	0.027	U		*0.027*	0.0061	U		*0.0061*

See Notes at end of Table

Table D-18
Analytes Detected in Landfill M-14 Sediment Samples
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Analyte	Sample ID		M14-SD11				M14-SD12				M14-SD13			
	Sample Date		6/16/10				6/28/10				6/16/10			
	ESC													
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
Metals (mg/kg)														
Aluminum	25500	18000	6770			*2.42*	10200			*4.05*	1250			*0.91*
Antimony	3	9.3	1.62	U		*1.62*	2.7	U		*2.7*	0.6	U		*0.6*
Arsenic	6	8.2	6.48			*0.95*	18.6			*1.59*	1.85			*0.36*
Barium	NAV	48	54			*1.15*	20.5	J		*1.93*	8.83			*0.43*
Beryllium	NAV	NAV	1.45			*0.17*	1.34	J		*0.29*	0.27	J		*0.06*
Cadmium	0.6	1.2	1.44			*0.17*	14			*0.29*	0.45			*0.06*
Calcium	NAV	NAV	4330			*3.09*	2510			*5.16*	781			*1.15*
Chromium	26	81	59.3			*0.37*	101			*0.63*	31.7			*0.14*
Cobalt	50	10	4.81			*1.64*	13.7			*2.75*	1.37	J		*0.61*
Copper	16	34	0.92	U		*0.92*	77.3			*1.54*	4.38			*0.35*
Iron	NAV	NAV	22700			*3.84*	37800			*6.41*	6930			*1.43*
Lead	31	47	10.1			*1.12*	171			*1.88*	8.61			*0.42*
Magnesium	NAV	NAV	1570			*13.2*	6410			*22.1*	554			*4.94*
Manganese	630	260	81.7			*0.55*	197			*0.92*	122			*0.2*
Mercury	0.2	0.15	0.011	J		*0.01*	0.011	U		*0.011*	0.006	J		*0.003*
Nickel	16	21	11.6			*1.33*	29.2			*2.22*	2.39			*0.5*
Potassium	NAV	NAV	1930			*10.1*	5100			*16.9*	534			*3.77*
Selenium	NAV	1	4.97			*1.18*	5.99			*1.98*	1.2			*0.44*
Silver	1	1	0.43	U		*0.43*	3.54			*0.72*	0.16	U		*0.16*
Sodium	NAV	NAV	405			*7.27*	30200			*12.1*	200			*2.72*
Vanadium	NAV	57	42			*1.7*	61.1			*2.84*	10.4			*0.64*
Zinc	120	150	68.7			*2.02*	218			*3.37*	36.8			*0.75*
Misc. (mg/kg)														
Total Organic Carbon	NAV	NAV	18000			*250*	6200			*250*	3300			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-19
Analytes Detected in Site M-15 Surface Water Samples
Page 1 of 2

Analyte	Sample ID		M15-SW1				M15-SW1-Diss				M15-SW2			
	Sample Date		6/14/10				6/14/10				6/14/10			
ESC	ESC													
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)														
Anthracene	0.035	NAV	0.1	J		*0.012*	NT				1.1			*0.012*
Benzo(a)anthracene	0.025	NAV	0.012	U		*0.012*	NT				0.02	J		*0.012*
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	160			*6.5*	20.1	J		*6.5*	107			*6.5*
Arsenic	150	36	12			*4.2*	13.1			*4.2*	13.3			*4.2*
Barium	220	NAV	43.9	J		*4*	41.4	J		*4*	34.5	J		*4*
Cadmium	NAV	8.8	0.65	J		*0.5*	0.55	J		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	216000			*31.8*	144000			*31.8*	219000			*31.8*
Iron	NAV	NAV	629			*20.4*	68.4			*20.4*	465			*20.4*
Lead	5.4	24	6.52			*2.6*	5.33	J		*2.6*	8.32			*2.6*
Magnesium	NAV	NAV	728000			*32.5*	462000			*32.5*	734000			*32.5*
Manganese	NAV	NAV	75.1			*1.7*	88.7			*1.7*	73.1			*1.7*
Nickel	NAV	22	6.22	J		*4.2*	5.9	J		*4.2*	6.42	J		*4.2*
Potassium	NAV	NAV	245000			*38.8*	153000			*38.8*	245000			*38.8*
Sodium	NAV	NAV	5300000			*139*	3440000			*139*	5370000			*139*
Thallium	10	NAV	16.7	J		*2.4*	12.8	J		*2.4*	15.6	J		*2.4*
Vanadium	12	NAV	6.1	U		*6.1*	6.1	U		*6.1*	6.1	U		*6.1*
Zinc	NAV	81	42.6			*6.5*	31.7			*6.5*	34.8			*6.5*
Misc. (ug/L)														
Hardness	NAV	NAV	3537022			*105*	NT				3567878			*105*

See Notes at end of Table

Table D-19
Analytes Detected in Site M-15 Surface Water Samples
Page 2 of 2

Analyte / ESC	Sample ID / Sample Date / ESC FW-SW	ESC SW-SW	M15-SW2-Diss 6/14/10 Result	Lab Q	Val Q	MDL	M15-SW4 6/14/10 Result	Lab Q	Val Q	MDL	M15-SW4-Diss 6/14/10 Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)														
Anthracene	0.035	NAV	NT				1.1			*0.012*	NT			
Benzo(a)anthracene	0.025	NAV	NT				0.02	J		*0.012*	NT			
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	25.7	J		*6.5*	624			*6.5*	15.9	J		*6.5*
Arsenic	150	36	15			*4.2*	13			*4.2*	11.8			*4.2*
Barium	220	NAV	33.5	J		*4*	47.4	J		*4*	40	J		*4*
Cadmium	NAV	8.8	0.57	J		*0.5*	0.77	J		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	214000			*31.8*	211000			*31.8*	204000			*31.8*
Iron	NAV	NAV	50	J		*20.4*	1910			*20.4*	35.8	J		*20.4*
Lead	5.4	24	2.98	J		*2.6*	9.71			*2.6*	3.4	J		*2.6*
Magnesium	NAV	NAV	720000			*32.5*	709000			*32.5*	687000			*32.5*
Manganese	NAV	NAV	33.9			*1.7*	80.7			*1.7*	46.1			*1.7*
Nickel	NAV	22	7.91	J		*4.2*	5.69	J		*4.2*	6.75	J		*4.2*
Potassium	NAV	NAV	248000			*38.8*	242000			*38.8*	236000			*38.8*
Sodium	NAV	NAV	5690000			*139*	5240000			*139*	5170000			*139*
Thallium	10	NAV	16.4	J		*2.4*	17.4	J		*2.4*	16.4	J		*2.4*
Vanadium	12	NAV	6.1	U		*6.1*	6.88	J		*6.1*	6.1	U		*6.1*
Zinc	NAV	81	38.1			*6.5*	53.2			*6.5*	31			*6.5*
Misc. (ug/L)														
Hardness	NAV	NAV	NT				3445326			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantiation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water.

Table D-20
Analytes Detected in Site M-15 Sediment Samples

Analyte	Sample ID		M15-SD1				M15-SD2				M15-SD3				M15-SD4			
	Sample Date		6/14/10				6/14/10				6/14/10				6/14/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.033	J		*0.0062*	0.013	J		*0.0042*	0.0042	U		*0.0042*	0.018	J		*0.0048*
Methylene chloride	0.159	NAV	0.0029	U		*0.0029*	0.002	U		*0.002*	0.0022	J		*0.002*	0.0027	J		*0.0023*
Toluene	2.5	2.5	0.0013	U		*0.0013*	0.00089	U		*0.00089*	0.12			*0.0009*	0.001	U		*0.001*
2-Butanone	NAV	NAV	0.01	J		*0.0064*	0.0043	U		*0.0043*	0.0044	U		*0.0044*	0.005	U		*0.005*
Carbon disulfide	NAV	NAV	0.0028	J		*0.0022*	0.0033	J		*0.0015*	0.0016	J		*0.0015*	0.0017	U		*0.0017*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.006	J		*0.0008*	0.00055	U		*0.00055*	0.00055	U		*0.00055*	0.013			*0.00063*
Benzo(a)anthracene	0.32	0.261	0.0087			*0.0006*	0.032			*0.00041*	0.029			*0.00042*	0.05			*0.00047*
Benzo(a)pyrene	0.37	0.43	0.039			*0.0006*	0.02			*0.00041*	0.017			*0.00042*	0.05			*0.00047*
Dimethylphthalate	NAV	NAV	0.68			*0.018*	0.45			*0.012*	0.49			*0.012*	0.42	J		*0.014*
Fluoranthene	0.75	0.6	0.013	U		*0.013*	0.0092	U		*0.0092*	0.0093	U		*0.0093*	0.097	J		*0.011*
Pyrene	0.49	0.665	0.016	U		*0.016*	0.011	U		*0.011*	0.011	U		*0.011*	0.081	J		*0.013*
Pesticides (mg/kg)																		
4,4'-DDT	0.008	0.001	0.00028	U		*0.00028*	0.0041			*0.00019*	0.00019	U		*0.00019*	0.00022	U		*0.00022*
PCBs (mg/kg)	None detected																	
Metals (mg/kg)																		
Aluminum	25500	18000	10800			*1.47*	6950			*0.85*	5570			*1.14*	9290			*1.31*
Antimony	3	9.3	1.55	J		*0.98*	0.88	J		*0.57*	1.16	J		*0.76*	0.87	U		*0.87*
Arsenic	6	8.2	14.9			*0.58*	10.6			*0.33*	7.73			*0.45*	12			*0.51*
Barium	NAV	48	24.7			*0.7*	8.82			*0.4*	5.27	J		*0.54*	11.9			*0.62*
Beryllium	NAV	NAV	1.68			*0.11*	1.07			*0.06*	1.09			*0.08*	1.53			*0.09*
Cadmium	0.6	1.2	2.66			*0.11*	2.97			*0.06*	1.31			*0.08*	2.19			*0.09*
Calcium	NAV	NAV	1690			*1.88*	1050			*1.08*	2360			*1.45*	986			*1.66*
Chromium	26	81	95.5			*0.23*	62.3			*0.13*	59.9			*0.18*	76.8			*0.2*
Cobalt	50	10	6.4			*1*	5.28			*0.58*	3.25			*0.77*	5.74			*0.89*
Copper	16	34	13.4			*0.56*	12.2			*0.32*	4.85			*0.43*	13.6			*0.5*
Iron	NAV	NAV	48900			*2.34*	28100			*1.34*	25300			*1.81*	35100			*2.07*
Lead	31	47	59.7			*0.68*	108			*0.39*	21.5			*0.53*	38.4			*0.61*
Magnesium	NAV	NAV	4910			*8.04*	3710			*4.63*	3020			*6.22*	4030			*7.12*
Manganese	630	260	49.2			*0.33*	32.4			*0.19*	17.7			*0.26*	35.8			*0.3*
Mercury	0.2	0.15	0.249			*0.004*	0.16			*0.003*	0.097			*0.002*	0.293			*0.003*
Nickel	16	21	15.5			*0.81*	9.76			*0.46*	6.76			*0.62*	14.6			*0.71*
Potassium	NAV	NAV	7970			*6.15*	6630			*3.54*	6530			*4.75*	7960			*5.44*
Selenium	NAV	1	6.98			*0.72*	4.21			*0.41*	3.79			*0.56*	5.85			*0.64*
Silver	1	1	1.37			*0.26*	1.44			*0.15*	0.69			*0.2*	1.25			*0.23*
Sodium	NAV	NAV	2920			*4.42*	2960			*2.55*	2440			*3.42*	1490			*3.92*
Thallium	NAV	NAV	0.67	J		*0.47*	0.27	U		*0.27*	0.37	U		*0.37*	0.56	J		*0.42*
Vanadium	NAV	57	83.2			*1.04*	34.9			*0.6*	33.4			*0.8*	48.4			*0.92*
Zinc	120	150	178			*1.23*	262			*0.71*	76.7			*0.95*	143			*1.09*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	6800			*250*	6000			*250*	4200			*250*	6000			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-21
Analytes Detected in Site M-16 Surface Water Samples
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Analyte	Sample ID		M16-SW1				M16-SW1-Diss				M16-SW2			
	Sample Date		6/23/10				6/23/10				6/23/10			
	ESC													
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)	None detected													
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	101			*6.5*	18.6	J		*6.5*	117			*6.5*
Arsenic	150	36	4.2	U		*4.2*	7.3	J		*4.2*	6.56	J		*4.2*
Barium	220	NAV	35.1	J		*4*	33.4	J		*4*	35.5	J		*4*
Cadmium	NAV	8.8	0.5	U		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	217000			*31.8*	214000			*31.8*	196000			*31.8*
Iron	NAV	NAV	925			*20.4*	95			*20.4*	1040			*20.4*
Lead	5.4	24	3.94	J		*2.6*	7.37			*2.6*	4.08	J		*2.6*
Magnesium	NAV	NAV	722000			*32.5*	708000			*32.5*	648000			*32.5*
Manganese	NAV	NAV	109			*1.7*	102			*1.7*	103			*1.7*
Nickel	NAV	22	4.2	U		*4.2*	5.82	J		*4.2*	4.2	U		*4.2*
Potassium	NAV	NAV	243000			*38.8*	221000			*38.8*	215000			*38.8*
Sodium	NAV	NAV	4990000	D		*139*	5080000	D		*139*	4730000	D		*139*
Thallium	10	NAV	5.19	J		*2.4*	7.31	J		*2.4*	2.4	U		*2.4*
Zinc	NAV	81	39.7			*6.5*	37.5			*6.5*	35.6			*6.5*
Misc. (ug/L)														
Hardness	NAV	NAV	3898662			*117*	NT				3506789			*117*

See Notes at end of Table

Table D-21
Analytes Detected in Site M-16 Surface Water Samples
Page 2 of 2

Analyte	Sample ID / Sample Date	ESC	M16-SW2-Diss 6/23/10				M16-SW4 6/23/10				M16-SW4-Diss 6/23/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected													
SVOCs (ug/L)	None detected													
Pesticides (ug/L)	None detected													
PCBs (ug/L)	None detected													
Metals (ug/L)														
Aluminum	NAV	NAV	22	J		*6.5*	277			*6.5*	35.6	J		*6.5*
Arsenic	150	36	5.37	J		*4.2*	4.2	U		*4.2*	4.93	J		*4.2*
Barium	220	NAV	36	J		*4*	35.8	J		*4*	37.6	J		*4*
Cadmium	NAV	8.8	0.59	J		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	209000			*31.8*	192000			*31.8*	208000			*31.8*
Iron	NAV	NAV	87.4			*20.4*	1380			*20.4*	113			*20.4*
Lead	5.4	24	7.35			*2.6*	6.83			*2.6*	6.61			*2.6*
Magnesium	NAV	NAV	686000			*32.5*	633000			*32.5*	683000			*32.5*
Manganese	NAV	NAV	104			*1.7*	100			*1.7*	100			*1.7*
Nickel	NAV	22	4.2	U		*4.2*	4.2	U		*4.2*	6.35	J		*4.2*
Potassium	NAV	NAV	215000			*38.8*	216000			*38.8*	211000			*38.8*
Sodium	NAV	NAV	5000000	D		*139*	4650000	D		*139*	4930000	D		*139*
Thallium	10	NAV	3.24	J		*2.4*	2.4	U		*2.4*	5.59	J		*2.4*
Zinc	NAV	81	43.4			*6.5*	47.1			*6.5*	48.3			*6.5*
Misc. (ug/L)														
Hardness	NAV	NAV	NT				3427006			*117*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water.

Table D-22
Analytes Detected in Site M-16 Sediment Samples

Analyte	Sample ID		M16-SD1				M16-SD2				DUP-SD01				M16-SD3				M16-SD4			
	Sample Date		6/14/10				6/14/10				6/14/10				6/14/10				6/14/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.0038	U		*0.0038*	0.36	J		*0.05*	0.16	J		*0.023*	0.082	J		*0.019*	0.013	J		*0.0046*
Methyl-tert-butyl ether	NAV	NAV	0.0012	U		*0.0012*	0.016	U		*0.016*	0.043			*0.0072*	0.063			*0.006*	0.0015	U		*0.0015*
Methylene chloride	0.159	NAV	0.0018	U		*0.0018*	0.023	U		*0.023*	0.013	J		*0.011*	0.0093	J		*0.0089*	0.0032	J		*0.0022*
tert-Butyl alcohol	NAV	NAV	0.0093	U		*0.0093*	0.12	U		*0.12*	0.078	J		*0.056*	0.092	J		*0.046*	0.011	U		*0.011*
2-Butanone	NAV	NAV	0.0039	U		*0.0039*	0.13	J		*0.051*	0.054	J		*0.023*	0.019	U		*0.019*	0.0048	U		*0.0048*
Carbon disulfide	NAV	NAV	0.0013	U		*0.0013*	0.093			*0.018*	0.058			*0.008*	0.024	J		*0.0066*	0.0024	J		*0.0016*
SVOCs (mg/kg)																						
Anthracene	0.22	0.085	0.0045			*0.00049*	0.0017	U		*0.0017*	0.0015	U		*0.0015*	0.0016	U		*0.0016*	0.0025	J		*0.0006*
Benzo(a)anthracene	0.32	0.261	0.03			*0.00037*	0.08			*0.0012*	0.015			*0.0012*	0.081			*0.0012*	0.034			*0.00045*
Benzo(a)pyrene	0.37	0.43	0.036			*0.00037*	0.043			*0.0012*	0.074			*0.0012*	0.045			*0.0012*	0.021			*0.00045*
Dimethylphthalate	NAV	NAV	0.43			*0.011*	1.4			*0.037*	1.2	J		*0.035*	1.3			*0.036*	0.55			*0.014*
Fluoranthene	0.75	0.6	0.12	J		*0.0083*	0.028	U		*0.028*	0.026	U		*0.026*	0.027	U		*0.027*	0.01	U		*0.01*
Hexachlorobutadiene	0.0265	0.0013	0.00049	U		*0.00049*	0.0017	U		*0.0017*	0.0015	U		*0.0015*	0.008	J		*0.0016*	0.0006	U		*0.0006*
Pyrene	0.49	0.665	0.1	J		*0.0099*	0.033	U		*0.033*	0.031	U		*0.031*	0.032	U		*0.032*	0.012	U		*0.012*
Pesticides (mg/kg)																						
4,4'-DDD	0.008	0.002	0.00021	U		*0.00021*	0.00071	U		*0.00071*	0.00068	U		*0.00068*	0.00068	U		*0.00068*	0.0014	JP		*0.00026*
PCBs (mg/kg)	None detected																					
Metals (mg/kg)																						
Aluminum	25500	18000	665			*0.67*	16200			*3.46*	16800			*3.29*	17500			*2.79*	10200			*0.71*
Antimony	3	9.3	0.44	U		*0.44*	2.3	U		*2.3*	2.2	U		*2.2*	3	J		*1.86*	1.4	J		*0.47*
Arsenic	6	8.2	0.99			*0.26*	20			*1.36*	24.5			*1.29*	24			*1.1*	15.1			*0.28*
Barium	NAV	48	3.48	J		*0.32*	35.3			*1.65*	38.3			*1.57*	40.1			*1.33*	42.4			*0.34*
Beryllium	NAV	NAV	0.08	J		*0.05*	2.28			*0.25*	2.4			*0.24*	2.53			*0.2*	1.54			*0.05*
Cadmium	0.6	1.2	0.21	J		*0.05*	9.71			*0.25*	11.3			*0.24*	12.3			*0.2*	10.8			*0.05*
Calcium	NAV	NAV	348			*0.85*	7010			*4.4*	3840			*4.2*	6640			*3.55*	1410			*0.91*
Chromium	26	81	6.66			*0.1*	129			*0.53*	144			*0.51*	144			*0.43*	117			*0.11*
Cobalt	50	10	0.45	U		*0.45*	12.5			*2.35*	12.5			*2.24*	13.6			*1.89*	3.45			*0.48*
Copper	16	34	4.16			*0.25*	121			*1.32*	119			*1.25*	124			*1.06*	42.3			*0.27*
Iron	NAV	NAV	3380			*1.06*	60500			*5.47*	61900			*5.22*	63400			*4.42*	35100			*1.13*
Lead	31	47	5.53			*0.31*	178			*1.6*	196			*1.53*	212			*1.29*	74.5			*0.33*
Magnesium	NAV	NAV	322			*3.64*	7750			*18.8*	7350			*18*	7660			*15.2*	4890			*3.88*
Manganese	630	260	10.3			*0.15*	170			*0.78*	169			*0.75*	177			*0.63*	38.9			*0.16*
Mercury	0.2	0.15	0.024			*0.002*	0.451			*0.008*	0.502			*0.007*	0.462			*0.008*	0.145			*0.003*
Nickel	16	21	0.76	J		*0.37*	30.7			*1.89*	32.6			*1.8*	35.2			*1.53*	12.8			*0.39*
Potassium	NAV	NAV	365			*2.78*	7800			*14.4*	8300			*13.7*	8580			*11.6*	9520			*2.97*
Selenium	NAV	1	0.53	J		*0.33*	11			*1.69*	10.8			*1.61*	10.6			*1.36*	5.32			*0.35*
Silver	1	1	0.12	J		*0.12*	5.49			*0.62*	5.91			*0.59*	6.44			*0.5*	3.78			*0.13*
Sodium	NAV	NAV	616			*2*	15700			*10.4*	9800			*9.88*	10200			*8.37*	3400			*2.14*
Thallium	NAV	NAV	0.21	U		*0.21*	1.11	U		*1.11*	1.06	U		*1.06*	0.9	U		*0.9*	0.76	J		*0.23*
Vanadium	NAV	57	4.17			*0.47*	81.9			*2.43*	106			*2.31*	89			*1.96*	52.3			*0.5*
Zinc	120	150	18.5			*0.56*	465			*2.88*	475			*2.75*	500			*2.32*	160			*0.59*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	3300			*250*	11000			*250*	9600			*250*	10000			*250*	6500			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-23
Analytes Detected in Site M-18 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	M18-SW3 6/22/10				M18-SW3-Diss 6/22/10				M18-SW5 6/17/10				M18-SW5-Diss 6/17/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	64.4			*6.5*	20.8	J		*6.5*	166			*6.5*	11	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	8.1	J		*4.2*	7.02	J		*4.2*	4.34	J		*4.2*
Barium	220	NAV	67.7			*4*	63.5			*4*	62.8			*4*	58.6			*4*
Calcium	NAV	NAV	92300			*31.8*	90300			*31.8*	59800			*31.8*	58100			*31.8*
Iron	NAV	NAV	1700			*20.4*	199			*20.4*	2720			*20.4*	516			*20.4*
Lead	5.4	24	8.71			*2.6*	6.38			*2.6*	11.2			*2.6*	8.15			*2.6*
Magnesium	NAV	NAV	234000			*32.5*	234000			*32.5*	113000			*32.5*	107000			*32.5*
Manganese	NAV	NAV	145			*1.7*	137			*1.7*	145			*1.7*	136			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.1	J		*0.09*	0.09	U		*0.09*
Nickel	NAV	22	7.67	J		*4.2*	7.52	J		*4.2*	8.6	J		*4.2*	8.64	J		*4.2*
Potassium	NAV	NAV	78800			*38.8*	77900			*38.8*	37700			*38.8*	36300			*38.8*
Sodium	NAV	NAV	1760000			*13.9*	1760000			*13.9*	876000			*13.9*	847000			*13.9*
Thallium	10	NAV	5.15	J		*2.4*	6.34	J		*2.4*	6.11	J		*2.4*	7.69	J		*2.4*
Zinc	NAV	81	46.1			*6.5*	44.4			*6.5*	65			*6.5*	57.5			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	829715			*105*	NT				613267			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water

Table D-24
Analytes Detected in Site M-18 Sediment Samples

Analyte	Sample ID		M18-SD1				M18-SD2				M18-SD3				M18-SD4				M18-SD5			
	Sample Date		6/16/10				6/17/10				6/16/10				6/24/10				6/17/10			
	ESC																					
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																						
Acetone	NAV	NAV	0.095	J		*0.037*	0.017	J		*0.0094*	0.024	J		*0.0059*	0.0042	U		*0.0042*	0.016	J		*0.0038*
Methylene chloride	0.159	NAV	0.017	U		*0.017*	0.0067	J		*0.0044*	0.0028	U		*0.0028*	0.002	U		*0.002*	0.0031	J		*0.0018*
Carbon disulfide	NAV	NAV	0.049	J		*0.013*	0.0033	U		*0.0033*	0.0093	J		*0.0021*	0.0015	U		*0.0015*	0.0019	J		*0.0013*
SVOCs (mg/kg)																						
Benzo(a)anthracene	0.32	0.261	0.0079	J		*0.0019*	0.027			*0.00094*	0.0057			*0.00069*	0.00042	U		*0.00042*	0.00038	U		*0.00038*
Benzo(a)pyrene	0.37	0.43	0.0079	J		*0.0019*	0.034			*0.00094*	0.0057			*0.00069*	0.00042	U		*0.00042*	0.0021	J		*0.00038*
Benzoic acid	NAV	NAV	0.69	J		*0.31*	0.21	U		*0.21*	0.44	J		*0.11*	0.092	U		*0.092*	0.083	U		*0.083*
Dimethylphthalate	NAV	NAV	1.2	J		*0.043*	1.1			*0.028*	0.39	J		*0.015*	0.54			*0.012*	0.39	J		*0.011*
Pesticides (mg/kg)	None detected																					
PCBs (mg/kg)	None detected																					
Metals (mg/kg)																						
Aluminum	25500	18000	10300			*3.54*	9930			*1.91*	5910			*0.91*	11400			*0.96*	3080			*0.69*
Antimony	3	9.3	2.36	U		*2.36*	2.36	J		*1.27*	1.05	J		*0.61*	1.52	J		*0.64*	0.46	U		*0.46*
Arsenic	6	8.2	22.8			*1.39*	7.74			*0.75*	11.9			*0.36*	3.73			*0.38*	2.57			*0.27*
Barium	NAV	48	39			*1.68*	23.9			*0.91*	33			*0.43*	14.2			*0.46*	6.09			*0.33*
Beryllium	NAV	NAV	1.64			*0.25*	2.6			*0.14*	1			*0.06*	1.99			*0.07*	0.77			*0.05*
Cadmium	0.6	1.2	5.65			*0.25*	4.07			*0.14*	3.56			*0.06*	3.38			*0.07*	0.65			*0.05*
Calcium	NAV	NAV	3130			*4.51*	1220			*2.43*	1030			*1.16*	293			*1.22*	159			*0.88*
Chromium	26	81	84.6			*0.55*	101			*0.3*	75			*0.14*	132			*0.15*	37.5			*0.11*
Cobalt	50	10	56			*2.4*	11.6			*1.29*	9.86			*0.62*	2.98			*0.65*	1.34			*0.47*
Copper	16	34	82.9			*1.35*	5.23			*0.73*	30.2			*0.35*	0.37	U		*0.37*	0.26	U		*0.26*
Iron	NAV	NAV	55100			*5.6*	63000			*3.02*	31900			*1.44*	43300			*1.52*	15800			*1.09*
Lead	31	47	166			*1.64*	43.4			*0.89*	67.7			*0.42*	4.22			*0.45*	3.31			*0.32*
Magnesium	NAV	NAV	5540			*19.3*	6220			*10.4*	2450			*4.95*	6780			*5.24*	1600			*3.76*
Manganese	630	260	230			*0.8*	44.1			*0.43*	23			*0.21*	7.35			*0.22*	6.72			*0.16*
Mercury	0.2	0.15	0.669			*0.009*	0.591			*0.006*	0.646			*0.003*	0.031			*0.003*	0.009	J		*0.002*
Nickel	16	21	45.1			*1.94*	22.3			*1.04*	14.5			*0.5*	7.5			*0.53*	4.09			*0.38*
Potassium	NAV	NAV	4920			*14.7*	14300			*7.94*	4250			*3.78*	19400			*4.01*	4590			*2.87*
Selenium	NAV	1	12.3			*1.73*	9.38			*0.93*	5.27			*0.44*	6.16			*0.47*	2.47			*0.34*
Silver	1	1	27.9			*0.63*	0.34	U		*0.34*	26.1			*0.16*	0.17	U		*0.17*	0.12	U		*0.12*
Sodium	NAV	NAV	15800			*10.6*	7070			*5.72*	2820			*2.72*	1640			*2.88*	250			*2.07*
Thallium	NAV	NAV	1.14	U		*1.14*	0.79	J		*0.61*	0.29	U		*0.29*	0.31	U		*0.31*	0.41	J		*0.22*
Vanadium	NAV	57	63			*2.48*	54.5			*1.34*	34.2			*0.64*	34.7			*0.68*	21.3			*0.48*
Zinc	120	150	358			*2.95*	215			*1.59*	187			*0.76*	90.5			*0.8*	25.8			*0.57*
Misc. (mg/kg)																						
Total Organic Carbon	NAV	NAV	17000			*250*	4200			*250*	11000			*250*	1100			*250*	2800			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-25
Analytes Detected in Site M-20 Surface Water Samples

Analyte	Sample ID / Sample Date		M20-SW1 6/23/10				M20-SW1-Diss 6/23/10				M20-SW2 6/23/10				M20-SW2-Diss 6/23/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)																		
Dimethylphthalate	NAV	NAV	8.8	J		*0.23*	NT				5.1	J		*0.23*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	246			*6.5*	6.5	U		*6.5*	260			*6.5*	6.5	U		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.92	J		*4.2*	4.2	U		*4.2*	5.2	J		*4.2*
Barium	220	NAV	41.1	J		*4*	42.2	J		*4*	41.3	J		*4*	40.8	J		*4*
Calcium	NAV	NAV	219000			*31.8*	233000			*31.8*	226000			*31.8*	238000			*31.8*
Chromium	NAV	50	1.96	J		*1.1*	1.1	U		*1.1*	1.1	U		*1.1*	1.1	U		*1.1*
Iron	NAV	NAV	1230			*20.4*	65.8			*20.4*	1380			*20.4*	65.8			*20.4*
Lead	5.4	24	7.34			*2.6*	6.33			*2.6*	3	J		*2.6*	4.71	J		*2.6*
Magnesium	NAV	NAV	725000			*32.5*	774000			*32.5*	747000			*32.5*	794000			*32.5*
Manganese	NAV	NAV	120			*1.7*	122			*1.7*	123			*1.7*	124			*1.7*
Nickel	NAV	22	5.46	J		*4.2*	5.1	J		*4.2*	4.5	J		*4.2*	4.2	U		*4.2*
Potassium	NAV	NAV	254000			*38.8*	255000			*38.8*	263000			*38.8*	255000			*38.8*
Sodium	NAV	NAV	5530000	D		*139*	5630000	D		*139*	5460000	D		*139*	5570000	D		*139*
Thallium	10	NAV	2.4	U		*2.4*	4.81	J		*2.4*	2.4	U		*2.4*	3.17	J		*2.4*
Zinc	NAV	81	45.3			*6.5*	42.2			*6.5*	40.4			*6.5*	42.7			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	3922267			*117*	NT				4040922			*117*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water.

Table D-26
Analytes Detected in Site M-20 Sediment Samples

Analyte	Sample ID		M20-SD1				M20-SD2			
	Sample Date		6/23/10				6/23/10			
	ESC									
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)										
Acetone	NAV	NAV	0.0055	U		*0.0055*	0.036	J		*0.0084*
Methylene chloride	0.159	NAV	0.0043	J		*0.0026*	0.004	U		*0.004*
SVOCs (mg/kg)										
Anthracene	0.22	0.085	0.0037	J		*0.00074*	0.00078	U		*0.00078*
Benzo(a)anthracene	0.32	0.261	0.01			*0.00055*	0.0065			*0.00059*
Benzo(a)pyrene	0.37	0.43	0.02			*0.00055*	0.019			*0.00059*
Dimethylphthalate	NAV	NAV	0.55	J		*0.017*	0.48	J		*0.018*
Pesticides (mg/kg)	None detected									
PCBs (mg/kg)	None detected									
Metals (mg/kg)										
Aluminum	25500	18000	6080			*0.98*	15200			*1.33*
Antimony	3	9.3	0.96	J		*0.65*	1.74	J		*0.89*
Arsenic	6	8.2	9.36			*0.38*	23.8			*0.52*
Barium	NAV	48	12.8			*0.46*	22.3			*0.63*
Beryllium	NAV	NAV	1.24			*0.07*	1.84			*0.1*
Cadmium	0.6	1.2	1.31			*0.07*	2.87			*0.1*
Calcium	NAV	NAV	863			*1.24*	967			*1.7*
Chromium	26	81	67.6			*0.15*	99.4			*0.21*
Cobalt	50	10	4.7			*0.66*	11.4			*0.9*
Copper	16	34	11.9			*0.37*	71.2			*0.51*
Iron	NAV	NAV	30300			*1.55*	44500			*2.11*
Lead	31	47	33.4			*0.45*	59.4			*0.62*
Magnesium	NAV	NAV	3190			*5.32*	3630			*7.26*
Manganese	630	260	27.6			*0.22*	37.4			*0.3*
Mercury	0.2	0.15	0.108			*0.003*	0.322			*0.003*
Nickel	16	21	9.79			*0.53*	21.6			*0.73*
Potassium	NAV	NAV	6010			*4.07*	6320			*5.54*
Selenium	NAV	1	4.04			*0.48*	6.86			*0.65*
Silver	1	1	1.35			*0.17*	8.07			*0.24*
Sodium	NAV	NAV	3130			*2.93*	576			*3.99*
Thallium	NAV	NAV	0.68	J		*0.31*	0.72	J		*0.43*
Vanadium	NAV	57	35.7			*0.69*	60.9			*0.93*
Zinc	120	150	79.8			*0.81*	184			*1.11*
Misc. (mg/kg)										
Total Organic Carbon	NAV	NAV	4400			*250*	5400			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-27
Analytes Detected in Site M-59 Parcel 43 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	P43-SW2 6/22/10				P43-SW2-Diss 6/22/10				P43-SW3 6/22/10				P43-SW3-Diss 6/22/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
cis-1,2-Dichloroethene	NAV	NAV	1.2	J		*0.35*	NT				1.6	J		*0.35*	NT			
Tetrachloroethene	45	NAV	0.81	J		*0.27*	NT				0.91	J		*0.27*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.12			*0.013*	NT				0.12			*0.012*	NT			
Benzo(a)anthracene	0.025	NAV	0.23			*0.013*	NT				0.24			*0.012*	NT			
Benzo(a)pyrene	0.014	NAV	0.01	U		*0.01*	NT				0.31			*0.009*	NT			
Benzoic acid	NAV	NAV	16			*2.1*	NT				2.1	U		*2.1*	NT			
3,3'-Dichlorobenzidine	4.5	NAV	0.021	U		*0.021*	NT				0.57			*0.021*	NT			
1,2,4-Trichlorobenzene	30	NAV	0.56			*0.021*	NT				0.55			*0.021*	NT			
Pesticides (ug/L)	Samples were not tested for this group.																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	65			*6.5*	6.5	U		*6.5*	49.6	J		*6.5*	6.5	U		*6.5*
Barium	220	NAV	63.6			*4*	65.6			*4*	65.4			*4*	62.9			*4*
Calcium	NAV	NAV	29800			*31.8*	31800			*31.8*	30500			*31.8*	30500			*31.8*
Iron	NAV	NAV	2350			*20.4*	731			*20.4*	2070			*20.4*	588			*20.4*
Lead	5.4	24	6.8			*2.6*	7.2			*2.6*	7.76			*2.6*	11.5			*2.6*
Magnesium	NAV	NAV	4510			*32.5*	4850			*32.5*	4740			*32.5*	4690			*32.5*
Manganese	NAV	NAV	89.3			*1.7*	89.7			*1.7*	88			*1.7*	84.3			*1.7*
Nickel	42	22	8.38	J		*4.2*	7.41	J		*4.2*	8.72	J		*4.2*	8.17	J		*4.2*
Potassium	NAV	NAV	3420			*38.8*	3580			*38.8*	3510			*38.8*	3420			*38.8*
Sodium	NAV	NAV	49100			*13.9*	52300			*13.9*	51300			*13.9*	50400			*13.9*
Thallium	10	NAV	3.25	J		*2.4*	2.4	U		*2.4*	3.08	J		*2.4*	2.4	U		*2.4*
Zinc	107	81	53.5			*6.5*	43			*6.5*	46.4			*6.5*	48.5			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	92975			*105*	NT				95754			*105*	NT			

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Exceedances of saltwater surface water quality criteria have a bold border.
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ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-28
Analytes Detected in Parcel 39 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC		M2-SW11 6/21/10				M2-SW11-Diss 6/21/10			
		FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)											
cis-1,2-Dichloroethene		NAV	NAV	1.6	J		*0.35*	NT			
Tetrachloroethene		45	NAV	1.1	J		*0.27*	NT			
Trichloroethene		47	NAV	0.73	J		*0.28*	NT			
SVOCs (ug/L)											
Anthracene		0.035	NAV	0.11			*0.012*	NT			
Benzo(a)anthracene		0.025	NAV	0.22			*0.012*	NT			
1,2,4-Trichlorobenzene		30	NAV	0.02	U		*0.02*	NT			
Pesticides (ug/L)	None detected										
PCBs (ug/L)	None detected										
Metals (ug/L)											
Aluminum		NAV	NAV	33	J		*6.5*	6.5	U		*6.5*
Barium		220	NAV	61.1			*4*	62.9			*4*
Calcium		NAV	NAV	29100			*31.8*	30000			*31.8*
Iron		NAV	NAV	1740			*20.4*	399			*20.4*
Lead		5.4	24	6.2			*2.6*	10.1			*2.6*
Magnesium		NAV	NAV	4340			*32.5*	4510			*32.5*
Manganese		NAV	NAV	81.1			*1.7*	80.6			*1.7*
Nickel		41	22	9.27	J		*4.2*	8.64	J		*4.2*
Potassium		NAV	NAV	3270			*38.8*	3420			*38.8*
Sodium		NAV	NAV	49200			*13.9*	51700			*13.9*
Thallium		10	NAV	2.4	U		*2.4*	2.41	J		*2.4*
Zinc		104	81	44.7			*6.5*	46.3			*6.5*
Misc. (ug/L)											
Hardness		NAV	NAV	90432			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-29
Analytes Detected in Parcel 39 Sediment Samples

Analyte	Sample ID		M2-SD11				M2-SD12				M2-SD13				M2-SD14			
	Sample Date		6/25/10				6/25/10				6/25/10				6/24/10			
	ESC																	
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV	NAV	0.0052	U		*0.0052*	0.18			*0.0079*	0.0088	J		*0.004*	0.0041	U		*0.0041*
Methylene chloride	0.159	NAV	0.0038	J		*0.0025*	0.0099	J		*0.0037*	0.0019	U		*0.0019*	0.0023	J		*0.0019*
2-Butanone	NAV	NAV	0.0054	U		*0.0054*	0.055	J		*0.0081*	0.0041	U		*0.0041*	0.0042	U		*0.0042*
SVOCs (mg/kg)																		
Anthracene	0.22	0.085	0.018			*0.00053*	0.0011	U		*0.0011*	0.057			*0.0026*	0.043			*0.0027*
Benzo(a)anthracene	0.32	0.261	0.12			*0.00053*	0.007	J		*0.0011*	0.29			*0.0026*	0.19			*0.002*
Benzo(a)pyrene	0.37	0.43	0.11			*0.00053*	0.0053	J		*0.0011*	0.27			*0.0026*	0.2			*0.002*
Benzo(b)fluoranthene	10.4	1.8	0.19	J		*0.014*	0.029	U		*0.029*	0.39	J		*0.072*	0.073	U		*0.073*
Benzo(g,h,i)perylene	0.17	0.17	0.095	J		*0.018*	0.035	U		*0.035*	0.089	U		*0.089*	0.091	U		*0.091*
Benzo(k)fluoranthene	0.24	0.24	0.07	J		*0.021*	0.041	U		*0.041*	0.1	U		*0.1*	0.11	U		*0.11*
bis(2-Ethylhexyl)phthalate	0.182	0.182	0.016	U		*0.016*	0.031	U		*0.031*	0.28	J		*0.077*	0.079	U		*0.079*
Chrysene	0.34	0.384	0.17	J		*0.02*	0.04	U		*0.04*	0.37	J		*0.099*	0.1	U		*0.1*
Dimethylphthalate	NAV	NAV	0.58			*0.012*	1.1			*0.024*	0.58	J		*0.059*	0.36	J		*0.061*
Fluoranthene	0.75	0.6	0.38	J		*0.0089*	0.018	U		*0.018*	0.92	J		*0.044*	0.42	J		*0.045*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.098	J		*0.015*	0.029	U		*0.029*	0.073	U		*0.073*	0.075	U		*0.075*
Phenanthrene	0.56	0.24	0.18	J		*0.012*	0.024	U		*0.024*	0.059	U		*0.059*	0.061	U		*0.061*
Pyrene	0.49	0.665	0.27	J		*0.011*	0.021	U		*0.021*	0.71	J		*0.052*	0.33	J		*0.054*
Pesticides (mg/kg)																		
alpha-Chlordane	0.007	0.007	0.00019	U		*0.00019*	0.00037	U		*0.00037*	0.0012	JP		*0.00018*	0.00019	U		*0.00019*
4,4'-DDD	0.008	0.002	0.00023	U		*0.00023*	0.00045	U		*0.00045*	0.0017	JP		*0.00022*	0.00023	U		*0.00023*
4,4'-DDE	0.005	0.0022	0.00027	U		*0.00027*	0.00052	U		*0.00052*	0.0012	JP		*0.00026*	0.00027	U		*0.00027*
PCBs (mg/kg)																		
Aroclor 1254	0.06	0.06	0.027			*0.0062*	0.012	U		*0.012*	0.064			*0.0061*	0.0063	U		*0.0063*
Metals (mg/kg)																		
Aluminum	25500	18000	3980			*0.66*	12800			*2.12*	3730			*0.9*	3630			*0.98*
Antimony	3	9.3	0.7	J		*0.44*	1.41	U		*1.41*	0.75	J		*0.6*	0.83	J		*0.65*
Arsenic	6	8.2	3.35			*0.26*	8.09			*0.83*	3.83			*0.35*	3.49			*0.38*
Barium	NAV	48	33.6			*0.31*	356			*1.01*	41			*0.43*	38.1			*0.46*
Beryllium	NAV	NAV	1.2			*0.05*	2.35			*0.15*	1.18			*0.06*	1.14			*0.07*
Cadmium	0.6	1.2	1.54			*0.05*	2.09			*0.15*	1.59			*0.06*	1.44			*0.07*
Calcium	NAV	NAV	670			*0.84*	3730			*2.7*	795			*1.14*	1230			*1.24*
Chromium	26	81	43.2			*0.1*	111			*0.33*	37.7			*0.14*	42			*0.15*
Cobalt	50	10	4.37			*0.45*	2.72	J		*1.44*	5.58			*0.61*	5.28			*0.66*
Copper	16	34	0.25	U		*0.25*	0.81	U		*0.81*	1.43			*0.34*	0.37	U		*0.37*
Iron	NAV	NAV	21700			*1.05*	33500			*3.36*	21700			*1.42*	22200			*1.55*
Lead	31	47	23.5			*0.31*	7.36			*0.98*	24			*0.42*	19.7			*0.45*
Magnesium	NAV	NAV	1600			*3.6*	3300			*11.6*	1250			*4.89*	1590			*5.32*
Manganese	630	260	9.74			*0.15*	18			*0.48*	24.5			*0.2*	26.6			*0.22*
Mercury	0.2	0.15	0.056			*0.003*	0.041			*0.005*	0.076			*0.002*	0.045			*0.002*
Nickel	16	21	8.73			*0.36*	14.4			*1.16*	10.5			*0.49*	8.85			*0.53*
Potassium	NAV	NAV	4420			*2.75*	5820			*8.83*	3100			*3.73*	4170			*4.07*
Selenium	NAV	1	3.18			*0.32*	6.6			*1.03*	3.34			*0.44*	3.6			*0.48*
Sodium	NAV	NAV	105			*1.98*	894			*6.36*	165			*2.69*	216			*2.93*
Thallium	NAV	NAV	0.29	J		*0.21*	0.68	U		*0.68*	0.29	U		*0.29*	0.31	U		*0.31*
Vanadium	NAV	57	16.7			*0.46*	42.9			*1.49*	18.4			*0.63*	18.2			*0.69*
Zinc	120	150	68.7			*0.55*	71.2			*1.77*	82.1			*0.75*	83.9			*0.81*
Misc. (mg/kg)																		
Total Organic Carbon	NAV	NAV	1800			*250*	5800			*250*	1800			*250*	2000			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-30
Analytes Detected in Parcel 49 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	P49-SW2 6/23/10				P49-SW2-Diss 6/23/10				P49-SW3 6/23/10				P49-SW3-Diss 6/23/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)																		
Dimethylphthalate	NAV	NAV	15			*0.23*	NT				3.5	J		*0.22*	NT			
Pesticides (ug/L)	Samples were not tested for this group.																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	264			*6.5*	6.5	U		*6.5*	174			*6.5*	9.31	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	5.2	J		*4.2*
Barium	220	NAV	47.1	J		*4*	49.4	J		*4*	41.9	J		*4*	43	J		*4*
Calcium	NAV	NAV	207000			*31.8*	208000			*31.8*	206000			*31.8*	218000			*31.8*
Iron	NAV	NAV	1670			*20.4*	61			*20.4*	1180			*20.4*	59.6			*20.4*
Lead	5.4	24	7.07			*2.6*	8.23			*2.6*	6.69			*2.6*	5.2	J		*2.6*
Magnesium	NAV	NAV	682000			*32.5*	681000			*32.5*	679000			*32.5*	719000			*32.5*
Manganese	NAV	NAV	127			*1.7*	126			*1.7*	124			*1.7*	129			*1.7*
Nickel	NAV	22	7.6	J		*4.2*	7.96	J		*4.2*	4.2	U		*4.2*	4.76	J		*4.2*
Potassium	NAV	NAV	236000			*38.8*	229000			*38.8*	242000			*38.8*	248000			*38.8*
Sodium	NAV	NAV	5030000	D		*139*	5050000	D		*139*	5190000	D		*139*	5150000	D		*139*
Thallium	10	NAV	2.4	U		*2.4*	5.06	J		*2.4*	2.4	U		*2.4*	3.66	J		*2.4*
Zinc	NAV	81	42.7			*6.5*	44.5			*6.5*	46.4			*6.5*	33.2			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	3691780			*117*	NT				3672341			*117*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water

Table D-31
Analytes Detected in Parcel 61 Surface Water Samples

Analyte	Sample ID / Sample Date		P61-SW1 6/15/10				P61-SW1-Diss 6/15/10			
	ESC									
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected									
SVOCs (ug/L)										
Benzo(a)anthracene	0.025	NAV	0.57			*0.012*	NT			
Hexachlorobutadiene	0.053	NAV	0.062	J		*0.021*	NT			
Pesticides (ug/L)	Samples were not tested for this group.									
PCBs (ug/L)	None detected									
Metals (ug/L)										
Aluminum	NAV	NAV	207			*6.5*	14.5	J		*6.5*
Arsenic	150	36	9.1	J		*4.2*	9.77	J		*4.2*
Barium	220	NAV	50.2			*4*	53.5			*4*
Cadmium	NAV	8.8	0.59	J		*0.5*	0.64	J		*0.5*
Calcium	NAV	NAV	18600			*31.8*	17900			*31.8*
Iron	NAV	NAV	1700			*20.4*	658			*20.4*
Lead	5.4	24	6.01			*2.6*	5.25	J		*2.6*
Magnesium	NAV	NAV	14600			*32.5*	13800			*32.5*
Manganese	NAV	NAV	126			*1.7*	127			*1.7*
Nickel	NAV	22	10.2	J		*4.2*	9.8	J		*4.2*
Potassium	NAV	NAV	6620			*38.8*	6290			*38.8*
Sodium	NAV	NAV	119000			*13.9*	110000			*13.9*
Thallium	10	NAV	13.7	J		*2.4*	12.8	J		*2.4*
Zinc	NAV	81	79.5			*6.5*	76.6			*6.5*
Misc. (ug/L)										
Hardness	NAV	NAV	106750			*106750*	NT			

Exceedances of freshwater surface water quality criteria are shaded.

Exceedances of saltwater surface water quality criteria have a bold border.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

ESC = Ecological Screening Criteria (see Section 3.3)

FW-SW = Fresh Water-Surface Water

SW-SW = Salt Water-Surface Water

MDL = Method Detection Limit

NAV = No Available Value

NT = Not Tested

PCB = Polychlorinated Biphenyl

SVOC = Semivolatile Organic Compound

VOC = Volatile Organic Compound

ug/L = micrograms per liter

FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water

Table D-32
Analytes Detected in Parcel 69 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC		P69-SW2 6/28/10				P69-SW2-Diss 6/28/10			
		FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected										
SVOCs (ug/L)	None detected										
Pesticides (ug/L)	Samples were not tested for this group.										
PCBs (ug/L)	None detected										
Metals (ug/L)											
Aluminum		NAV	NAV	71.2			*6.5*	20.1	J		*6.5*
Arsenic		150	36	4.2	U		*4.2*	4.63	J		*4.2*
Barium		220	NAV	36.9	J		*4*	36	J		*4*
Calcium		NAV	NAV	241000			*31.8*	250000			*31.8*
Iron		NAV	NAV	494			*20.4*	72.8			*20.4*
Magnesium		NAV	NAV	779000			*32.5*	810000			*32.5*
Manganese		NAV	NAV	95.1			*1.7*	95.6			*1.7*
Potassium		NAV	NAV	301000			*38.8*	313000			*38.8*
Sodium		NAV	NAV	6620000			*139*	6750000			*139*
Zinc		NAV	81	53.5			*6.5*	31.8			*6.5*
Misc. (ug/L)											
Hardness		NAV	NAV	3809532			*105*	NT			

U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc not calculated in saline water.

Table D-33
Analytes Detected in Landfill CW-3A Surface Water Samples

Analyte	Sample ID / Sample Date		CW3-SW4 6/28/10				CW3-SW4-Diss 6/28/10				CW3-SW5 6/28/10				CW3-SW5-Diss 6/28/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
Toluene	253	NAV	0.37	U		*0.37*	NT				6.8			*0.37*	NT			
SVOCs (ug/L)																		
Anthracene	0.035	NAV	0.11			*0.02*	NT				0.11			*0.021*	NT			
Benzo(a)pyrene	0.014	NAV	0.31			*0.02*	NT				0.021	U		*0.021*	NT			
3,3'-Dichlorobenzidine	4.5	NAV	0.61			*0.02*	NT				0.021	U		*0.021*	NT			
Pesticides (ug/L)	None detected																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	505			*6.5*	51.4			*6.5*	282			*6.5*	74			*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	8.52	J		*4.2*	7.7	J		*4.2*
Barium	220	NAV	126			*4*	119			*4*	91.4			*4*	85.9			*4*
Cadmium	0.14	8.8	0.5	U		*0.5*	0.5	U		*0.5*	0.97	J		*0.5*	0.79	J		*0.5*
Calcium	NAV	NAV	16600			*31.8*	16800			*31.8*	18300			*31.8*	18800			*31.8*
Chromium	19	50	4.43	J		*1.1*	1.1	U		*1.1*	2.13	J		*1.1*	1.1	U		*1.1*
Cobalt	24	NAV	6.53	J		*5.8*	5.89	J		*5.8*	5.8	U		*5.8*	5.8	U		*5.8*
Copper	6.5	3.1	8.48	J		*6.6*	6.6	U		*6.6*	6.6	U		*6.6*	6.6	U		*6.6*
Iron	NAV	NAV	4170			*20.4*	1260			*20.4*	32500			*20.4*	28900			*20.4*
Lead	5.4	24	8.81			*2.6*	2.6	U		*2.6*	6.18			*2.6*	2.6	U		*2.6*
Magnesium	NAV	NAV	7750			*32.5*	7460			*32.5*	9590			*32.5*	9840			*32.5*
Manganese	NAV	NAV	193			*1.7*	192			*1.7*	315			*1.7*	309			*1.7*
Mercury	0.77	0.94	0.09	U		*0.09*	0.09	U		*0.09*	0.17	J		*0.09*	0.15	J		*0.09*
Nickel	34	22	6.04	J		*4.2*	6.59	J		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Potassium	NAV	NAV	4100			*38.8*	4300			*38.8*	3260			*38.8*	3260			*38.8*
Sodium	NAV	NAV	127000			*13.9*	128000			*13.9*	153000			*13.9*	153000			*13.9*
Vanadium	12	NAV	6.1	U		*6.1*	6.1	U		*6.1*	6.51	J		*6.1*	6.1	U		*6.1*
Zinc	88	81	117			*6.5*	99.8			*6.5*	49.5			*6.5*	55.4			*6.5*
Misc. (ug/L)																		
Hardness	na	na	73414			*105*	NT				85099			*105*	NT			

Exceedances of freshwater surface water quality criteria are bold and shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-34
Analytes Detected in Landfill CW-3A Sediment Samples
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Analyte	Sample ID		CW3-SD1				CW3-SD2				CW3-SD3			
	Sample Date		6/28/10				6/28/10				6/28/10			
	ESC													
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)														
Acetone	NAV	NAV	0.41			*0.049*	0.076	J		*0.014*	0.005	U		*0.005*
Methylene chloride	0.159	NAV	0.033	J		*0.023*	0.01	J		*0.0064*	0.0023	U		*0.0023*
Toluene	2.5	2.5	0.01	U		*0.01*	0.0029	U		*0.0029*	0.0011	U		*0.0011*
2-Butanone	NAV	NAV	0.093	J		*0.05*	0.014	U		*0.014*	0.0051	U		*0.0051*
SVOCs (mg/kg)														
Acenaphthene	0.016	0.016	0.085	U		*0.085*	0.038	U		*0.038*	0.016	U		*0.016*
Anthracene	0.22	0.085	0.0036	U		*0.0036*	0.0016	U		*0.0016*	0.00066	U		*0.00066*
Benzo(a)anthracene	0.32	0.261	0.0036	U		*0.0036*	0.0016	U		*0.0016*	0.016			*0.00066*
Benzo(a)pyrene	0.37	0.43	0.0036	U		*0.0036*	0.0016	U		*0.0016*	0.014			*0.00066*
Benzo(b)fluoranthene	10.4	1.8	0.099	U		*0.099*	0.044	U		*0.044*	0.018	U		*0.018*
Benzo(g,h,i)perylene	0.17	0.17	0.12	U		*0.12*	0.054	U		*0.054*	0.022	U		*0.022*
Benzo(k)fluoranthene	0.24	0.24	0.14	U		*0.14*	0.063	U		*0.063*	0.026	U		*0.026*
Benzoic acid	NAV	NAV	0.6	U		*0.6*	1.2	JB		*0.26*	0.11	U		*0.11*
Chrysene	0.34	0.384	0.14	U		*0.14*	0.06	U		*0.06*	0.025	U		*0.025*
Dibenzofuran	NAV	NAV	0.12	U		*0.12*	0.052	U		*0.052*	0.022	U		*0.022*
Dimethylphthalate	NAV	NAV	3.7			*0.082*	1.7			*0.036*	0.57			*0.015*
Fluoranthene	0.75	0.6	0.061	U		*0.061*	0.027	U		*0.027*	0.011	U		*0.011*
Fluorene	0.19	0.019	0.11	U		*0.11*	0.05	U		*0.05*	0.021	U		*0.021*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.1	U		*0.1*	0.044	U		*0.044*	0.018	U		*0.018*
Phenanthrene	0.56	0.24	0.082	U		*0.082*	0.036	U		*0.036*	0.015	U		*0.015*
Pyrene	0.49	0.665	0.072	U		*0.072*	0.032	U		*0.032*	0.013	U		*0.013*
Pesticides (mg/kg)														
4,4'-DDD	0.008	0.002	0.0015	U		*0.0015*	0.00068	U		*0.00068*	0.013	P		*0.00028*
4,4'-DDE	0.005	0.0022	0.0018	U		*0.0018*	0.0008	U		*0.0008*	0.0042			*0.00033*
4,4'-DDT	0.008	0.001	0.0013	U		*0.0013*	0.00056	U		*0.00056*	0.0048			*0.00023*
PCBs (mg/kg)	None detected													
Metals (mg/kg)														
Aluminum	25500	18000	8820			*7.43*	7500			*3.32*	2200			*1.16*
Arsenic	6	8.2	6.59	J		*2.92*	1.3	U		*1.3*	1.23	J		*0.46*
Barium	NAV	48	71			*3.54*	34.4			*1.58*	16.4			*0.55*
Beryllium	NAV	NAV	0.81	J		*0.53*	0.53	J		*0.24*	0.29	J		*0.08*
Cadmium	0.6	1.2	3.38			*0.53*	1.94			*0.24*	1.07			*0.08*
Calcium	NAV	NAV	3820			*9.47*	1480			*4.23*	474			*1.48*
Chromium	26	81	145			*1.15*	129			*0.51*	29.3			*0.18*
Cobalt	50	10	5.04	U		*5.04*	2.25	U		*2.25*	1.33	J		*0.79*
Copper	16	34	11.1			*2.83*	7.65			*1.26*	31.6			*0.44*
Iron	NAV	NAV	7120			*11.8*	1600			*5.26*	5340			*1.83*
Lead	31	47	10.8			*3.45*	7.18			*1.54*	25			*0.54*
Magnesium	NAV	NAV	1250			*40.5*	417			*18.1*	579			*6.32*
Manganese	630	260	45.3			*1.68*	13.6			*0.75*	7.36			*0.26*
Mercury	0.2	0.15	0.061	J		*0.017*	0.065			*0.007*	0.016	J		*0.003*
Nickel	16	21	15.1	J		*4.07*	4.7	J		*1.82*	3.33			*0.63*
Potassium	NAV	NAV	954			*31*	514			*13.8*	1190			*4.83*
Selenium	NAV	1	12.9			*3.63*	4.38			*1.62*	1.21	J		*0.57*
Sodium	NAV	NAV	3130			*22.3*	1300			*9.96*	366			*3.48*
Vanadium	NAV	57	84.1			*5.22*	60.4			*2.33*	17.3			*0.81*
Zinc	120	150	46.7			*6.19*	16.4			*2.77*	40.5			*0.97*
Misc. (mg/kg)														
Total Organic Carbon	NAV	NAV	12000			*250*	12000			*250*	500			*250*

See Notes at end of Table

Table D-34
Analytes Detected in Landfill CW-3A Sediment Samples
Page 2 of 2

Analyte	Sample ID / Sample Date	ESC		CW3-SD4 6/28/10				CW3-SD5 6/28/10				CW3-SD6 6/28/10			
		FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)															
Acetone		NAV	NAV	0.0046	U		*0.0046*	0.0061	U		*0.0061*	0.062	J		*0.01*
Methylene chloride		0.159	NAV	0.0022	U		*0.0022*	0.0031	J		*0.0029*	0.0048	U		*0.0048*
Toluene		2.5	2.5	0.0067	J		*0.00098*	0.0013	U		*0.0013*	0.0072	J		*0.0021*
2-Butanone		NAV	NAV	0.0048	U		*0.0048*	0.0063	U		*0.0063*	0.01	U		*0.01*
SVOCs (mg/kg)															
Acenaphthene		0.016	0.016	0.014	U		*0.014*	0.014	U		*0.014*	0.78	J		*0.16*
Anthracene		0.22	0.085	0.0072			*0.00061*	0.00061	U		*0.00061*	4.1			*0.0067*
Benzo(a)anthracene		0.32	0.261	0.03			*0.00061*	0.00061	U		*0.00061*	7			*0.0067*
Benzo(a)pyrene		0.37	0.43	0.026			*0.00061*	0.00061	U		*0.00061*	4.6			*0.0067*
Benzo(b)fluoranthene		10.4	1.8	0.017	U		*0.017*	0.017	U		*0.017*	5.7			*0.18*
Benzo(g,h,i)perylene		0.17	0.17	0.021	U		*0.021*	0.021	U		*0.021*	2	J		*0.22*
Benzo(k)fluoranthene		0.24	0.24	0.024	U		*0.024*	0.024	U		*0.024*	2.3	J		*0.26*
Benzoic acid		NAV	NAV	0.1	U		*0.1*	0.1	U		*0.1*	1.1	U		*1.1*
Chrysene		0.34	0.384	0.023	U		*0.023*	0.023	U		*0.023*	5.6			*0.25*
Dibenzofuran		NAV	NAV	0.02	U		*0.02*	0.02	U		*0.02*	0.71	J		*0.22*
Dimethylphthalate		NAV	NAV	0.71			*0.014*	0.72			*0.014*	1.6	J		*0.15*
Fluoranthene		0.75	0.6	0.01	U		*0.01*	0.01	U		*0.01*	17			*0.11*
Fluorene		0.19	0.019	0.019	U		*0.019*	0.019	U		*0.019*	1.4	J		*0.21*
Indeno(1,2,3-c,d)pyrene		0.2	0.2	0.017	U		*0.017*	0.017	U		*0.017*	2	J		*0.18*
Phenanthrene		0.56	0.24	0.014	U		*0.014*	0.014	U		*0.014*	15			*0.15*
Pyrene		0.49	0.665	0.081	J		*0.012*	0.012	U		*0.012*	13			*0.13*
Pesticides (mg/kg)															
4,4'-DDD		0.008	0.002	0.0022	J		*0.00026*	0.00026	U		*0.00026*	0.00057	U		*0.00057*
4,4'-DDE		0.005	0.0022	0.00031	U		*0.00031*	0.00031	U		*0.00031*	0.00066	U		*0.00066*
4,4'-DDT		0.008	0.001	0.002	J		*0.00021*	0.00022	U		*0.00022*	0.00047	U		*0.00047*
PCBs (mg/kg)	None detected														
Metals (mg/kg)															
Aluminum		25500	18000	1670			*0.93*	1920			*1.12*	3950			*1.84*
Arsenic		6	8.2	1.02	J		*0.37*	0.44	U		*0.44*	0.72	U		*0.72*
Barium		NAV	48	90.5			*0.44*	7.42			*0.53*	97.4			*0.88*
Beryllium		NAV	NAV	0.24	J		*0.07*	0.24	J		*0.08*	0.91			*0.13*
Cadmium		0.6	1.2	0.43			*0.07*	0.1	J		*0.08*	0.23	J		*0.13*
Calcium		NAV	NAV	179			*1.19*	112	J		*1.43*	2540			*2.35*
Chromium		26	81	18.1			*0.14*	53.3			*0.17*	121			*0.29*
Cobalt		50	10	1.04	J		*0.63*	0.76	U		*0.76*	1.38	J		*1.25*
Copper		16	34	23.3			*0.36*	1.13	J		*0.43*	4.75			*0.7*
Iron		NAV	NAV	6440			*1.48*	616			*1.77*	4590			*2.92*
Lead		31	47	31.2			*0.43*	3.14			*0.52*	9.32			*0.86*
Magnesium		NAV	NAV	498			*5.08*	154			*6.11*	779			*10*
Manganese		630	260	9.96			*0.21*	2.8			*0.25*	28.1			*0.42*
Mercury		0.2	0.15	0.009	J		*0.003*	0.033			*0.003*	0.079			*0.007*
Nickel		16	21	2.27			*0.51*	3.48			*0.61*	5.51			*1.01*
Potassium		NAV	NAV	1080			*3.88*	281			*4.67*	310			*7.68*
Selenium		NAV	1	0.92	J		*0.45*	2.04			*0.55*	5.3			*0.9*
Sodium		NAV	NAV	278			*2.8*	389			*3.36*	1900			*5.53*
Vanadium		NAV	57	13.1			*0.65*	8.16			*0.79*	15.6			*1.29*
Zinc		120	150	69.8			*0.78*	6.62			*0.93*	17.7			*1.54*
Misc. (mg/kg)															
Total Organic Carbon		NAV	NAV	3400			*250*	6600			*250*	6600			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = The two gas chromotography columns had greater than 25% difference; concentration is estimate
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-35
Analytes Detected in Site CW-6 Surface Soil Samples
Page 1 of 1

Analyte	Sample ID / Sample Date / Sample Depth	ESC	CW6-SS1 6/18/10 0-0.5				CW6-SS2 6/18/10 0-0.5				CW6-SS3 6/18/10 0-0.5				CW6-SS4 6/18/10 0-0.5			
			Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																		
Acetone	NAV		0.025	J		*0.0059*	0.0075	J		*0.0036*	0.58			*0.0065*	18	JD		*2*
Methylene chloride	4.05		0.0028	U		*0.0028*	0.0065	B		*0.0017*	0.012	B		*0.0031*	0.052			*0.0086*
Styrene	300		0.00088	U		*0.00088*	0.00054	U		*0.00054*	0.0027	J		*0.00097*	0.0027	U		*0.0027*
2-Butanone	NAV		0.0061	U		*0.0061*	0.0037	U		*0.0037*	0.088			*0.0067*	0.99			*0.019*
Methyl isobutyl ketone (2-Hexanone	NAV		0.0057	U		*0.0057*	0.0035	U		*0.0035*	0.0063	U		*0.0063*	0.025	J		*0.018*
SVOCs (mg/kg)																		
Acenaphthylene	682		0.013	U		*0.013*	0.01	U		*0.01*	4.2			*0.076*	0.031	U		*0.031*
Benzo(b)fluoranthene	59.8		0.018	U		*0.018*	0.15	J		*0.013*	32	D		*0.49*	0.04	U		*0.04*
Benzo(g,h,i)perylene	119		0.022	U		*0.022*	0.085	J		*0.016*	14			*0.12*	0.05	U		*0.05*
Benzo(k)fluoranthene	148		0.025	U		*0.025*	0.058	J		*0.019*	9.6			*0.14*	0.058	U		*0.058*
Benzoic acid	NAV		2.3			*0.62*	2.2			*0.46*	*7*	J		*3.5*	15	D		*2.9*
bis(2-Ethylhexyl)phthalate	0.925		0.019	U		*0.019*	0.014	U		*0.014*	0.58	J		*0.11*	0.044	U		*0.044*
Chrysene	4.73		0.024	U		*0.024*	0.12	J		*0.018*	22			*0.14*	0.056	U		*0.056*
Dibenz(a,h)anthracene	18.4		0.015	U		*0.015*	0.011	U		*0.011*	3.5			*0.087*	0.035	U		*0.035*
Dibenzofuran	NAV		0.021	U		*0.021*	0.015	U		*0.015*	0.46	J		*0.12*	0.048	U		*0.048*
Dimethylphthalate	NAV		0.57			*0.014*	0.35	J		*0.011*	0.69	J		*0.082*	1.2	J		*0.033*
Fluoranthene	122		0.011	U		*0.011*	0.29	J		*0.008*	70	D		*0.3*	0.24	J		*0.025*
Fluorene	122		0.02	U		*0.02*	0.015	U		*0.015*	1.8	J		*0.11*	0.047	U		*0.047*
Indeno(1,2,3-c,d)pyrene	109		0.018	U		*0.018*	0.084	J		*0.013*	13			*0.1*	0.041	U		*0.041*
Phenanthrene	45.7		0.014	U		*0.014*	0.14	J		*0.011*	37	D		*0.41*	0.033	U		*0.033*
Pyrene	78.5		0.013	U		*0.013*	0.22	J		*0.0095*	53	D		*0.36*	0.2	J		*0.03*
Pesticides (mg/kg)																		
alpha-Chlordane	0.224		0.00023	U		*0.00023*	0.00017	U		*0.00017*	0.0089	P		*0.00025*	0.0045	JP		*0.00052*
4,4'-DDD	0.758		0.0074	P		*0.00027*	0.0091			*0.0002*	0.02	P		*0.00031*	0.00063	U		*0.00063*
4,4'-DDE	0.596		0.1	D		*0.0064*	0.066	D		*0.0048*	0.023			*0.00036*	0.0056	JP		*0.00074*
4,4'-DDT	0.0035		0.12	D		*0.0045*	0.23	D		*0.0034*	0.021			*0.00025*	0.00052	U		*0.00052*
Dieldrin	0.0049		0.0092			*0.00021*	0.00016	U		*0.00016*	0.00024	U		*0.00024*	0.00048	U		*0.00048*
PCBs (mg/kg)	None detected																	
Metals (mg/kg)																		
Aluminum	50		5230			*1.36*	1640			*0.91*	6740			*1.41*	6240			*2.54*
Antimony	0.27		1.34	J		*0.9*	0.62	J		*0.61*	3.06	J		*0.94*	2.8	J		*1.69*
Arsenic	9.9		8.23			*0.53*	4.24			*0.36*	24.2			*0.55*	24			*1*
Barium	283		23.4			*0.65*	9.92			*0.44*	29.1			*0.67*	77.8			*1.21*
Beryllium	10		0.42	J		*0.1*	0.13	J		*0.07*	0.65			*0.1*	0.34	J		*0.18*
Cadmium	0.36		0.56			*0.1*	0.22	J		*0.07*	2.13			*0.1*	2.24			*0.18*
Calcium	NAV		1740			*1.73*	588			*1.16*	1550			*1.8*	6540			*3.23*
Chromium	0.4		31.8			*0.21*	13.1			*0.14*	55.2			*0.22*	29.2			*0.39*
Cobalt	13		1.05	J		*0.92*	1.02	J		*0.62*	1.77	J		*0.96*	1.72	U		*1.72*
Copper	28		59.1			*0.52*	13.2			*0.35*	91.2			*0.54*	73.8			*0.97*
Iron	NAV		14300			*2.15*	5440			*1.45*	56700			*2.23*	18200			*4.02*
Lead	11		105			*0.63*	30.9			*0.42*	356			*0.66*	247			*1.18*
Magnesium	NAV		1010			*7.4*	387			*4.99*	1230			*7.7*	849			*13.8*
Manganese	220		43.1			*0.31*	38			*0.21*	45.5			*0.32*	18.1			*0.57*
Mercury	0.00051		0.218			*0.003*	0.295			*0.002*	8.1			*0.09*	2.5			*0.035*
Nickel	30		5.5			*0.74*	2.93			*0.5*	8.31			*0.77*	7.22			*1.39*
Potassium	NAV		1020			*5.65*	460			*3.81*	1190			*5.88*	969			*10.6*
Selenium	0.21		2.95			*0.66*	1.1			*0.45*	7.61			*0.69*	4.78			*1.24*
Silver	2		0.29	J		*0.24*	0.16	U		*0.16*	0.28	J		*0.25*	0.6	J		*0.45*
Sodium	NAV		225			*4.07*	106	J		*2.74*	262			*4.23*	330			*7.61*
Thallium	1		0.44	U		*0.44*	0.29	U		*0.29*	0.47	J		*0.45*	0.82	U		*0.82*
Vanadium	2		40.7			*0.95*	12.3			*0.64*	55.6			*0.99*	45.4			*1.78*
Zinc	8.5		58.5			*1.13*	42.5			*0.76*	149			*1.18*	373			*2.11*
Misc. (mg/kg)																		
Total Organic Carbon	na		6000			*250*	3600			*250*	8200			*250*	10000			*250*

Exceedances of ESC are shaded.
ESC = Ecological Screening Criteria (see Section 3.3)
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-36
Analytes Detected in Site CW-6 Surface Water Samples

Analyte	Sample ID		CW6-SW5				CW6-SW5-Diss				CW6-SW6				CW6-SW6-Diss			
	Sample Date		6/24/10				6/24/10				6/24/10				6/24/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)																		
Methyl-tert-butyl ether	51000	18000	0.35	U		*0.35*	NT				0.65	J		*0.35*	NT			
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	None detected																	
PCBs (ug/L)																		
Aroclor 1242	0.014	0.03	0.13			*0.008*	NT				0.3			*0.007*	NT			
Metals (ug/L)																		
Aluminum	NAV	NAV	130			*6.5*	16.3	J		*6.5*	146			*6.5*	14	J		*6.5*
Arsenic	150	36	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*	4.2	U		*4.2*
Barium	220	NAV	69.4			*4*	65.6			*4*	80.8			*4*	81.3			*4*
Cadmium	0.17	8.8	0.52	J		*0.5*	0.5	U		*0.5*	1.13	J		*0.5*	0.8	J		*0.5*
Calcium	NAV	NAV	30200			*31.8*	29600			*31.8*	28400			*31.8*	28600			*31.8*
Cobalt	24	NAV	16.6			*5.8*	16.5			*5.8*	29.4			*5.8*	28.7			*5.8*
Iron	NAV	NAV	2520			*20.4*	252			*20.4*	2840			*20.4*	1440			*20.4*
Lead	5.4	24	8.09			*2.6*	8.79			*2.6*	7.94			*2.6*	6.32			*2.6*
Magnesium	NAV	NAV	4830			*32.5*	4720			*32.5*	5730			*32.5*	5900			*32.5*
Manganese	NAV	NAV	113			*1.7*	109			*1.7*	141			*1.7*	147			*1.7*
Nickel	42	22	23			*4.2*	20.8			*4.2*	32.6			*4.2*	31.2			*4.2*
Potassium	NAV	NAV	3150			*38.8*	3100			*38.8*	3370			*38.8*	3470			*38.8*
Selenium	5	71	4.8	U		*4.8*	4.8	U		*4.8*	4.8	U		*4.8*	4.8	U		*4.8*
Sodium	NAV	NAV	55500			*13.9*	54700			*13.9*	66800			*13.9*	69900			*13.9*
Zinc	108	81	80.1			*6.5*	66.5			*6.5*	79.5			*6.5*	79.9			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	95205			*105*	NT				94486			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-37
Analytes Detected in Site CW-6 Sediment Samples

Analyte	Sample ID		CW6-SD1				CW6-SD2				CW6-SD3				CW6-SD4				CW6-SD5				CW6-SD6			
	Sample Date		6/18/10				6/18/10				6/18/10				6/18/10				6/24/10				6/24/10			
	ESC																									
	FW-SED	SW-SED	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (mg/kg)																										
Acetone	NAV	NAV	1.1			*0.031*	3.7			*0.024*	1			*0.017*	0.034	J		*0.016*	0.015	J		*0.004*	0.0039	U		*0.0039*
Methylene chloride	0.159	NAV	0.052	B		*0.014*	0.052	B		*0.011*	0.038	B		*0.0079*	0.033	B		*0.0073*	0.0019	U		*0.0019*	0.0018	U		*0.0018*
Styrene	0.254	NAV	0.027	J		*0.0045*	0.024	J		*0.0035*	0.0025	U		*0.0025*	0.0023	U		*0.0023*	0.0006	U		*0.0006*	0.001	J		*0.00058*
Toluene	2.5	2.5	0.0065	U		*0.0065*	0.005	U		*0.005*	0.0036	U		*0.0036*	0.011	J		*0.0033*	0.00085	U		*0.00085*	0.002	J		*0.00082*
2-Butanone	NAV	NAV	0.5			*0.031*	1.7			*0.025*	0.17			*0.017*	0.016	U		*0.016*	0.0041	U		*0.0041*	0.004	U		*0.004*
SVOCs (mg/kg)																										
Acenaphthene	0.016	0.016	0.052	U		*0.052*	0.045	U		*0.045*	0.035	U		*0.035*	0.029	U		*0.029*	0.013	U		*0.013*	0.47	J		*0.061*
Acenaphthylene	0.044	0.044	0.046	U		*0.046*	0.04	U		*0.04*	0.031	U		*0.031*	0.026	U		*0.026*	0.011	U		*0.011*	1.6	J		*0.054*
Anthracene	0.22	0.085	0.011	J		*0.0022*	0.0079	J		*0.0019*	0.0074	J		*0.0015*	0.0012	U		*0.0012*	0.0053			*0.00053*	0.3			*0.0026*
Benzo(a)anthracene	0.32	0.261	0.039			*0.0017*	0.049			*0.0014*	0.034			*0.0011*	0.018			*0.00094*	0.033			*0.0004*	1			*0.0019*
Benzo(a)pyrene	0.37	0.43	0.16			*0.0017*	0.16			*0.0014*	0.11			*0.0011*	0.083			*0.00094*	0.036			*0.0004*	1.2			*0.0019*
Benzo(b)fluoranthene	10.4	1.8	0.06	U		*0.06*	0.052	U		*0.052*	0.04	U		*0.04*	0.034	U		*0.034*	0.014	U		*0.014*	2.1	J		*0.071*
Benzo(g,h,i)perylene	0.17	0.17	0.075	U		*0.075*	0.064	U		*0.064*	0.05	U		*0.05*	0.042	U		*0.042*	0.018	U		*0.018*	0.89	J		*0.087*
Benzo(k)fluoranthene	0.24	0.24	0.087	U		*0.087*	0.075	U		*0.075*	0.058	U		*0.058*	0.049	U		*0.049*	0.021	U		*0.021*	0.74	J		*0.1*
Benzoic acid	NAV	NAV	13			*2.1*	4.3			*1.8*	7.2			*1.4*	1.2	U		*1.2*	0.088	U		*0.088*	0.43	U		*0.43*
Chrysene	0.34	0.384	0.084	U		*0.084*	0.072	U		*0.072*	0.056	U		*0.056*	0.047	U		*0.047*	0.02	U		*0.02*	1.9	J		*0.098*
Dibenzofuran	NAV	NAV	0.072	U		*0.072*	0.062	U		*0.062*	0.048	U		*0.048*	0.041	U		*0.041*	0.017	U		*0.017*	0.48	J		*0.084*
Dimethylphthalate	NAV	NAV	2			*0.05*	1.2	J		*0.043*	1.4			*0.033*	1	J		*0.028*	0.43	J		*0.012*	0.45	J		*0.058*
2,4-Dinitrophenol	0.00621	NAV	0.19	U		*0.19*	0.16	U		*0.16*	1.7			*0.13*	1.2			*0.11*	0.045	U		*0.045*	0.22	U		*0.22*
Fluoranthene	0.75	0.6	0.037	U		*0.037*	0.23	J		*0.032*	0.025	U		*0.025*	0.021	U		*0.021*	0.093	J		*0.0089*	4.9			*0.043*
Fluorene	0.19	0.019	0.07	U		*0.07*	0.06	U		*0.06*	0.047	U		*0.047*	0.039	U		*0.039*	0.017	U		*0.017*	0.82	J		*0.082*
Indeno(1,2,3-c,d)pyrene	0.2	0.2	0.061	U		*0.061*	0.053	U		*0.053*	0.041	U		*0.041*	0.035	U		*0.035*	0.015	U		*0.015*	0.98	J		*0.072*
2-Methylnaphthalene	0.07	0.07	0.046	U		*0.046*	0.04	U		*0.04*	0.031	U		*0.031*	0.026	U		*0.026*	0.011	U		*0.011*	1.3	J		*0.054*
Naphthalene	0.16	0.16	0.064	U		*0.064*	0.055	U		*0.055*	0.042	U		*0.042*	0.036	U		*0.036*	0.015	U		*0.015*	4.4			*0.074*
Phenanthrene	0.56	0.24	0.05	U		*0.05*	0.043	U		*0.043*	0.033	U		*0.033*	0.028	U		*0.028*	0.012	U		*0.012*	8.3			*0.058*
Pyrene	0.49	0.665	0.044	U		*0.044*	0.21	J		*0.038*	0.03	U		*0.03*	0.025	U		*0.025*	0.068	J		*0.011*	3.3			*0.052*
Pesticides (mg/kg)																										
4,4'-DDE	0.005	0.0022	0.0011	U		*0.0011*	0.00095	U		*0.00095*	0.006	J		*0.00074*	0.00062	U		*0.00062*	0.00027	U		*0.00027*	0.00026	U		*0.00026*
PCBs (mg/kg)																										
Aroclor 1242	0.07	0.023	0.012	U		*0.012*	0.01	U		*0.01*	0.0078	U		*0.0078*	0.0065	U		*0.0065*	0.05			*0.0028*	0.0027	U		*0.0027*
Aroclor 1260	0.005	0.005	0.1	JP		*0.021*	0.018	U		*0.018*	0.014	U		*0.014*	0.012	U		*0.012*	0.005	U		*0.005*	0.0048	U		*0.0048*
Metals (mg/kg)																										
Aluminum	25500	18000	4540			*4.47*	11400			*3.55*	8500			*2.78*	10700			*2.47*	2170			*0.99*	860			*1.09*
Antimony	3	9.3	2.98	U		*2.98*	2.47	J		*2.37*	1.85	U		*1.85*	2.33	J		*1.65*	0.66	U		*0.66*	0.72	U		*0.72*
Arsenic	6	8.2	3.31	J		*1.76*	1.4	U		*1.4*	13.1			*1.09*	11.7			*0.97*	3.18			*0.39*	0.68	J		*0.43*
Barium	NAV	48	71			*2.13*	87.2			*1.69*	80			*1.32*	137			*1.18*	13.1			*0.47*	4.41	J		*0.52*
Beryllium	NAV	NAV	0.32	U		*0.32*	0.85	J		*0.25*	0.59	J		*0.2*	1.84			*0.18*	1.02			*0.07*	0.38	J		*0.08*
Cadmium	0.6	1.2	0.9	J		*0.32*	5.56			*0.25*	1.04			*0.2*	2.79			*0.18*	1.34			*0.07*	0.38	J		*0.08*
Calcium	NAV	NAV	3600			*5.69*	1190			*4.53*	2510			*3.54*	3400			*3.14*	1.26	U		*1.26*	16.7	J		*1.38*
Chromium	26	81	35.3			*0.69*	64.2			*0.55*	55.4			*0.43*	150			*0.38*	50.2			*0.15*	75.8			*0.17*
Cobalt	50	10	3.03	U		*3.03*	7.78			*2.41*	2.97	J		*1.88*	3.7	J		*1.68*	5.82			*0.67*	8.94			*0.74*
Copper	16	34	26.2			*1.7*	39.5			*1.35*	28.2			*1.06*	56.2			*0.94*	4.63			*0.38*	2.49			*0.41*
Iron	NAV	NAV	7630			*7.08*	8330			*5.63*	18000			*4.4*	19500			*3.91*	15700			*1.57*	9040			*1.72*
Lead	31	47	126			*2.08*	143			*1.65*	218			*1.29*	124			*1.15*	13.4			*0.46*	5.67			*0.5*
Magnesium	NAV	NAV	833			*24.4*	1270			*19.4*	1410			*15.1*	2550			*13.5*	316			*5.41*	160			*5.92*
Manganese	630	260	16.9			*1.01*	16.5			*0.8*	23.3			*0.63*	42.1			*0.56*	4.9			*0.22*	4.36			*0.25*
Mercury	0.2	0.15	0.426			*0.011*	0.167			*0.008*	6.6			*0.069*	2.3			*0.03*	0.047			*0.003*	0.064			*0.002*
Nickel	16	21	8.97	J		*2.45*	16.2			*1.95*	8.61			*1.52*	14.1			*1.35*	29.7			*0.54*	56.2			*0.6*
Potassium	NAV	NAV	829			*18.6*	1390			*14.8*	1480			*11.6*	2150			*10.3*	871			*4.14*	441			*4.53*
Selenium	NAV	1	3.41	J		*2.18*	3.62	J		*1.73*	5.34			*1.36*	4.12			*1.2*	3.17			*0.48*	1.82			*0.53*
Silver	1	1	4.73			*0.8*	4.04			*0.63*	1.1	J		*0.5*	12.1			*0.44*	0.18	U		*0.18*	0.19	U		*0.19*
Sodium	NAV	NAV	447	J		*13.4*	419	J		*10.7*	260	J		*8.33*	301			*7.41*	133			*2.98*	150			*3.26*
Vanadium	NAV	57	18.9			*3.14*	62.9			*2.5*	40.9			*1.95*	68.4			*1.73*	19.9			*0.7*	10.7			*0.76*
Zinc	120	150	73.8			*3.72*	110			*2.96*	106			*2.31*	168			*2.06*	49.8			*0.83*	15.3			*0.91*
Misc. (mg/kg)																										
Total Organic Carbon	NAV	NAV	9500			*250*	7400			*250*	12000			*250*	8500			*250*	4700			*250*	540			*250*

Exceedances of freshwater sediment quality criteria are shaded.
Exceedances of saltwater sediment quality criteria have a bold border.
B = The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SED = Fresh Water-Sediment
SW-SED = Salt Water-Sediment
MDL = Method Detection Limit
mg/kg = milligrams per kilogram
NAV = No Available Value
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

Table D-38
Analytes Detected in Parcel 15 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	P15-SW1 6/24/10				P15-SW1-Diss 6/24/10				P15-SW3 6/24/10				P15-SW3-Diss 6/24/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	Samples were not tested for this group.																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	107			*6.5*	48.7	J		*6.5*	99.7			*6.5*	30.2	J		*6.5*
Barium	220	NAV	120			*4*	120			*4*	101			*4*	98			*4*
Cadmium	0.15	8.8	0.55	J		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*	0.5	U		*0.5*
Calcium	NAV	NAV	20300			*31.8*	20300			*31.8*	19400			*31.8*	18900			*31.8*
Iron	NAV	NAV	2320			*20.4*	1480			*20.4*	1540			*20.4*	872			*20.4*
Lead	5.4	24	6.84			*2.6*	8.27			*2.6*	8.3			*2.6*	4.33	J		*2.6*
Magnesium	NAV	NAV	8700			*32.5*	8720			*32.5*	7600			*32.5*	7440			*32.5*
Manganese	NAV	NAV	138			*1.7*	138			*1.7*	106			*1.7*	101			*1.7*
Nickel	36	22	8.45	J		*4.2*	8.22	J		*4.2*	7.79	J		*4.2*	6.68	J		*4.2*
Potassium	NAV	NAV	3510			*38.8*	3550			*38.8*	3500			*38.8*	3440			*38.8*
Sodium	NAV	NAV	73900			*13.9*	74300			*13.9*	64500			*13.9*	63200			*13.9*
Zinc	94	81	87.6			*6.5*	80.6			*6.5*	85.2			*6.5*	74.8			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	86563			*105*	NT				79642			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness.

Table D-39
Analytes Detected in Parcel 27 Surface Water Samples

Analyte	Sample ID / Sample Date		P27-SW1 6/25/10				P27-SW1-Diss 6/25/10				P27-SW2 6/25/10				P27-SW2-Diss 6/25/10			
	ESC																	
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	Samples were not tested for this group.																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	310			*6.5*	64.5			*6.5*	231			*6.5*	68.3			*6.5*
Barium	220	NAV	135			*4*	125			*4*	137			*4*	126			*4*
Cadmium	0.16	8.8	0.88	J		*0.5*	0.52	J		*0.5*	0.76	J		*0.5*	0.69	J		*0.5*
Calcium	NAV	NAV	20100			*31.8*	19100			*31.8*	20900			*31.8*	19300			*31.8*
Chromium	21	50	1.42	J		*1.1*	1.1	U		*1.1*	1.72	J		*1.1*	28.5			*1.1*
Iron	NAV	NAV	2170			*20.4*	434			*20.4*	1730			*20.4*	536			*20.4*
Lead	5.4	24	10.6			*2.6*	5.77	J		*2.6*	5.46	J		*2.6*	8.18			*2.6*
Magnesium	NAV	NAV	8680			*32.5*	8360			*32.5*	8900			*32.5*	8570			*32.5*
Manganese	NAV	NAV	108			*1.7*	94.1			*1.7*	103			*1.7*	95.8			*1.7*
Mercury	0.77	0.94	0.1	J		*0.09*	0.1	J		*0.09*	0.09	U		*0.09*	0.09	U		*0.09*
Nickel	39	22	10.2	J		*4.2*	10	J		*4.2*	10.6	J		*4.2*	17.3	J		*4.2*
Potassium	NAV	NAV	3820			*38.8*	3630			*38.8*	3840			*38.8*	3720			*38.8*
Sodium	NAV	NAV	68900			*13.9*	65200			*13.9*	70400			*13.9*	68100			*13.9*
Zinc	100	81	77.6			*6.5*	67.4			*6.5*	82.4			*6.5*	76.4			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	85913			*105*	NT				88902			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
Exceedances of saltwater surface water quality criteria have a bold border.
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

Table D-40
Analytes Detected in Parcel 28 Surface Water Samples

Analyte	Sample ID / Sample Date	ESC	P28-SW1 6/24/10				P28-SW1-Diss 6/24/10				P28-SW2 6/24/10				P28-SW2-Diss 6/24/10			
	FW-SW	SW-SW	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL	Result	Lab Q	Val Q	MDL
VOCs (ug/L)	None detected																	
SVOCs (ug/L)	None detected																	
Pesticides (ug/L)	Samples were not tested for this group.																	
PCBs (ug/L)	None detected																	
Metals (ug/L)																		
Aluminum	NAV	NAV	154			*6.5*	28.8	J		*6.5*	132			*6.5*	30.8	J		*6.5*
Barium	220	NAV	98.5			*4*	99.6			*4*	97.6			*4*	93.6			*4*
Calcium	NAV	NAV	20100			*31.8*	20500			*31.8*	20500			*31.8*	20100			*31.8*
Iron	NAV	NAV	1360			*20.4*	721			*20.4*	1460			*20.4*	713			*20.4*
Lead	5.4	24	6.36			*2.6*	7.14			*2.6*	7.74			*2.6*	5.74	J		*2.6*
Magnesium	NAV	NAV	7660			*32.5*	7780			*32.5*	7740			*32.5*	7570			*32.5*
Manganese	NAV	NAV	98.4			*1.7*	101			*1.7*	108			*1.7*	106			*1.7*
Nickel	37	22	7.31	J		*4.2*	5.97	J		*4.2*	5.37	J		*4.2*	7.05	J		*4.2*
Potassium	NAV	NAV	3640			*38.8*	3700			*38.8*	3730			*38.8*	3680			*38.8*
Sodium	NAV	NAV	71200			*13.9*	72500			*13.9*	71900			*13.9*	70600			*13.9*
Zinc	96	81	75.7			*6.5*	77.1			*6.5*	80.1			*6.5*	72.8			*6.5*
Misc. (ug/L)																		
Hardness	NAV	NAV	81664			*105*	NT				83061			*105*	NT			

Exceedances of freshwater surface water quality criteria are shaded.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
ESC = Ecological Screening Criteria (see Section 3.3)
FW-SW = Fresh Water-Surface Water
SW-SW = Salt Water-Surface Water
MDL = Method Detection Limit
NAV = No Available Value
NT = Not Tested
PCB = Polychlorinated Biphenyl
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound
ug/L = micrograms per liter
FW-SW ESC for cadmium, chromium, copper, nickel, and zinc are based on minimum detected hardness

M20-SD2	LOC	06/13/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	21.8
Cadmium	1.2	2.87
Chromium	81	90.4
Cobalt	10	11.4
Copper	34	71.3
Lead	47	58.4
Mercury	0.15	0.322
Nickel	21	23.8
Selenium	1	1.68
Silver	1	1.1
Vanadium	57	60.9
Zinc	150	183

M20-SW2	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M20-SD1	LOC	06/13/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	9.35
Cadmium	1.2	1.44
Selenium	1	1.63
Silver	1	1.05

M20-SW1	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M15-SD4	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	13
Cadmium	1.2	2.19
Selenium	0.51	1.25
Silver	1	1.21

M15-SW4	LOC	06/14/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M15-SD5	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	1.2	1.31
Selenium	1	3.39

M15-SD2	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides		
4,4'-DDT	0.001	0.0043
PCBs - No Exceedances		
Metals		
Arsenic	8.2	10.6
Cadmium	1.2	2.87
Lead	47	108
Mercury	0.15	0.16
Selenium	1	4.21
Silver	1	1.43
Zinc	150	542

M15-SW2	LOC	06/14/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M15-SD1	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	14.9
Cadmium	1.2	2.65
Chromium	81	84.5
Lead	47	59.7
Mercury	0.15	0.249
Selenium	1	6.98
Silver	1	1.37
Vanadium	57	83.2
Zinc	150	178

M15-SW1	LOC	06/14/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD2	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Dioctyl Phthalate	0.06	0.23
Metals - No Exceedances		

M14-SD1	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
bis(2-Ethylhexyl)phthalate	0.18715	0.43 J
Pesticides		
4,4'-DDD	0.002	0.004 P
4,4'-DDE	0.0022	0.0031
PCBs - No Exceedances		
Metals		
Selenium	1	1.07 J

P69-SW2	LOC	06/16/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD1	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SW1	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD2	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		
Arsenic	8.2	20
Cadmium	1.2	9.73
Chromium	81	129
Copper	34	121
Lead	47	178
Mercury	0.15	0.451
Nickel	21	30.7
Selenium	1	11
Silver	1	1.49
Vanadium	57	83.5
Zinc	150	615

M14-SW2	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD4	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	15.5
Cadmium	1.2	10.8
Chromium	81	117
Copper	34	42.3
Lead	47	74.5
Selenium	1	5.32
Silver	1	3.78
Zinc	150	178

M14-SW4	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD3	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Benzo(a)anthracene	0.261	0.28
Chrysene	0.384	0.39 J
Fluoranthene	0.6	0.7 J
Pesticides		
4,4'-DDD	0.002	0.0033
PCBs - No Exceedances		
Metals		
Selenium	1	1.09 J

M14-SW3	LOC	06/22/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD12	LOC	06/28/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		
Arsenic	8.2	18.6
Cadmium	1.2	14
Chromium	81	101
Copper	34	173
Lead	47	171
Nickel	21	29.2
Selenium	1	1.09
Silver	1	3.54
Vanadium	57	83.1
Zinc	150	318

M14-SW12	LOC	06/28/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD4	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Selenium	1	1.79

M14-SD7	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Benzo(a)anthracene	0.261	0.31
Chrysene	0.384	0.39 J
Fluoranthene	0.6	0.78 J
Phenanthrene	0.24	0.45 J
Pyrene	0.665	0.82 J
Pesticides		
4,4'-DDD	0.002	0.008
4,4'-DDE	0.0022	0.0052
PCBs - No Exceedances		
Metals		
Copper	34	43.2
Selenium	1	1.85

M14-SD6	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.085	0.037
Benzo(a)anthracene	0.261	0.55
Benzo(a)pyrene	0.43	0.47
Chrysene	0.384	0.51 J
Fluoranthene	0.6	0.84 J
Phenanthrene	0.24	0.38 J
Pyrene	0.665	0.9 J
Pesticides		
4,4'-DDD	0.002	0.0072 P
4,4'-DDE	0.0022	0.003
PCBs - No Exceedances		
Metals		
Selenium	1	1.04

M14-SD5	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides		
4,4'-DDD	0.002	0.0043
4,4'-DDE	0.0022	0.0035
PCBs - No Exceedances		
Metals		
Selenium	1	1.37

M14-SD14	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SW14	LOC	06/22/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		
Cadmium	0.6	0.73

M14-SD13	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Dibenz(a,h)anthracene	0.0616	0.64 J
Pesticides		
4,4'-DDD	0.002	0.0047
4,4'-DDT	0.001	0.00141 J
PCBs - No Exceedances		
Metals		
Selenium	1	1.2

M14-SW13	LOC	06/22/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD11	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Barium	48	54
Cadmium	1.2	1.44
Selenium	1	4.57

P61-SW1	LOC	06/15/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD10	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.085	0.6
Benzo(a)anthracene	0.261	0.83
Benzo(b)pyrene	0.43	0.68
Benzo(g,h,i)perylene	0.17	0.32 J
Benzo(k)fluoranthene	0.24	0.31 J
Chrysene	0.384	0.81 J
Fluoranthene	0.6	2.2
Fluorene	0.019	0.32 J
Indeno(1,2,3-c,d)pyrene	0.2	0.36 J
Phenanthrene	0.24	1.9 J
Pyrene	0.665	1.5 J
Pesticides		
4,4'-DDD	0.002	0.0053
4,4'-DDE	0.0022	0.0018 J
4,4'-DDT	0.001	0.00161 J
PCBs - No Exceedances		
Metals		
Selenium	1	1.19

M14-SD9	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Benzo(a)anthracene	0.261	0.35
Chrysene	0.384	0.35 J
Fluoranthene	0.6	0.84 J
Phenanthrene	0.24	0.38 J
Pyrene	0.665	0.84 J
Pesticides		
4,4'-DDD	0.002	0.0061 P
4,4'-DDE	0.0022	0.0048
4,4'-DDT	0.001	0.0043 P
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SD8	LOC	06/16/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.085	0.17
Benzo(a)anthracene	0.261	2.7
Benzo(a)pyrene	0.43	0.63
Benzo(g,h,i)perylene	0.17	0.36 J
Benzo(k)fluoranthene	0.24	0.27 J
Chrysene	0.384	0.72 J
Fluoranthene	0.6	1.5 J
Indeno(1,2,3-c,d)pyrene	0.2	0.34 J
Phenanthrene	0.24	0.79 J
Pyrene	0.665	1.4 J
Pesticides		
4,4'-DDD	0.002	0.0077
4,4'-DDE	0.0022	0.0073
4,4'-DDT	0.001	0.013
PCBs - No Exceedances		
Metals - No Exceedances		

M14-SW8	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M16-SD2	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	8.2	24
Cadmium	1.2	13.3
Chromium	81	164
Cobalt	10	13.6
Copper	34	124
Lead	47	140
Mercury	0.15	0.662
Nickel	21	35.5
Selenium	1	10.8
Silver	1	6.44
Vanadium	57	89
Zinc	150	500

M16-SW2	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M16-SD1	LOC	06/14/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M16-SW1	LOC	06/23/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M16-SD3	LOC	06/15/2010
	SW-SED	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

M16-SW3	LOC	06/22/2010
	SW-SW	Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals - No Exceedances		

LEGEND

Sample Locations

- Sediment Sample Location
- Surface Water Sample Location
- Sediment/Surface Water Sample Location
- Road Centerline
- Building
- Municipal Boundary
- Water Feature
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary

Notes:
1) Surface water concentrations are in ug/L and soil and sediment concentrations are in mg/kg.
2) Soil samples were collected from 0-0.5 feet (ft) below ground surface (bgs) and sediment samples were collected from 0-0.5 ft at the surface water/sediment interface.
3) J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
4) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
5) LOC = Level of Concern
6) Conc. = Concentration
7) FW-SED = Fresh Water-Sediment
8) SW-SED = Salt Water-Sediment
9) FW-SW = Fresh Water-Surface Water
10) SW-SW = Salt Water-Surface Water

N

Scale:
0 300 600 1,200
Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw Shaw Environmental, Inc.

FIGURE D-1

FORT MONMOUTH
BASELINE ECOLOGICAL EVALUATION REPORT

SAMPLE RESULTS

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: G:\FI_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_025_FigX-X_MP_East_Results_BEE_rpt.mxd (6/14/2012)

LEGEND

Sample Locations

- Sediment Sample Location
- Surface Water Sample Location
- Sediment/Surface Water Sample Location
- Road Centerline
- Building
- Municipal Boundary
- Water Feature
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary

Notes:
1) Surface water concentrations are in ug/L and soil and sediment concentrations are in mg/kg.
2) Soil samples were collected from 0-0.5 feet (ft) below ground surface (bgs) and sediment samples were collected from 0-0.5 ft at the surface water/sediment interface.
3) D = The reported value is from a secondary analysis with a dilution factor.
The original analysis exceeded the calibration range.
4) J = Data indicates the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.
5) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
6) LOC = Level of Concern
7) Conc. = Concentration
8) FW-SED = Fresh Water-Sediment
9) SW-SED = Salt Water-Sediment
10) FW-SW = Fresh Water-Surface Water
11) SW-SW = Salt Water-Surface Water

N

Scale:

0 300 600 1,200

Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw Shaw Environmental, Inc.

FIGURE D-2

FORT MONMOUTH BASELINE ECOLOGICAL EVALUATION REPORT

SAMPLE RESULTS

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: G:\FI_Monmouth\GIS_Documents\Project_Maps\BER_Report\FTMM_024_FigX-X_MP_West_Results_BER_pt1.mxd (8/14/2012)

SHREWSBURY TOWNSHIP

EATONTOWN BOROUGH
TINTON FALLS BOROUGH

PARKERS CREEK BRANCH

PARKERS CK BRANCH - UNT TO 1204B @ 1.9P

SHREWSBURY (PARKERS CREEK)

WAMPUM BROOK

Route 537

Tinton Avenue

Hance Road

Gustin Lane

Hemenway Road

Hemschell Road

Meigs Drive

Meigs Court

Meigs Circle

Lefferts Drive

Maxwell Place

Pinebrook Road

Woodward Road

Mitchell Drive

Hance Drive

Laboratory Road

Corregidor Road

Normandy Drive

Normandy Court

Normandy Place

Normandy Road

Monmouth County 51

Hooper Ave

Watson Avenue

Pearl Harbor Avenue

Fort Hancock Road

Fire Line Drive

Radar Avenue

Parkway Road

Meigs Drive

Charles Wood Area

ECP Parcel 15

ECP Parcel 26

ECP Parcel 27

IRP Site CW-3A

IRP Site CW-6

CWA-SD1/CWA-SW1

CW6-SD5/CW6-SW5

CW6-SD6/CW6-SW6

CW6-SS1

CW6-SS2

P28-SW1

P28-SW2

P15-SW1

P15-SW2

P15-SW3

P27-SW1

P27-SW2

CW3-SD1

CW3-SD2

CW3-SD3

CW3-SD4

CW3-SW4

CW3-SD5

CW3-SW5

CW3-SD6

CW3-SD7

CW3-SW7

CW3-SD8

CWA-SD1	LOC FW-SED	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Acenaphthene	0.016	0.49 J
Phenanthrene	0.56	0.8 J
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	6	6.29
Cadmium	0.6	1.15
Chromium	26	32.8
Lead	31	32.4
Mercury	0.2	0.241

CWA-SW1	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Hexachlorobutadiene	0.053	0.12
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Lead (Total)	5.4	13.4
Lead (Dissolved)	5.4	14
Selenium (Dissolved)	5	5.33 J

P28-SW1	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Lead (Total)	5.4	6.36
Lead (Dissolved)	5.4	7.14

P28-SW2	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Lead (Total)	5.4	7.74
Lead (Dissolved)	5.4	5.74 J

P15-SW3	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Lead (Total)	5.4	8.3

P15-SW1	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium (Total)	0.55	0.55 J
Lead (Total)	5.4	6.84
Lead (Dissolved)	5.4	8.27

P27-SW2	LOC FW-SW	06/25/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium (Total)	0.16	0.76 J
Cadmium (Dissolved)	0.16	0.69 J
Chromium (Dissolved)	21	28.5
Lead (Total)	5.4	5.46 J
Lead (Dissolved)	5.4	6.18

P27-SW1	LOC FW-SW	06/25/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium (Total)	0.16	0.88 J
Cadmium (Dissolved)	0.16	0.53 J
Lead (Total)	5.4	10.6
Lead (Dissolved)	5.4	5.77 J

CW3-SD4	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Copper	16	23.3
Lead	31	31.2

CW3-SW4	LOC FW-SW	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.035	0.11
Benzo(a)pyrene	0.014	0.31
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Copper (Total)	6.5	8.44 J
Lead (Total)	5.4	8.81
Zinc (Total)	88	117
Zinc (Dissolved)	88	99.8

CW3-SD6	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Acenaphthene	0.016	0.78 J
Anthracene	0.22	4.3
Benzo(a)anthracene	0.32	7
Benzo(a)pyrene	0.37	4.6
Benzo(b,k)perylene	0.17	2 J
Benzo(k)fluoranthene	0.24	2.3 J
Chrysene	0.34	5.6
Fluoranthene	0.75	17
Fluorene	0.19	1.4 J
Indeno(1,2,3-c,d)pyrene	0.2	2.7
Phenanthrene	0.56	15
Pyrene	0.49	12
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Chromium	26	121

CW3-SD8	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	0.78 J
Chromium	26	97.3

CW3-SD7	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	1.08
Chromium	26	60.7
Lead	31	36
Mercury	0.2	0.251

CW3-SW7	LOC FW-SW	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.035	0.11
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium (Total)	0.14	2.07 J
Chromium (Total)	19	55.5
Copper (Total)	6.5	9.99 J
Lead (Total)	5.4	69.7
Vanadium (Total)	12	60.3
Zinc (Total)	88	149

CW3-SD1	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	6	6.59 J
Cadmium	0.6	1.38
Chromium	26	145

CW3-SD2	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	1.94
Chromium	26	135

CW3-SD3	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides		
4,4'-DDD	0.008	0.013 P
PCBs - No Exceedances		
Metals		
Cadmium	0.6	1.07
Chromium	26	29.3
Copper	16	31.6

CW3-SD5	LOC FW-SED	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Chromium	26	53.3

CW3-SW5	LOC FW-SW	06/28/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Anthracene	0.035	0.11
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium (Total)	0.14	0.37 J
Cadmium (Dissolved)	0.14	0.79 J
Lead (Total)	5.4	6.38

CW6-SD6	LOC FW-SED	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Acenaphthene	0.016	0.47 J
Acenaphthylene	0.044	1.6 J
Anthracene	0.22	0.5
Benzo(a)anthracene	0.32	1
Benzo(a)pyrene	0.37	1.2
Benzo(g,h,i)perylene	0.17	0.83 J
Benzo(k)fluoranthene	0.24	0.74 J
Chrysene	0.34	1.9 J
Fluoranthene	0.75	4.9
Fluorene	0.19	0.82 J
Indeno(1,2,3-c,d)pyrene	0.2	0.98 J
2-Methylnaphthalene	0.07	1.3 J
Naphthalene	0.16	4.4
Phenanthrene	0.56	8.3
Pyrene	0.49	3.3
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Chromium	26	75.8
Nickel	16	54.2

CW6-SW6	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Aroclor-1242	0.014	0.3
Metals		
Cadmium (Total)	0.14	1.13 J
Cadmium (Dissolved)	0.14	0.8 J
Cobalt (Total)	24	29.4
Cobalt (Dissolved)	24	28.7
Lead (Total)	5.4	7.96
Lead (Dissolved)	5.4	6.32

CWS-SD1	LOC FW-SED	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Aroclor 1260	0.005	0.1 JP
Metals		
Cadmium	0.6	0.9 J
Chromium	26	35.3
Copper	16	26.2
Lead	31	126
Mercury	0.2	0.428
Silver	1	4.73

CWS-SW1	LOC FW-SW	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	5.56
Chromium	26	64.2
Copper	16	39.5
Lead	31	143
Nickel	16	19.2
Silver	1	4.04

CWS-SD2	LOC FW-SED	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	1.04
Chromium	26	55.4
Copper	16	28.2
Lead	31	218
Mercury	0.2	0.6
Silver	1	3.12

CWS-SD3	LOC FW-SED	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs		
2,4-Dichlorophenol	0.00621	1.7
Pesticides		
4,4'-DDE	0.005	0.006 J
PCBs - No Exceedances		
Metals		
Arsenic	6	13.1
Cadmium	0.6	1.04
Chromium	26	55.4
Copper	16	28.2
Lead	31	218
Mercury	0.2	0.6
Silver	1	3.12

CWS-SD4	LOC FW-SED	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs		
2,4-Dichlorophenol	0.00621	1.2
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Arsenic	6	11.7
Cadmium	0.6	2.79
Chromium	26	150
Copper	16	56.2
Lead	31	124
Mercury	0.2	2.5
Silver	1	13.1
Zinc	120	168

CWS-SD5	LOC FW-SED	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Cadmium	0.6	1.34
Chromium	26	50.2
Nickel	16	29.7

CWS-SW5	LOC FW-SW	06/24/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs		
Aroclor-1242	0.014	0.13
Metals		
Cadmium (Total)	0.17	0.52 J
Lead (Total)	5.4	8.05
Lead (Dissolved)	5.4	8.79

CWS-SS3	LOC ESC	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs		
Chrysene	4.73	22
Pesticides		
4,4'-DDT	0.0035	0.021
PCBs - No Exceedances		
Metals		
Aluminum	50	6740
Antimony	0.27	3.06 J
Arsenic	9.9	24.2
Cadmium	0.56	2.13
Chromium	0.4	53.2
Copper	28	91.2
Lead	31	356
Mercury	0.00051	8.1
Selenium	0.21	7.61
Vanadium	2	55.6
Zinc	8.5	149

CWS-SS4	LOC ESC	06/18/2010 Conc.
VOCs - No Exceedances		
SVOCs - No Exceedances		
Pesticides - No Exceedances		
PCBs - No Exceedances		
Metals		
Aluminum	50	6240
Antimony	0.27	2.8 J
Arsenic	9.9	24
Cadmium	0.56	2.24
Chromium	0.4	29.2
Copper	28	73.8
Lead	31	247
Mercury	0.00051	2.1
Selenium	0.21	4.78
Vanadium	2	45.4
Zinc	8.5	373

LEGEND

Sample Locations

- Sediment Sample Location
- Surface Water Sample Location
- Sediment/Surface Water Sample Location
- Surface Soil Sample Location
- Road Centerline
- Water Feature
- Building
- Water Body
- IRP Site
- ECP Parcel
- Installation Boundary
- Municipal Boundary

Notes:
1) Surface water concentrations are in ug/L and soil and sediment concentrations are in mg/kg.
2) Soil samples were collected from 0-0.5 feet (ft) below ground surface (bgs) and sediment samples were collected from 0-0.5 ft at the surface water/sediment interface.
3) J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
4) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
5) LOC = Level of Concern
6) Conc. = Concentration
7) FW-SED = Fresh Water-Sediment
8) SW-SED = Salt Water-Sediment
9) FW-SW = Fresh Water-Surface Water
10) SW-SW = Salt Water-Surface Water

N

Scale:
0 300 600 1,200
Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE D-3
FORT MONMOUTH
BASELINE ECOLOGICAL EVALUATION REPORT
SAMPLE RESULTS
CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

U.S. ARMY GARRISON FORT MONMOUTH

ArcGIS File: G:\Ft_Monmouth\GIS_Documents\Project_Maps\BEE_Report\FTMM_023_FigX-X_CWA_Results_BEE_rpt.mxd (6/14/2012)

APPENDIX E

New Jersey Department of Environmental Protection Ecological Screening Criteria

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
Acenaphthene	83-32-9		38[8]	670(h)			990(h)	See Saline Criteria[3] 0.00671[8]		0.016	0.500	20[9]					
Acenaphthylene	208-96-8		4840[8]					See Saline Criteria[3] 0.00587[8]		0.044	0.640	682[8]					
Acrolein	107-02-8		0.19[8]	6.1(h)			9.3(h)	0.00000152[8]				5.27[8]					
Acrylonitrile	107-13-1		66[8]	0.051(hc)			0.25(hc)	0.0012[8]				0.0239[8]					
Aldrin	309-00-2	3	0.017[8]	0.000049(hc)	1.3		0.000050(hc)	0.002	8	See Freshwater Criteria[6]		0.00332[8]					
Aluminum	7429-90-5							2.55%[15]			1.8%[15]		50				
Ammonia, un-ionized	7664-41-7	See N.J.A.C. 7:9B-1.14(e)			See N.J.A.C. 7:9B-												
Anthracene	120-12-7		0.035[8]	8,300(h)			40,000(h)	0.22 0.0572[8]	370	0.085	1.1	1,480[8]					
Antimony	7440-36-0		80[8]	5.6(h)(T)			640(h)(T)		3[15]		9.3[15]	5[9]	5		78		0.27
Arsenic	7440-38-2	340(d)(s)	150(d)(s)	0.017(hc)(T)	69(d)(s)	36(d)(s)	0.061(hc)(T)	6 9.9790[8]	33	8.2	70	9.9[9,10]	10	18		43	46
Asbestos	1332-21-4			7x10[6]fibers/L >10um(h)													
Barium	7440-39-3		220[8]	2,000(h)(T)							48[15]	283[11]	500		330		2,000
Benz(a)anthracene	56-55-3		0.025[8]	0.038(hc)			0.18(hc)	0.320 0.108[8]	1,480	0.261	1.6	5.21[8]					
Benzene	71-43-2		114[8] 824[16]	0.15(hc)			3.3(hc)	See Saline Criteria[3] 0.142[8]		0.34[7]		0.255[8]					
Benzidine	92-87-5			0.000086(hc)			0.00020(hc)										
3,4-Benzofluoranthene (Benzo(b)fluoranthene)	205-99-2		9.07[8]	0.038(hc)			0.18(hc)	10.4[8]			1.800[15]	59.8[8]					
Benzo(k)fluoranthene	207-08-9			0.38(hc)			1.8(hc)	0.240	1,340	See Freshwater Criteria[6]		148[8]					
Benzo(g,h,i)perylene	191-24-2		7.64[8]					0.170	320	See Freshwater Criteria[6]		119[8]					
Benzo(a)pyrene (BaP)	50-32-8		0.014[8]	0.0038(hc)			0.018(hc)	0.37 0.150[8]	1,440	0.430	1.6	1.52[8]					
Beryllium	7440-41-7		3.6[8]	6.0(h)(T)			42(h)(T)					10[9]	10		40		21
BHC (Benzohexachloride)								0.003	12	See Freshwater Criteria[6]							
alpha-BHC (alpha-HCH)	319-84-6		12.4[8]	0.0026(hc)			0.0049(hc)	0.006	10			0.0994[8]					
beta-BHC (beta-HCH)	319-85-7		0.495[8]	0.0091(hc)			0.017(hc)	0.005	21			0.00398[8]					
gamma-BHC (gamma-HCH/Lindane)	58-89-9	0.95	0.026[8]	0.98(h)	0.16		1.8(h)	0.003	1			0.00500[8]					
Biphenyl	92-52-4											60[9]					
Bis(2-chloroethyl) ether	111-44-4		1900[8]	0.030(hc)			0.53(hc)	3.520[8]				23.7[8]					
Bis(2-chloroisopropyl) ether	108-60-1			1,400(h)			65,000(h)					19.9[8]					
Bis(2-ethylhexyl) phthalate	117-81-7		0.3[8]	1.2(hc)			2.2(hc)	0.182[8]	0.750[15]	0.18216[15]	2.64651[15]	0.925[8]					
Boron	7440-42-8											0.5[9]	0.5				
Bromine	7726-95-6											10[9]	10				
Bromodichloromethane (Dichlorobromomethane)	75-27-4			0.55(hc)			17(hc)					0.540[8]					
Bromoform	75-25-2		230[8]	4.3(hc)			140(hc)	0.492[8]				15.9[8]					

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
Butyl benzyl phthalate	85-68-7		23[8]	150(h)			190(h)	1.970[8]			0.063[15]	0.239[8]					
Cadmium	7440-43-9	(a)	(a)	3.4(h)(T)	40(d)(s)	8.8(d)(s)	16(h)(T)	0.6 0.990[8]	10	1.2	9.6	4[9,11]	4	32	140	0.77	0.36
Carbon tetrachloride	56-23-5		240[8]	0.33(hc)			2.3(hc)	1.450[8]				2.98[8]					
Chlordane	57-74-9	2.4	0.0043	0.00010(hc)	0.09	0.004	0.00011(hc)	0.007 0.00324[8]	6	See Freshwater Criteria[6]		0.224[8]					
Chloride	16887-00-6	860,000	230,000	250,000													
Chlorine Produced Oxidants (CPO)	7782-50-5	19	11		13	7.5											
3-Chloroaniline	108-42-9											20[9]	20				
Chlorobenzene	108-90-7		47[8]	210(h)			2,500(h)	0.291[8]				40[12] 13.1[8]					
Chloroform	67-66-3		140[8]	68(h)			2,100(h)	0.121[8]				1.19[8]					
2-Chloronaphthalene	91-58-7		0.396[8]	1,000(h)			1,600(h)	0.417[8]				0.0122[8]					
2-Chlorophenol	95-57-8		24[8]	81(h)			150(h)	0.0319[8]			0.008[15]	0.243[8]					
3-Chlorophenol	108-43-0											7[12]	7				
Chlorpyrifos	2921-88-2	0.083	0.041		0.011	0.0056											
Chromium	7440-47-3		42[8]	92(h)(T)			750(h)(T)	26 43.4[8]	110	81	370	0.4[12]	1				
Chromium+3	16065-83-1	(a)	(a)													26	34
Chromium+6	18540-29-9	15(d)(s)	10(d)(s)		1,100(d)(s)	50(d)(s)											130
Chrysene	218-01-9			3.8(hc)			18(hc)	0.34 0.166[8]	460	0.384	2.8	4.73[8]					
Cobalt	7440-48-4		24[8]					50[8]			10[15]	20[9] 0.14[8]	20	13		120	230
Copper	7440-50-8	(a)	(a)	1,300(h)(T)	4.8(d)(s)	3.1(d)(s)		16 31.6[8]	110	34	270	60[12] 5.4[8]	100	70	80	28	49
Cyanide (Total)	57-12-5	22(fc)	5.2(fc)	140(h)	1.0(fc)	1.0(fc)	140(h)	0.0001[8]				1.33[8]					
4,4'-DDD (p,p'-TDE)	72-54-8			0.00031(hc)			0.00031(hc)	0.008 0.00488[8]	6	0.002[15]	0.02[15]	0.758[8]					
4,4'-DDE	72-55-9		0.00000000451[8]	0.00022(hc)			0.00022(hc)	0.005 0.00316[8]	19	0.0022	0.027	0.596[8]					
4,4'-DDT	50-29-3	1.1	0.001	0.00022(hc)	0.13	0.001	0.00022(hc)	0.008 0.00416[8]	71	0.001[15]	0.007[15]	0.0035[8]					
DDT (Total)								0.007	12	0.0016	0.046					0.093[21]	0.021[21]
Demeton	8065-48-3		0.1			0.1											
Dibenz(a,h)anthracene	53-70-3			0.0038(hc)			0.018(hc)	0.06 0.033[8]	130	0.063	0.26	18.4[8]					
Dibromochloromethane (Chlorodibromomethane)	124-48-1			0.40(hc)			13(hc)					2.05[8]					
Di-n-butyl phthalate	84-74-2		9.7[8]	2,000(h)			4,500(h)	1.114[8]	0.110[15]		0.058[15]	200[9] 0.15[8]					
1,2-Dichlorobenzene	95-50-1		14[8]	2,000(h)			6,200(h)	0.294[8]			0.013[15]	2.96[8]					
1,3-Dichlorobenzene	541-73-1		38[8]	2,200(h)			8,300(h)	1.315[8]				37.7[8]					
1,4-Dichlorobenzene	106-46-7		9.4[8]	550(h)			2,200(h)	0.318[8]			0.110[15]	20[12] 0.546[8]					
3,3'-Dichlorobenzidine	91-94-1		4.5[8]	0.021(hc)			0.028(hc)	0.127[8]				0.646[8]					
1,2-Dichloroethane	107-06-2		910[8]	0.29(hc)			28(hc)	0.260[8]				21.2[8]					
1,1-Dichloroethylene	75-35-4		65[8]	4.7(h)			100(h)	0.0194[8]				8.28[8]					
trans-1,2-Dichloroethylene	156-60-5		970[8]	590(h)			43,000(h)	0.654[8]				0.784[8]					

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
2,4-Dichlorophenol	120-83-2		11[8]	77(h)			290(h)	0.0817[8]			0.005[15]	87.5[8]					
3,4-Dichlorophenol	95-77-2											20[9,12]	20				
1,2-Dichloropropane	78-87-5		360[8]	0.50(hc)			15(hc)	0.333[8]				32.7[8]					
1,3-Dichloropropene (cis and trans)	542-75-6			0.34(hc)			21(hc)										
Dieldrin	60-57-1	0.24	0.056	0.000052(hc)	0.71	0.0019	0.000054(hc)	0.002 0.0019[8]	91	See Freshwater Criteria[6]		0.00238[8]				0.022	0.0049
Diethyl phthalate	84-66-2		110[8]	17,000(h)			44,000(h)	0.295[8]			0.006[15]	100[9] 24.8[8]					
2,4-Dimethyl phenol	105-67-9		100[8]	380(h)			850(h)	0.304[8]				0.010[8]					
4,6-Dinitro-o-cresol	534-52-1			13(h)			280(h)										
2,4-Dinitrophenol	51-28-5		19[8]	69(h)			5,300(h)	0.00621[8]				20[9] 0.0609[8]	20				
2,4-Dinitrotoluene	121-14-2		44[8]	0.11(hc)			3.4(hc)	0.0144[8]				1.28[8]					
1,2-Diphenylhydrazine	122-66-7			0.036(hc)			0.20(hc)										
Endosulfans (alpha and beta)	115-29-7	0.22	0.056	62(h)	0.034	0.0087	89(h)										
Endosulfan sulfate	1031-07-8		2.22[8]	62(h)			89(h)	0.0346[8]				0.0358[8]					
Endrin	72-20-8	0.086	0.036	0.059(h)	0.037	0.0023	0.060(h)	0.003 0.00222[8]	130	See Freshwater Criteria[6]		0.0101[8]					
Endrin aldehyde	7421-93-4		0.15[8]	0.059(h)			0.060(h)	0.480[8]				0.0105[8]					
Ethylbenzene	100-41-4		14[8] 81[16]	530(h)			2,100(h)	See Saline Criteria[3] 0.175[8]		1.4[7]		5.16[8]					
Fluoranthene	206-44-0		1.9[8]	130(h)			140(h)	0.75 0.423[8]	1,020	0.600	5.1	122[8]					
Fluorene	86-73-7		19[8]	1,100(h)			5,300(h)	0.19 0.0774[8]	160	0.019	0.54	122[8]					
Fluorine	7782-41-4											200[9]	200				
Furan	110-00-9											600[9]					
Guthion	86-50-0		0.01			0.01											
Heptachlor	76-44-8	0.52	0.0038	0.000079(hc)	0.053	0.0036	0.000079(hc)	0.0006[8]	0.010[15]		0.0003[15]	0.00598[8]					
Heptachlor epoxide	1024-57-3	0.52	0.0038	0.000039(hc)	0.053	0.0036	0.000039(hc)	0.005 0.00247[8]	5	See Freshwater Criteria[6]		0.152[8]					
Hexachlorobenzene	118-74-1		0.0003[8]	0.00028(hc)			0.00029(hc)	0.020	24	See Freshwater Criteria[6]		0.199[8]					
Hexachlorobutadiene	87-68-3		0.053[8]	0.44(hc)			18(hc)	0.0265[8]			0.0013[15]	0.0398[8]					
Hexachlorocyclopentadiene	77-47-4		77[8]	40(h)			1,100(h)	0.901[8]				10[9] 0.755[8]					
Hexachloroethane	67-72-1		8[8]	1.4(hc)			3.3(hc)	0.584[8]			0.073[15]	0.596[8]					
Indeno(1,2,3-cd)pyrene	193-39-5		4.31[8]	0.038(hc)			0.18(hc)	0.200	320	See Freshwater Criteria[6]		109[8]					
Iodine	7553-56-2											4[9]	4				
Isophorone	78-59-1		920[8]	35(hc)			960(hc)	0.432[8]				139[8]					
Lead	7439-92-1	38(d)(s)	5.4(d)(s)	5.0(h)(T)	210(d)(s)	24(d)(s)		31 35.8[8]	250	47	218	40.5[11] 0.0537[8]	50	120	1,700	11	56
Lithium	7439-93-2											2[9]	2				
Malathion	121-75-5		0.1			0.1											
Manganese	7439-96-5						100(h)(T)	630[15]	1,100[15]		260[15]		500	220	450	4,300	4,000
Mercury	7439-97-6	1.4(d)(s)	0.77(d)(s)	0.050(h)(T)	1.8(d)(s)	0.94(d)(s)	0.051(h)(T)	0.2 0.174[8]	2	0.15	0.71	0.00051[11] 0.1[8]	0.3				

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
Methoxychlor	72-43-5		0.03	40(h)		0.03		0.0136[8]				0.0199[8]					
Methyl bromide (bromomethane)	74-83-9		16[8]	47(h)			1,500(h)	0.00137[8]				0.235[8]					
Methyl t-butyl ether (MTBE)	1634-04-4	151,000[17]	51,450[16] 51,000[17]	70(h)	53,000[17]	18,000[17]											
Methylene chloride	75-09-2		940[8]	2.5(hc)			310(hc)	0.159[8]				4.05[8]					
2-Methylnaphthalene	91-57-6		330[8]					See Saline Criteria[3] 0.0202[8]		0.070	0.67	3.24[8]					
Mirex	2385-85-5		0.001			0.001		0.007	130	See Freshwater Criteria[6]							
Molybdenum	7439-98-7											2[9]	2				
Naphthalene	91-20-3		13[8]					See Saline Criteria[3] 0.176[8]		0.16	2.1	0.0994[8]					
Nickel	7440-02-0	(a)	(a)	500(h)(T)	64(d)(s)	22(d)(s)	1,700(h)(T)	16 22.7[8]	75	21	52	30[9] 13.6[8]	30	38	280	210	130
Nitrate (as N)	14797-55-8			10,000(h)													
Nitrobenzene	98-95-3		220[8]	17(h)			690(h)	0.145[8]				1.31[8]					
4-Nitrophenol	100-02-7		60[8]					0.0133[8]				7[12] 5.12[8]					
N-Nitrosodi-n-butylamine	924-16-3			0.0063(hc)			0.22(hc)										
N-Nitrosodiethylamine	55-18-5		768[8]	0.00023(hc)			0.13(hc)	0.0228[8]				0.0693[8]					
N-Nitrosodimethylamine	62-75-9			0.00069(hc)			3.0(hc)					0.0000321[8]					
N-Nitrosodiphenylamine	86-30-6			3.3(hc)			6.0(hc)					0.545[8]					
N-Nitrosodi-n-propylamine (Di-n-propylnitrosamine)	621-64-7			0.0050(hc)			0.51(hc)										
N-Nitrosopyrrolidine	930-55-2			0.016(hc)			34(hc)					0.0126[8]					
Parathion	56-38-2	0.065	0.013					0.000757[8]				0.00034[8]					
Pentachlorobenzene	608-93-5		0.019[8]	1.4(h)			1.5(h)	0.024[8]				20[12] 0.497[8]					
Pentachlorophenol	87-86-5	(b)	(b)	0.27(hc)	13	7.9	3.0(hc)	23[8]			0.017[15]	3[9] 0.119[8]	3	5.0	31	2.1	2.8
Phenanthrene	85-01-8		3.6[8]					0.56 0.204[8]	950	0.240	1.5	45.7[9]					
Phenol	108-95-2		180[8]	10,000(h)			860,000(h)	0.0491[8]	0.048[15]		0.130[15]	30[12] 120[8]					
Phosphorous (yellow)	7723-14-0					0.1											
PCB Aroclor 1016								0.007	53	See Freshwater Criteria[6]							
PCB Aroclor 1248								0.030	150	See Freshwater Criteria[6]							
PCB Aroclor 1254								0.060	34	See Freshwater Criteria[6]							
PCB Aroclor 1260								0.005	24	See Freshwater Criteria[6]							
Polychlorinated biphenyls (PCBs)	1336-36-3		0.014	0.000064(hc)		0.03	0.000064(hc)	0.07 0.0598[8]	530	0.023	0.180	0.371[10] 0.000332[8]	40				
Pyrene	129-00-0		0.30[8]	830(h)			4,000(h)	0.490 0.195[8]	850	0.665	2.6	78.5[8]					

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
Selenium	7782-49-2	20(s)	5.0(s)	170(h)(T)	290(d)(s)	71(d)(s)	4,200(h)(T)				1[15]	0.21[13] 0.0276[8]	1	0.52	4.1	1.2	0.63
Silver	7440-22-4	(a)	0.12[8]	170(h)(T)	1.9(d)(s)		40,000(h)(T)	See Saline Criteria[3] 0.5[8]		1.0	3.7	2[9] 4.04[8]	2	560		4.2	14
Styrene	100-42-5		32[8]					0.254[8]				300[9] 4.69[8]	300				
Sulfide-hydrogen sulfide (undissociated)	7783-06-4		2			2											
TCDF												0.00084[14]					
Technetium	7440-26-8											0.2[9]	0.2				
tert-Butyl alcohol (TBA)	75-65-0		355,000[16]														
2,3,5,6-Tetrachloroaniline	3481-20-7											20[9]	20				
1,2,3,4-Tetrachlorobenzene	634-66-2											10[9]					
1,2,4,5-Tetrachlorobenzene	95-94-3		3[8]	0.97(h)			1.1(h)	1.252[8]				2.02[8]					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6		0.000000003[8]	0.0000000050(hc)			0.0000000051(hc)	0.00000012[8]	0.0000088[15]		0.0000036[15]	0.00000315[10] 0.000000199[8]					
1,1,2,2-Tetrachloroethane	79-34-5		380[8]	4.7(h)			110(h)	0.850[8]				0.127[8]					
Tetrachloroethylene	127-18-4		45[8]	0.34(hc)			1.6(hc)	See Saline Criteria[3] 0.990[8]		0.45[7]		9.92[8]					
2,3,4,5-Tetrachlorophenol	4901-51-3											20[12]					
Thallium	7440-28-0		10[8]	0.24(h)(T)			0.47(h)(T)					1[9]	1				
Tin	7440-31-5		180[8]								>3.4[15]	50[9]	50				
Toluene	108-88-3		253[8] 822[16]	1,300(h)			15,000(h)	See Saline Criteria[3] 1.220[8]		2.5[7]		200[9]	200				
Toxaphene	8001-35-2	0.73	0.0002	0.00028(hc)	0.21	0.0002	0.00028(hc)	0.000077[8]				0.119[8]					
2,4,5-Trichloroaniline	636-30-6											20[9]	20				
1,2,3-Trichlorobenzene	87-61-6											20[12]					
1,2,4-Trichlorobenzene	120-82-1		30[8]	21(h)			42(h)	5.062[8]			>0.0048[15]	20[12]					
1,1,1-Trichloroethane	71-55-6		76[8]	120(h)			2,600(h)	0.213[8]				29.8[8]					
1,1,2-Trichloroethane	79-00-5		500[8]	13(h)			350(h)	0.518[8]				28.6[8]					
Trichloroethylene	79-01-6		47[8]	1.0(hc)			12(hc)	See Saline Criteria[3] 0.112[8]		1.6[7]		12.4[8]					
2,4,5-Trichlorophenol	95-95-4			1,800(h)			3,600(h)				0.003[15]	9[12]	4				
2,4,6-Trichlorophenol	88-06-2		4.9[8]	0.58(hc)			1.0(hc)	0.208[8]			0.006[15]	4[9]					
Uranium	7440-61-1											5[9]	5				
Vanadium	7440-62-2		12[8]								57[15]	2[9]	2			7.8	280
Vinyl chloride	75-01-4		930[8]	0.082(hc)			8.1(hc)	0.202[8]				0.646[8]					
Xylene	1330-20-7		27[8] 296[16]					See Saline Criteria[3] 0.433[8]		>0.12[7]		10[8]					
Zinc	7440-66-6	(a)	(a)	7,400(h)(T)	90(d)(s)	81(d)(s)	26,000(h)(T)	120 121[8]	820	150	410	8.5[11] 6.62[8]	50	160	120	46	79
Low Molecular Weight PAHs[18]															29		100
High Molecular Weight PAHs[19]															18		1.1

NJDEP Ecological Screening Criteria

Toxic Substance	CAS Number	Surface Water (ug/L)						Sediment (mg/kg)				Soil (mg/kg)					
		Fresh Water (FW2) Criteria			Saline Water (SE & SC) Criteria			Fresh Water Criteria		Saline Water Criteria		Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]			
		Aquatic		Human Health	Aquatic		Human Health	Lowest Effects Level (LEL)[1]	Severe Effects Level (SEL)[2]	Effects Range Low (ER-L)[4]	Effects Range Medium (ER-M)[5]			Plants	Soil Invertebrates	Avian	Mammalian
		Acute	Chronic		Acute	Chronic											
Total PAHs								4.0	10,000	4.0	45.0						

(a) Criteria as listed at (f)3 below as formula
(b) Criteria as listed at (f)4 below as formula
(d) Criterion is expressed as a function of the Water Effect Ratio (WER). For criterion in the table, WER equates to the default value of 1.0.
(fc) Criteria expressed as free cyanide (as CN)/L
(h) Human health noncarcinogen
(hc) Human health carcinogen
(s) Dissolved criterion
(T) Total recoverable criterion
1 Lowest Effects Levels (LELs) indicate concentrations at which adverse benthic impact may begin to occur (level tolerated by most benthic organisms). Water column species and wildlife are at potential risk via bio-magnification (food chain toxicity) if site-related sediment concentrations of PCBs, organochlorine pesticides, or mercury are at or above the LEL. Other known biomagnifiers without ESC warrant case-by-case evaluation.
2. Severe Effects Levels (SELs) are also provided, but the SEL is not a BEE screening value. Contamination at this level indicates severe impacts to the benthic community in most cases studied. For non-polar organics (PAHs, organochlorine pesticides, PCBs), the SEL is calculated from a site-specific TOC level. Since the table SEL is based on 100% organic carbon, the calculated site-specific number is lower.
3. Refer to Estuarine/Marine Screening Criteria when a freshwater parameter has no corresponding value. Since the biological activity of non-polar organics is not expected to differ greatly in the estuarine/marine environment, these screens can be used as surrogates. While uncertainty associated with the use of estuarine/marine metal screens as freshwater surrogates is greater than with non-polar organics, one surrogate metal (silver) is provided.
4. Effects Range-Low (ER-L) represents a concentration at which adverse benthic impacts are found in approximately 10% of studies. Water column species and wildlife are at potential risk via biomagnification (food chain toxicity) if site-related sediment concentrations of PCBs, organochlorine pesticides, or mercury are at or above the ER-L. Other known biomagnifiers without NOAA screening numbers (dioxins, furans, other chlorinated organics, and selenium) warrant case-by-case evaluation.
5. The Effects Range-Median (ER-M) is also provided. The ER-M is not a BEE screening value. Contamination greater than the ER-M value indicates adverse benthic impacts in more than 50% of cases studie

6. Refer to Freshwater Sediment Screening Criteria when a Estuarine/Marine parameter has no corresponding value and for individual Aroclor values. Since the biological activity of non-polar organics is not expected to differ greatly in the fresh water environment, freshwater screens can be used as surrogates.
7. Screening values were developed for the protection of marine receptors; however, for the purpose of this document they are considered surrogates for freshwater systems.
8. USEPA Region 5, RCRA Ecological Screening Levels (ESLs) represent a protective benchmark (e.g., water quality criteria, sediment quality guidelines/ criteria, and chronic no adverse effect levels) for 223 contaminants and are not intended to serve as cleanup levels, but are intended to function as screeni levels. http://www.epa.gov/reg5rcra/ca/ESL.pdf
9. Wildlife Preliminary Remediation Goal based on plant study.
10. Wildlife Preliminary Remediation Goal based on shrew study.
11. Wildlife Preliminary Remediation Goal based on woodcock study.
12. Wildlife Preliminary Remediation Goal based on earthworm study.
13. Wildlife Preliminary Remediation Goal based on mouse study.
14. Wildlife Preliminary Remediation Goal based on hawk study.
15. Sediment value from NOAA Screening Quick Reference Tables (SQuiRTs).
16. Westhollow Technical Center Levels were developed by Shell Oil for surface water and were approved for use by NJDEP with the following conditions: 1) the source area is removed, 2) these levels are on the fringe of the contamination area, and 3) active remediation is occurring. These levels are applicable to surface water and wetland areas.
17. USEPA Ambient Water Quality Criteria Update for Methyl Tertiary-Butyl Ether (MTBE) http://www.epa.gov/waterscience/criteria/mtbe-fs.html
18. Low Molecular Weight PAHs are defined as compounds composed of fewer than four rings.
19. High Molecular Weight PAHs are defined as compounds composed of four or more rings.
20. Guidance for Developing Ecological Soil Screening Levels, OSWER Directive 9285.7-55, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460, November 2003, Revised February 2005, http://www.epa.gov/ecotox/ecossl/pdf/ecossl_guidance_chapters.pdf
21. Value applies to DDT and metabolites.

NOTE: See Page 7/7 (SW Calculations tab) for Surface Water Calculator for metals.

NJDEP Ecological Screening Criteria

(f)3 Freshwater aquatic criteria for cadmium, chromium III, copper, nickel, silver, and zinc are expressed as a function of water hardness. Criteria can be calculated at any hardness using these equations as listed below. Criteria thus calculated are multiplied by appropriate conversion factor (CF) to convert total recoverable metal into dissolved metal and by the default Water Effect Ratio (WER) of 1.0.

General formula: WER [e(V[ln (hardness)] + ln A - V[ln Z])] CF

where:
V = pooled slope
A = FAV at given hardness
Z = selected value of hardness

Cadmium:
Acute dissolved criterion WER [$e^{(1.0166\ (\ln\ [\text{hardness}])-3.924)}$] 0.651
Chronic dissolved criterion WER [$e^{(0.7409\ (\ln\ [\text{hardness}])-4.719)}$] 0.651

Chromium III:
Acute dissolved criterion WER [$e^{(0.819\ (\ln\ [\text{hardness}])+3.7256)}$] 0.277
Chronic dissolved criterion WER [$e^{(0.819\ (\ln\ [\text{hardness}])+0.6848)}$] 0.277

Copper:
Acute dissolved criterion WER [$e^{(0.9422\ (\ln\ [\text{hardness}])-1.7)}$] 0.908
Chronic dissolved criterion WER [$e^{(0.8545\ (\ln\ [\text{hardness}])-1.702)}$] 0.908

Nickel:
Acute dissolved criterion WER [$e^{(0.846\ (\ln\ [\text{hardness}])+2.255)}$] 0.846
Chronic dissolved criterion WER [$e^{(0.846\ (\ln\ [\text{hardness}])+0.0584)}$] 0.846

Silver:
Acute dissolved criterion WER [$e^{(1.72\ (\ln\ [\text{hardness}])-6.59)}$] 0.85

Zinc:
Acute or dissolved criterion WER [$e^{(0.8473\ (\ln\ [\text{hardness}])+0.884)}$] 0.950
Chronic dissolved criterion WER [$e^{(0.8473\ (\ln\ [\text{hardness}])+0.884)}$] 0.950

(f)4 Freshwater criteria for pentachlorophenol are expressed as a function of pH. Criteria are derived in accordance with the formula set forth below:

Acute criterion = $e^{(1.005[\text{pH}]-4.869)}$
Chronic criterion = $e^{(1.005[\text{pH}]-5.134)}$

Analytical Method Detection Limits and Environmental Screening Criteria
Fort Monmouth Main Post and Charles Wood Area
2010 Baseline Ecological Evaluation

Analyte	CAS No.	Surface Water MDL (ug/L)	Surface Water QL (ug/L)	Surface Water DQO (ug/L)	Sediment MDL (mg/kg)	Sediment RL (mg/kg)	Sediment DQO (mg/kg)	Soil MDL (mg/kg)	Soil RL (mg/kg)	Soil DQO (mg/kg)
Volatile Organics (Method 8260B)										
Acetone	67-64-1	2.75	5	NAV	0.00302	0.025	NAV	0.00302	0.025	NAV
Acrolein	107-02-08	2.53	5	0.19	0.00398	0.025	14.4	0.00398	0.025	5.27
Acrylonitrile	107-13-1	1.76	5	66	0.00491	0.025	15.7	0.00491	0.025	0.02393
Benzene	71-43-2	0.32	1	824	0.00038	0.005	0.34	0.00038	0.005	0.25462
Bromodichloromethane	75-27-4	0.36	1	NAV	0.00062	0.005	0.00113	0.00062	0.005	0.53978
Bromoform	75-25-2	0.47	1	230	0.00074	0.005	0.99627	0.00074	0.005	15.9
Carbon tetrachloride	56-23-5	0.62	1	240	0.00099	0.005	0.03573	0.00099	0.005	2.98
Chlorobenzene	108-90-7	0.49	1	47	0.0005	0.005	0.06194	0.0005	0.005	40
Chloroform	67-66-3	0.34	1	140	0.00074	0.005	0.027	0.00074	0.005	1.19
Dibromochloromethane	124-48-1	0.52	1	NAV	0.00054	0.005	0.26761	0.00054	0.005	2.05
1,2-Dichlorobenzene	95-50-1	0.45	1	14	0.00062	0.005	NAV	0.00062	0.005	NAV
1,3-Dichlorobenzene	541-73-1	0.43	1	38	0.00037	0.005	NAV	0.00037	0.005	NAV
1,4-Dichlorobenzene	106-46-7	0.32	1	9.4	0.00041	0.005	NAV	0.00041	0.005	NAV
1,1-Dichloroethane	75-34-3	0.36	1	NAV	0.00094	0.005	NAV	0.00094	0.005	NAV
1,2-Dichloroethane	107-06-2	0.48	1	910	0.00064	0.005	0.05418	0.00064	0.005	21.2
1,1-Dichloroethene	75-35-4	0.47	1	65	0.00147	0.005	0.02327	0.00147	0.005	8.28
cis-1,2-Dichloroethene	156-59-2	0.35	1	NAV	0.00089	0.005	NAV	0.00089	0.005	NAV
trans-1,2-Dichloroethene	156-60-5	0.41	1	970	0.00069	0.005	0.20894	0.00069	0.005	0.78373
1,2-Dichloropropane	78-87-5	0.46	1	360	0.00026	0.005	0.35161	0.00026	0.005	32.7
cis-1,3-Dichloropropene	542-75-6	0.31	1	NAV	0.00072	0.005	NAV	0.00072	0.005	NAV
trans-1,3-Dichloropropene	542-75-6	0.29	1	NAV	0.00079	0.005	NAV	0.00079	0.005	NAV
Ethylbenzene	100-41-4	0.53	1	81	0.00062	0.005	1.4	0.00062	0.005	5.16
Methyl-tert-butyl ether	1634-04-4	0.35	1	18000	0.00096	0.005	NAV	0.00096	0.005	NAV
Methyl bromide (bromomethane)	74-83-9	0.62	1	16	0.00245	0.005	0.000148	0.00245	0.005	0.23516
Methylene chloride	75-09-2	0.41	1	940	0.00142	0.005	0.159	0.00142	0.005	4.05
Styrene	100-42-5	0.36	1	32	0.00045	0.005	0.44496	0.00045	0.005	300
tert-Butyl alcohol	75-65-0	2.61	5	355000	0.00741	0.025	NAV	0.00741	0.025	NAV
1,1,1,2-Tetrachloroethane	630-20-6	0.43	1	NAV	0.00043	0.005	NAV	0.00043	0.005	NAV
1,1,2,2-Tetrachloroethane	79-34-5	0.31	1	380	0.00046	0.005	0.02908	0.00046	0.005	0.12722
Tetrachloroethene	127-18-4	0.27	1	45	0.00101	0.005	0.45	0.00101	0.005	9.92
Toluene	108-88-3	0.37	1	253	0.00064	0.005	2.5	0.00064	0.005	200
1,1,1-Trichloroethane	71-55-6	0.4	1	76	0.00088	0.005	0.24685	0.00088	0.005	29.8
1,1,2-Trichloroethane	79-00-5	0.38	1	500	0.0009	0.005	0.67351	0.0009	0.005	28.6
Trichloroethene	79-01-6	0.28	1	47	0.00086	0.005	1.6	0.00086	0.005	12.4
Vinyl chloride	75-01-4	0.34	1	930	0.00123	0.005	0.002	0.00123	0.005	0.64614
m,p-Xylene	1330-20-7	0.95	2	27	0.00072	0.01	0.12	0.00072	0.01	10
o-Xylene	1330-20-7	0.43	1	27	0.00068	0.005	0.12	0.00068	0.005	10
2-Butanone	78-93-3	1.32	5	NAV	0.00311	0.025	NAV	0.00311	0.025	NAV
2-Chloroethyl vinyl ether	110-75-8	1.79	5	NAV	0.01151	0.025	NAV	0.01151	0.025	NAV
Methyl isobutyl ketone (2-Hexanone)	108-10-1	1.94	5	NAV	0.00392	0.025	NAV	0.00392	0.025	NAV
4-Methyl-2-pentanone	108-10-1	2.1	5	NAV	0.00292	0.025	NAV	0.00292	0.025	NAV
Carbon disulfide	75-15-0	0.54	1	NAV	0.00106	0.005	NAV	0.00106	0.005	NAV
Chloroethane	75-00-3	0.66	1	NAV	0.0014	0.005	NAV	0.0014	0.005	NAV
Chloromethane	74-87-3	0.54	1	NAV	0.00086	0.005	NAV	0.00086	0.005	NAV
Dichlorodifluoromethane	75-71-8	0.55	1	NAV	0.00065	0.005	NAV	0.00065	0.005	NAV
Di-isopropyl ether	108-20-3	1.00	5	NAV	0.001	0.005	NAV	0.001	0.005	NAV
Trichlorofluoromethane	75-69-4	0.35	1	NAV	0.00132	0.005	NAV	0.00132	0.005	NAV
Vinyl acetate	108-05-4	1.05	5	NAV	0.00347	0.025	NAV	0.00347	0.025	NAV

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Base/Neutrals (Method 8270C)										
Acenaphthene	83-32-9	0.212	10	38	0.0094	0.33	0.016	0.0094	0.33	20
Acenaphthylene	208-96-8	0.697	10	4840	0.0084	0.33	0.044	0.0084	0.33	682
Aniline	62-53-3	3.368	10	NAV	0.0284	0.33	NAV	0.0284	0.33	NAV
Anthracene	120-12-7	0.1	0.1	0.035	0.0068	0.33	0.085	0.0068	0.33	1480
Azobenzene	103-33-3	0.224	10	NAV	0.0078	0.33	NAV	0.0078	0.33	NAV
Benzidine	92-87-5	3.618	30	NAV	0.0335	0.33	NAV	0.0335	0.33	NAV
Benzo(a)anthracene	56-55-3	0.07	0.1	0.025	0.0159	0.33	0.261	0.0159	0.33	5.21
Benzo(a)pyrene	50-32-8	0.08	0.1	0.014	0.0072	0.33	0.37	0.0072	0.33	1.52
Benzo(b)fluoranthene	205-99-2	0.287	10	9.07	0.0109	0.33	1.8	0.0109	0.33	59.8
Benzo(g,h,i)perylene	191-24-2	0.289	10	7.64	0.0135	0.33	0.17	0.0135	0.33	119
Benzo(k)fluoranthene	207-08-9	0.182	10	NAV	0.0157	0.33	0.24	0.0157	0.33	148
Benzoic acid	65-85-0	7.398	30	NAV	0.3864	1	NAV	0.3864	1	NAV
Benzyl alcohol	100-51-6	0.348	10	NAV	0.0125	0.33	NAV	0.0125	0.33	NAV
bis(2-Chloroethoxy)methane	111-91-1	0.551	10	NAV	0.0192	0.33	NAV	0.0192	0.33	NAV
bis(2-chloroethyl)ether	111-44-4	0.546	10	1900	0.016	0.33	NAV	0.016	0.33	23.7
bis(2-Chloroisopropyl)ether	108-60-1	0.173	10	NAV	0.0138	0.33	NAV	0.0138	0.33	19.9
bis(2-Ethylhexyl)phthalate	117-81-7	0.0785	0.1	0.3	0.0118	0.33	0.18216	0.0118	0.33	0.92594
4-Bromophenyl-phenylether	101-55-3	0.23	10	NAV	0.0065	0.33	NAV	0.0065	0.33	NAV
Butylbenzylphthalate	85-68-7	0.188	10	23	0.016	0.33	0.063	0.016	0.33	0.23889
4-Chloro-3-methylphenol (p-chloro-m-cresol)	59-50-7	0.4	10	NAV	0.0148	0.33	NAV	0.0148	0.33	NAV
4-Chloroaniline	106-47-8	2.863	10	NAV	0.0235	0.33	NAV	0.0235	0.33	NAV
2-Chlorophenol	95-57-8	0.544	10	24	0.0033	0.0033	0.008	0.0033	0.0033	0.24266
4-Chlorophenyl-phenylether	7005-72-3	0.206	10	NAV	0.0181	0.33	NAV	0.0181	0.33	NAV
Chrysene	218-01-9	0.18	10	NAV	0.0151	0.33	0.34	0.0151	0.33	4.73
Dibenz(a,h)anthracene	53-70-3	0.416	10	NAV	0.0096	0.33	0.06	0.0096	0.33	18.4
Dibenzofuran	132-64-9	0.236	10	NAV	0.013	0.33	NAV	0.013	0.33	NAV
1,2-Dichlorobenzene	95-50-1	0.264	10	14	0.0127	0.33	0.013	0.0127	0.33	2.96
1,3-Dichlorobenzene	541-73-1	0.129	10	38	0.0059	0.33	3.01	0.0059	0.33	37.7
1,4-Dichlorobenzene	106-46-7	0.204	10	9.4	0.0114	0.33	0.11	0.0114	0.33	20
3,3'-Dichlorobenzidine	91-94-1	0.1	0.1	4.5	0.0214	0.33	0.02822	0.0214	0.33	0.64636
2,4-Dichlorophenol	120-83-2	0.659	10	11	0.0033	0.0033	0.005	0.0033	0.0033	87.5
Diethylphthalate	84-66-2	0.382	10	110	0.0052	0.33	0.006	0.0052	0.33	100
2,4-Dimethylphenol	105-67-9	0.708	10	100	0.0033	0.0033	0.30453	0.0033	0.0033	0.01
Dimethylphthalate	131-11-3	0.219	10	NAV	0.009	0.33	NAV	0.009	0.33	NAV
Di-n-butylphthalate	84-74-2	2.401	20	9.7	0.0262	0.33	0.058	0.0262	0.33	200
Di-n-octylphthalate	117-84-0	0.509	10	NAV	0.0038	0.33	NAV	0.0038	0.33	NAV
2,4-Dinitrophenol	51-28-5	2.098	10	19	0.0033	0.0033	0.00133	0.0033	0.0033	20
2,4-Dinitrotoluene	121-14-2	1.026	10	44	0.0101	0.33	0.07513	0.0101	0.33	1.28
2,6-Dinitrotoluene	606-20-2	0.321	10	NAV	0.0136	0.33	NAV	0.0136	0.33	NAV
Fluoranthene	206-44-0	0.0865	0.1	1.9	0.0067	0.33	0.6	0.0067	0.33	122
Fluorene	86-73-7	0.31	10	19	0.0126	0.33	0.019	0.0126	0.33	122
Hexachlorobenzene	118-74-1	0.0629	0.1	0.0003	0.0136	0.33	0.02	0.0136	0.33	0.19878
Hexachlorobutadiene	87-68-3	0.1	0.1	0.053	0.0033	0.0033	0.0013	0.0033	0.0033	0.03976
Hexachlorocyclopentadiene	77-47-4	0.238	10	77	0.0081	0.33	0.90074	0.0081	0.33	10
Hexachloroethane	67-72-1	0.246	10	8	0.0149	0.33	0.073	0.0149	0.33	0.59634
Indeno(1,2,3-c,d)pyrene	193-39-5	0.0719	0.1	4.31	0.0111	0.33	0.2	0.0111	0.33	109
Isophorone	78-59-1	0.298	10	920	0.011	0.33	0.4223	0.011	0.33	139
2-Methylnaphthalene	91-57-6	0.324	10	330	0.0084	0.33	0.07	0.0084	0.33	3.24

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2-Methylphenol (o-Cresol)	95-48-7	0.239	10	NAV	0.0181	0.33	NAV	0.0181	0.33	NAV
4-Methylphenol (p-cresol)	106-44-5	0.377	10	NAV	0.0173	0.33	NAV	0.0173	0.33	NAV
Naphthalene	91-20-3	0.118	10	13	0.0115	0.33	0.16	0.0115	0.33	0.9939
Nitrobenzene	98-95-3	0.676	10	220	0.0126	0.33	0.4876	0.0126	0.33	1.31
2-Nitroaniline	88-74-4	0.485	10	NAV	0.0148	0.33	NAV	0.0148	0.33	NAV
3-Nitroaniline	99-09-2	1.091	10	NAV	0.0214	0.33	NAV	0.0214	0.33	NAV
4-Nitroaniline	100-01-6	1.361	10	NAV	0.0434	0.33	NAV	0.0434	0.33	NAV
2-Nitrophenol	88-75-5	0.524	10	NAV	0.0161	0.33	NAV	0.0161	0.33	NAV
4-Nitrophenol	100-02-7	11.792	30	60	0.0619	0.33	NAV	0.0619	0.33	7
n-Nitroso-dimethylamine	62-75-9	0.274	10	NAV	0.0033	0.0033	0.00000275	0.0033	0.0033	0.0000321
n-Nitroso-di-n-propylamine	621-64-7	0.195	10	NAV	0.0168	0.33	NAV	0.0168	0.33	NAV
n-Nitrosodiphenylamine	86-30-6	0.599	10	NAV	0.008	0.33	0.15524	0.008	0.33	0.54514
Pentachlorophenol	87-86-5	1	1	2.5	0.033	0.033	0.017	0.033	0.033	2.8
Phenanthrene	85-01-8	0.0905	0.1	3.6	0.009	0.33	0.24	0.009	0.33	45.7
Phenol	108-95-2	0.207	10	180	0.0077	0.33	NAV	0.0077	0.33	NAV
Pyridine	110-86-1	4.309	20	NAV	0.2104	0.66	NAV	0.2104	0.66	NAV
Pyrene	129-00-0	0.1	0.1	0.3	0.008	0.33	0.49	0.008	0.33	78.5
1,2,4-Trichlorobenzene	120-82-1	0.148	10	30	0.0033	0.0033	0.0048	0.0033	0.0033	20
2,4,5-Trichlorophenol	95-95-4	0.397	10	NAV	0.0033	0.0033	0.003	0.0033	0.0033	4
2,4,6-Trichlorophenol	88-06-2	0.559	10	4.9	0.0033	0.0033	0.006	0.0033	0.0033	4
Pesticides (Method 8081B)										
alpha-BHC	319-84-6	0.000514	0.005	12.4	0.00013	0.0017	0.006	0.00013	0.0017	0.09939
beta-BHC	319-85-7	0.000862	0.005	0.495	0.00018	0.0017	0.005	0.00018	0.0017	0.00398
gamma-BHC	58-89-9	0.000546	0.005	0.026	0.00015	0.0017	0.003	0.00015	0.0017	0.005
delta-BHC	319-86-8	0.000556	0.005	NAV	0.0001	0.0017	0.003	0.0001	0.0017	NAV
Aldrin	309-00-2	0.00062	0.005	0.017	0.0001	0.0017	0.002	0.0001	0.0017	0.00332
alpha-Chlordane	5103-71-9	0.000492	0.005	0.004	0.00014	0.0017	0.007	0.00014	0.0017	0.224
gamma-Chlordane	57-74-9	0.000501	0.005	0.004	0.00013	0.0017	0.007	0.00013	0.0017	0.224
4,4'-DDD	72-54-8	0.090714	0.005	NAV	0.00017	0.0017	0.002	0.00017	0.0017	0.75815
4,4'-DDE	72-55-9	0.000398	0.005	4.51E-09	0.0002	0.0017	0.0022	0.0002	0.0017	0.59587
4,4'-DDT	50-29-3	0.000588	0.005	0.001	0.00014	0.0017	0.001	0.00014	0.0017	0.0175
Dieldrin	60-57-1	0.000468	0.005	0.0019	0.00013	0.0017	0.002	0.00013	0.0017	0.00238
Endosulfan I	115-29-7	0.000608	0.005	0.0087	0.00015	0.0017	NAV	0.00015	0.0017	NAV
Endosulfan II	115-29-7	0.000551	0.005	0.0087	0.00014	0.0017	NAV	0.00014	0.0017	NAV
Endosulfan sulfate	1031-07-8	0.000598	0.005	2.22	0.00015	0.0017	0.0346	0.00015	0.0017	0.03578
Endrin	72-20-8	0.000582	0.005	0.0023	0.00018	0.0017	0.003	0.00018	0.0017	0.0101
Endrin aldehyde	7421-93-4	0.000452	0.005	0.15	0.0002	0.0017	3.2	0.0002	0.0017	0.105
Endrin ketone	53494-70-5	0.00057	0.005	NAV	0.00013	0.0017	NAV	0.00013	0.0017	NAV
Heptachlor	76-44-8	0.00069	0.005	0.0036	0.00014	0.0017	0.0003	0.00014	0.0017	0.00598
Heptachlor epoxide	1024-57-3	0.000669	0.005	0.0036	0.00016	0.0017	0.005	0.00016	0.0017	0.15188
Methoxychlor	72-43-5	0.000417	0.005	0.03	0.00017	0.0017	0.00359	0.00017	0.0017	0.01988
Toxaphene	8001-35-2	0.036	0.05	0.0002	0.00978	0.017	0.000109	0.00978	0.017	0.11927
TAL Metals (Method 6010B/7471A)										
Aluminum	7429-90-5	4.97	100	NAV	0.677	5	18000	0.677	5	50
Antimony	7440-36-0	0.14	2	80	0.026	1	3	0.026	1	0.27
Arsenic	7440-38-2	0.18	1	36	0.022	1	6	0.022	1	9.9
Barium	7440-39-3	0.1	10	220	0.008	1	48	0.008	1	283
Beryllium	7440-41-7	0.09	1	3.6	0.007	1		0.007	1	10
Cadmium	7440-43-9	0.13	1	8.8	0.009	1	0.6	0.009	1	0.36

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Calcium	7440-70-2	9.06	500	NAV	0.635	5	NAV	0.635	5	NAV
Chromium	7440-47-3	0.04	2	42	0.011	1	26	0.011	1	1
Cobalt	7440-48-4	0.05	1	24	0.006	1	10	0.006	1	13
Copper	7440-50-8	0.04	2	3.1	0.006	1	16	0.006	1	28
Iron	7439-89-6	10.28	100	NAV	0.926	5	NAV	0.926	5	NAV
Lead	7439-92-1	0.04	1	5.4	0.004	1	31	0.004	1	11
Magnesium	7439-95-4	4.95	100	NAV	0.693	10	NAV	0.693	10	NAV
Manganese	7439-96-5	0.05	1	NAV	0.006	1	260	0.006	1	220
Mercury (7471 or 7470)	7439-97-6	0.09	0.2	0.77	0.002	0.01	0.15	0.002	0.01	0.00051
Nickel	7440-02-0	0.06	1	22	0.009	1	16	0.009	1	30
Potassium	7440-09-7	12.22	100	NAV	0.901	10	NAV	0.901	10	NAV
Selenium	7782-49-2	0.7	5	5	0.056	1	1	0.056	1	0.21
Silver	7440-22-4	0.03	1	0.12	0.007	1	1	0.007	1	2
Sodium	7440-23-5	5.32	100	NAV	1.225	10	NAV	1.225	10	NAV
Thallium	7440-28-0	0.02	1	10	0.005	1	NAV	0.005	1	1
Vanadium	7440-62-2	0.15	5	12	0.013	1	57	0.013	1	2
Zinc	7440-66-6	0.09	2	81	0.011	1	120	0.011	1	8.5
PCBs (Method 8082A)										
Aroclor 1016	12674-11-2	0.0095904	0.05	0.014	0.00347	0.017	0.007	0.00347	0.017	0.371
Aroclor 1221	11104-28-2	0.019	0.05	0.014	0.00908	0.017	0.023	0.00908	0.017	0.371
Aroclor 1232	11141-16-5	0.015	0.05	0.014	0.00747	0.017	0.023	0.00747	0.017	0.371
Aroclor 1242	53469-21-9	0.0089	0.05	0.014	0.0137	0.017	0.023	0.0137	0.017	0.371
Aroclor 1248	12672-29-6	0.024	0.05	0.014	0.00659	0.017	0.03	0.00659	0.017	0.371
Aroclor 1254	11097-69-1	0.0044	0.05	0.014	0.0014946	0.017	0.06	0.0014946	0.017	0.371
Aroclor 1260	11096-82-5	0.0080562	0.05	0.014	0.00411	0.017	0.005	0.00411	0.017	0.371
Field Parameters										
pH (surface water only)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO) (surface water only)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salinity (surface water only)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductivity (surface water only)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature (surface water only)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other Parameters										
TOC - sediment only (Method 415.1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Grain Size - sediment only (ASTM D442-53)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness - surface water only (Method 310.1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ug/L = microgram per liter
DQO = Data Quality Objective; The Surface Water DQOs, Sediment DQOs, and Soil DQOs listed in this table, also function as Environmental Screening Values.
MDL = Method Detection Limit
mg/kg = milligram per kilogram
NA = Not Applicable
NAV = No Available Value
PCB = Polychlorinated Biphenyl
QL = Quantitation Limit
RL = Reporting Limit
TAL = Total Analyte List
TOC = Total Organic Carbon

APPENDIX G
Field Documentation and Field Measured Parameters

Field Measured Parameters
Fort Monmouth Main Post and Charles Wood Area
2010 BEE Sampling Event

Location	Medium	Date	Time	Hardness (mg/L)	pH	Temperature ˚C	Conductivity (umho)	Salinity (ppt)	Dissolved Oxygen	
									mg/L	%
CW3-SD7	Sediment	28-Jun-10	11:40	NA	5.76	24.83	1.00	0.49	8.68	104.1
CW3-SD8	Sediment	28-Jun-10	12:10	NA	NA	NA	NA	NA	NA	NA
M14-SD14	Sediment	16-Jun-10	14:12	NA	7.15	22.60	0.27	0.13	9.35	108.4
M2-SD1	Sediment	25-Jun-10	13:40	NA	7.47	23.70	0.60	0.27	11.27	143.7
M2-SD2	Sediment	24-Jun-10	14:40	NA	7.08	27.58	0.59	0.27	11.15	142.3
M3-SD12	Sediment	21-Jun-10	15:40	NA	7.50	24.86	0.46	0.22	6.20	75.2
M3-SD13	Sediment	25-Jun-10	11:25	NA	7.30	22.73	0.42	0.21	8.88	103.4
M8-SD11	Sediment	21-Jun-10	10:15	NA	7.42	24.96	3.29	1.72	6.53	80.2
MP-SD1	Sediment	25-Jun-10	12:05	NA	7.30	23.20	0.42	0.21	9.24	108.4
MP-SD2	Sediment	25-Jun-10	14:15	NA	7.52	26.51	0.58	0.27	10.04	125.2
MP-SD3	Sediment	25-Jun-10	15:05	NA	7.53	22.34	0.36	0.18	7.33	112.6
CW3-SD1	Sediment	28-Jun-10	8:50	NA	8.32	22.49	0.66	0.34	7.17	83.3
CW3-SD2	Sediment	28-Jun-10	9:05	NA	7.00	21.80	0.70	0.36	6.85	78.6
CW3-SD3	Sediment	28-Jun-10	9:18	NA	6.65	21.21	0.75	0.39	6.01	68.4
CW3-SD4	Sediment	28-Jun-10	9:40	NA	5.87	22.29	0.85	0.44	6.43	74.6
CW3-SD5	Sediment	28-Jun-10	10:20	NA	6.05	22.19	1.03	0.54	5.56	64.4
CW3-SD6	Sediment	28-Jun-10	10:48	NA	6.27	23.61	0.55	0.27	5.44	64.1
CW6-SD1	Sediment	18-Jun-10	16:32	NA	NA	NA	NA	NA	NA	NA
CW6-SD2	Sediment	18-Jun-10	16:14	NA	NA	NA	NA	NA	NA	NA
CW6-SD3	Sediment	18-Jun-10	16:42	NA	NA	NA	NA	NA	NA	NA
CW6-SD4	Sediment	18-Jun-10	16:47	NA	NA	NA	NA	NA	NA	NA
CW6-SD5	Sediment	24-Jun-10	10:35	NA	7.80	18.45	0.50	0.28	8.16	95.0
CW6-SD6	Sediment	24-Jun-10	9:40	NA	7.80	17.52	0.55	0.31	8.12	87.6
CWA-SD1	Sediment	24-Jun-10	9:00	NA	8.25	26.93	0.55	0.25	9.11	115.9
M14-SD1	Sediment	15-Jun-10	9:10	NA	7.65	21.76	3.34	1.80	9.20	108.1
M14-SD10	Sediment	16-Jun-10	11:22	NA	6.77	21.77	0.31	0.16	8.63	98.4
M14-SD11	Sediment	16-Jun-10	11:50	NA	6.88	22.16	0.29	0.14		106.0
M14-SD12	Sediment	28-Jun-10	13:45	NA	6.85	33.02	42.90	23.35	8.74	139.0
M14-SD13	Sediment	16-Jun-10	12:48	NA	7.03	22.36	0.28	0.13	10.25	119.4
M14-SD2	Sediment	15-Jun-10	9:40	NA	7.51	23.45	6.30	3.58	8.61	104.0
M14-SD3	Sediment	15-Jun-10	10:25	NA	7.11	24.19	8.52	5.40	9.93	121.0
M14-SD4	Sediment	15-Jun-10	10:50	NA	7.14	24.81	16.92	9.81	13.53	172.0
M14-SD5	Sediment	15-Jun-10	11:36	NA	7.94	25.30	18.35	10.90	17.00	221.4
M14-SD6	Sediment	15-Jun-10	12:10	NA	8.22	25.82	21.17	11.80	20.29	266.7
M14-SD7	Sediment	15-Jun-10	14:33	NA	6.68	24.08	16.46	9.21	20.45	247.1
M14-SD8	Sediment	15-Jun-10	15:23	NA	7.14	23.97	1.14	9.02	22.37	284.2
M14-SD9	Sediment	16-Jun-10	10:50	NA	6.41	22.00	0.32	0.16	8.06	94.1
M15-SD1	Sediment	14-Jun-10	13:45	NA	7.85	24.36	32.50	20.55	9.27	121.9
M15-SD2	Sediment	14-Jun-10	14:10	NA	8.00	24.55	32.67	20.60	9.24	126.5
M15-SD3	Sediment	14-Jun-10	14:30	NA	7.80	24.51	32.72	20.44	8.07	108.6
M15-SD4	Sediment	14-Jun-10	15:02	NA	7.87	25.01	32.57	20.34	10.04	136.0
M16-SD1	Sediment	14-Jun-10	10:04	NA	7.62	24.32	33.57	21.09	3.99	50.2
M16-SD2	Sediment	14-Jun-10	10:44	NA	7.49	24.30	33.36	21.17	4.19	60.1
M16-SD3	Sediment	14-Jun-10	11:10	NA	7.35	24.29	33.77	21.41	4.19	56.6
M16-SD4	Sediment	14-Jun-10	11:55	NA	7.33	24.38	33.30	21.04	4.37	59.0
M18-SD1	Sediment	16-Jun-10	15:45	NA	6.61	26.33	0.33	0.16	9.69	120.4
M18-SD2	Sediment	17-Jun-10	9:03	NA	6.99	23.10	8.94	5.15	5.38	64.7
M18-SD3	Sediment	16-Jun-10	16:36	NA	8.22	24.64	13.77	7.64	10.24	137.0
M18-SD4	Sediment	16-Jun-10	17:00	NA	8.23	24.26	9.12	6.02	11.08	136.0
M18-SD5	Sediment	17-Jun-10	10:00	NA	7.30	22.40	5.88	3.38	6.38	75.6
M2-SD10	Sediment	25-Jun-10	9:40	NA	7.38	24.01	0.55	0.27	8.03	95.3
M2-SD11	Sediment	25-Jun-10	9:55	NA	7.33	24.46	0.56	0.27	8.01	97.1
M2-SD12	Sediment	25-Jun-10	10:10	NA	7.23	25.11	0.57	0.27	8.48	103.3
M2-SD13	Sediment	25-Jun-10	10:30	NA	7.28	24.88	0.56	0.27	8.64	104.7
M2-SD14	Sediment	24-Jun-10	14:15	NA	7.14	27.35	0.67	0.31	12.89	164.2
M2-SD3	Sediment	24-Jun-10	15:08	NA	6.96	27.43	0.60	0.27	13.21	168.2
M2-SD4	Sediment	24-Jun-10	15:24	NA	7.03	23.57	0.58	0.27	10.91	140.0
M2-SD5	Sediment	24-Jun-10	15:36	NA	7.11	27.58	0.58	0.27	11.72	149.3
M2-SD6	Sediment	24-Jun-10	15:53	NA	7.19	27.30	0.57	0.26	10.67	133.1
M2-SD7	Sediment	25-Jun-10	8:45	NA	8.01	24.45	0.57	0.28	8.61	102.7
M2-SD8	Sediment	25-Jun-10	9:05	NA	7.64	24.10	0.56	0.27	8.20	97.7
M2-SD9	Sediment	25-Jun-10	9:25	NA	7.50	24.00	0.55	0.27	7.80	91.8
M20-SD1	Sediment	23-Jun-10	9:50	NA	7.66	26.81	35.75	21.67	10.68	150.9
M20-SD2	Sediment	23-Jun-10	10:15	NA	7.67	26.68	35.63	21.65	136.20	9.6
M3-SD1	Sediment	18-Jun-10	10:38	NA	7.05	25.65	2.51	1.28	7.64	94.9
M3-SD10	Sediment	21-Jun-10	15:12	NA	7.51	28.29	0.73	0.33	6.33	81.4
M3-SD11	Sediment	21-Jun-10	14:25	NA	7.44	27.61	0.69	0.32	5.62	72.3
M3-SD2	Sediment	18-Jun-10	10:50	NA	7.25	25.52	1.79	0.90	7.40	91.0

See Notes at end of table.

Field Measured Parameters
Fort Monmouth Main Post and Charles Wood Area
2010 BEE Sampling Event

Location	Medium	Date	Time	Hardness (mg/L)	pH	Temperature ˚C	Conductivity (umho)	Salinity (ppt)	Dissolved Oxygen	
									mg/L	%
M3-SD3	Sediment	18-Jun-10	11:28	NA	7.39	27.15	2.38	1.18	7.26	91.5
M3-SD4	Sediment	18-Jun-10	11:50	NA	7.50	25.62	1.47	0.73	7.16	87.9
M3-SD5	Sediment	18-Jun-10	13:33	NA	-	-	-	-	-	-
M3-SD6	Sediment	18-Jun-10	13:50	NA	-	-	-	-	-	-
M3-SD7	Sediment	18-Jun-10	14:08	NA	-	-	-	-	-	-
M3-SD8	Sediment	21-Jun-10	14:40	NA	7.42	28.97	0.84	0.38	7.30	95.4
M3-SD9	Sediment	21-Jun-10	14:57	NA	7.44	28.40	0.83	0.37	6.97	90.1
M4-SD1	Sediment	22-Jun-10	13:55	NA	7.28	25.30	0.63	0.30	4.65	57.6
M4-SD2	Sediment	22-Jun-10	14:14	NA	7.34	24.81	0.60	0.29	4.67	56.9
M4-SD3	Sediment	22-Jun-10	14:30	NA	7.24	24.74	0.59	0.28	4.21	52.5
M4-SD4	Sediment	22-Jun-10	14:46	NA	7.14	27.71	0.58	0.28	4.54	54.1
M4-SD5	Sediment	22-Jun-10	15:07	NA	7.20	24.87	0.57	0.28	4.64	58.9
M4-SD6	Sediment	22-Jun-10	15:30	NA	7.17	24.79	0.57	0.27	3.89	48.0
M5-SD1	Sediment	17-Jun-10	12:18	NA	7.36	21.28	1.41	0.72	6.90	85.1
M5-SD2	Sediment	18-Jun-10	9:23	NA	7.71	21.41	0.91	0.49	6.48	73.5
M5-SD3	Sediment	18-Jun-10	9:37	NA	7.42	21.53	0.82	0.43	6.63	75.7
M5-SD4	Sediment	18-Jun-10	9:04	NA	8.30	21.70	1.65	0.90	6.90	80.8
M5-SD5	Sediment	18-Jun-10	9:57	NA	7.43	21.20	0.61	0.34	6.67	75.5
M5-SD6	Sediment	18-Jun-10	10:17	NA	7.33	21.30	0.60	0.31	6.69	76.1
M8-SD1	Sediment	23-Jun-10	13:05	NA	8.29	27.49	8.99	4.75	9.43	121.9
M8-SD10	Sediment	17-Jun-10	11:58	NA	7.54	23.56	1.07	0.56	7.45	88.5
M8-SD12	Sediment	17-Jun-10	12:50	NA	7.41	25.00	1.73	0.71	7.59	92.3
M8-SD2	Sediment	17-Jun-10	10:46	NA	7.27	23.57	4.46	2.44	7.59	91.5
M8-SD3	Sediment	17-Jun-10	16:24	NA	8.33	28.31	26.67	15.21	7.60	106.4
M8-SD4	Sediment	17-Jun-10	16:44	NA	8.39	28.40	24.13	13.21	3.55	49.4
M8-SD5	Sediment	17-Jun-10	16:00 HT	NA	8.30	28.45	28.15	16.33	5.28	74.4
M8-SD6	Sediment	23-Jun-10	13:29	NA	7.92	28.14	6.39	3.39	8.30	1097.0
M8-SD6	None	17-Jun-10	15:28 HT	NA	8.11	28.55	30.30	17.37	7.54	106.9
M8-SD7	Sediment	23-Jun-10	13:38	NA	7.52	28.78	5.72	2.90	13.88	172.5
M8-SD7	None	17-Jun-10	14:40 HT	NA	8.03	28.30	28.90	16.54	6.50	91.5
M8-SD8	Sediment	17-Jun-10	13:45	NA	7.46	28.03	22.40	12.39	9.73	130.5
M8-SD9	Sediment	17-Jun-10	11:35	NA	7.84	23.79	1.19	0.61	7.05	84.1
CW6-SS1	Soil	18-Jun-10	15:23	NA	NA	NA	NA	NA	NA	NA
CW6-SS2	Soil	18-Jun-10	15:40	NA	NA	NA	NA	NA	NA	NA
CW6-SS3	Soil	18-Jun-10	15:50	NA	NA	NA	NA	NA	NA	NA
CW6-SS4	Soil	18-Jun-10	15:59	NA	NA	NA	NA	NA	NA	NA
CW3-SW7	Surface Water	28-Jun-10	11:35 HT	133.74	5.76	24.83	1.00	0.49	8.68	104.1
M14-SW14	None	16-Jun-10	14:03 HT	100	7.15	22.60	0.27	0.13	9.35	108.4
M14-SW14	Surface Water	22-Jun-10	12:09	71.1	7.56	26.33	0.34	0.16	7.33	91.2
M2-SW1	Surface Water	25-Jun-10	13:38	96.6	7.47	23.70	0.60	0.27	11.27	143.7
M2-SW2	Surface Water	24-Jun-10	14:33	92.4	7.08	27.58	0.59	0.27	11.15	142.3
M3-SW12	Surface Water	22-Jun-10	8:43	163	6.92	22.29	1.29	0.68	4.96	57.7
M3-SW13	Surface Water	25-Jun-10	11:15	113	7.30	22.73	0.42	0.21	8.88	103.4
M8-SW11	Surface Water	21-Jun-10	10:05	323	7.42	24.96	3.29	1.72	6.53	80.2
MP-SW1	Surface Water	25-Jun-10	11:55	111	7.30	23.20	0.42	0.21	9.24	108.4
MP-SW2	Surface Water	25-Jun-10	14:02	91.1	7.52	26.51	0.58	0.27	10.04	125.2
MP-SW3	Surface Water	25-Jun-10	14:58	85.4	7.53	22.34	0.36	0.18	7.33	112.6
CW3-SW4	Surface Water	28-Jun-10	9:50	73.41	5.87	22.29	0.85	0.44	6.43	74.6
CW3-SW5	Surface Water	28-Jun-10	10:15	85.1	6.05	22.19	1.03	0.54	5.56	64.4
CW6-SW6	Surface Water	24-Jun-10	10:29	95.2	7.80	18.45	0.50	0.28	8.16	95.0
CW6-SW6	Surface Water	24-Jun-10	9:33 HT	94.5	7.80	17.52	0.55	0.31	8.12	87.6
CWA-SW1	Surface Water	24-Jun-10	8:55 HT	132	8.25	26.93	0.55	0.25	9.11	115.9
M14-SW12	Surface Water	28-Jun-10	13:53	3821.58	6.85	33.02	42.90	23.35	8.74	139.0
M14-SW13	Surface Water	22-Jun-10	11:32	72.3	7.75	25.00	0.35	0.17	5.39	63.9
M14-SW3	Surface Water	22-Jun-10	10:08	334	7.45	25.82	3.80	1.83	4.26	53.0
M14-SW8	Surface Water	15-Jun-10	15:01	116.48	7.14	23.97	1.14	9.02	22.37	284.2
M15-SW1	Surface Water	14-Jun-10	13:40	3537	7.85	24.36	32.50	20.55	9.27	121.9
M15-SW2	Surface Water	14-Jun-10	14:00	3567	8.00	24.55	32.67	20.60	9.24	126.5
M15-SW4	Surface Water	14-Jun-10	14:55	3445	7.87	25.01	32.57	20.34	10.04	136.0
M16-SW1	Surface Water	23-Jun-10	11:55	3512	7.90	29.15	36.60	21.25	12.16	176.3
M16-SW2	Surface Water	23-Jun-10	12:05	3159	8.18	29.69	36.07	20.74	10.36	153.8
M16-SW4	None	14-Jun-10	11:45 HT	NA	7.33	24.38	33.30	21.04	4.37	59.0
M16-SW4	Surface Water	23-Jun-10	12:18	3087	8.36	30.05	32.69	18.30	8.50	122.8
M18-SW3	Surface Water	22-Jun-10	10:08	1195.2	6.70	25.95	26.33	15.52	1.84	24.7
M18-SW5	Surface Water	17-Jun-10	9:50	613	7.30	22.40	5.88	3.38	6.38	75.6
M2-SW11	Surface Water	21-Jun-10	11:30	90.4	7.41	24.07	0.52	0.25	7.48	90.5

See Notes at end of table.

Field Measured Parameters
Fort Monmouth Main Post and Charles Wood Area
2010 BEE Sampling Event

Location	Medium	Date	Time	Hardness (mg/L)	pH	Temperature ˚C	Conductivity (umho)	Salinity (ppt)	Dissolved Oxygen	
									mg/L	%
M2-SW6	Surface Water	21-Jun-10	11:15	93.5	7.67	24.41	0.52	0.25	6.08	72.8
M20-SW1	Surface Water	23-Jun-10	9:45	3533	7.66	26.81	35.75	21.67	10.68	150.9
M20-SW2	Surface Water	23-Jun-10	10:10	3640	7.67	26.68	35.63	21.65	136.20	9.6
M3-SW3	Surface Water	21-Jun-10	8:31	512	8.19	23.89	5.15	2.80	3.83	46.6
M3-SW6	Surface Water	21-Jun-10	8:50	262	7.19	23.77	2.56	1.34	5.81	70.30
M4-SW4	Surface Water	21-Jun-10	9:45	99.9	8.07	23.19	0.60	0.31	6.53	77.0
M5-SW4	Surface Water	18-Jun-10	8:45	166	8.30	21.70	1.65	0.90	6.90	80.8
M8-SW12	Surface Water	23-Jun-10	11:20	229	7.70	25.16	2.36	1.25	14.14	159.3
M8-SW3	Surface Water	17-Jun-10	16:18	2590	8.33	28.31	26.67	15.21	7.60	106.4
M8-SW7	Surface Water	23-Jun-10	11:05	719	7.94	25.58	7.38	4.02	11.07	135.7
M8-SW7	None	17-Jun-10	14:25 HT	NA	8.03	28.30	28.90	16.54	6.50	91.5
P15-SW1	Surface Water	24-Jun-10	12:33	86.6	7.15	20.62	0.63	0.34	9.12	102.1
P15-SW3	Surface Water	24-Jun-10	12:15	79.6	7.26	21.17	0.56	0.29	9.23	105.0
P27-SW1	Surface Water	25-Jun-10	15:58	85.9	6.40	21.15	0.58	0.30	8.93	100.7
P27-SW2	Surface Water	25-Jun-10	15:45	88.9	6.94	21.15	0.57	0.29	7.33	82.6
P28-SW1	Surface Water	24-Jun-10	11:54	81.7	7.36	21.87	0.62	0.32	12.01	137.3
P28-SW2	Surface Water	24-Jun-10	11:34	83.1	7.61	21.30	0.60	0.32	8.64	112.0
P43-SW2	Surface Water	22-Jun-10	9:36	93	7.16	23.58	0.54	0.27	5.76	68.3
P43-SW3	Surface Water	22-Jun-10	9:18	95.8	7.40	23.38	0.54	0.27	6.52	74.9
P49-SW2	Surface Water	23-Jun-10	8:53 HT	3325	7.55	25.44	32.62	20.13	5.19	71.9
P49-SW3	Surface Water	23-Jun-10	8:40 HT	3308	7.81	25.72	33.08	20.36	7.70	105.5
P61-SW1	Surface Water	15-Jun-10	14:01 HT	106.75	6.86	19.20	0.78	10.45	13.00	140.4
P69-SW2	Surface Water	28-Jun-10	13:30	3809	7.38	32.55	41.38	22.65	7.87	123.0

Notes:
HT = Measurements taken within one hour of high tide as listed on NOAA tide tables for Gooseneck Point (NOAA, 2010)
None = No sample collected at specified date and time
NA = Not analyzed
mg/L = milligrams per liter
umho = micromhos
ppt = parts per thousand

2010 NOAA Tide Predictions: Gooseneck Point, bridge

(Reference station: Sandy Hook, Corrections Applied: Times: High 2 hr. 18 min., Low 2 hr. 41 min., Heights: High *0.55, Low *0.55)

January - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
01/01/2010	Fri	04:14AM LST	-0.4	L	09:58AM LST	3.3	H	05:06PM LST	-0.6	L	10:34PM LST	2.7	H		
01/02/2010	Sat	05:07AM LST	-0.5	L	10:49AM LST	3.3	H	05:55PM LST	-0.6	L	11:27PM LST	2.8	H		
01/03/2010	Sun	05:59AM LST	-0.5	L	11:42AM LST	3.2	H	06:42PM LST	-0.6	L					
01/04/2010	Mon	12:22AM LST	2.8	H	06:51AM LST	-0.4	L	12:36PM LST	3.0	H	07:29PM LST	-0.5	L		
01/05/2010	Tue	01:19AM LST	2.8	H	07:45AM LST	-0.2	L	01:32PM LST	2.9	H	08:19PM LST	-0.4	L		
01/06/2010	Wed	02:14AM LST	2.8	H	08:43AM LST	-0.1	L	02:27PM LST	2.6	H	09:13PM LST	-0.2	L		
01/07/2010	Thu	03:09AM LST	2.7	H	09:49AM LST	0.1	L	03:22PM LST	2.4	H	10:12PM LST	-0.1	L		
01/08/2010	Fri	04:03AM LST	2.7	H	10:58AM LST	0.2	L	04:18PM LST	2.3	H	11:13PM LST	0.0	L		
01/09/2010	Sat	04:59AM LST	2.6	H	12:02PM LST	0.2	L	05:18PM LST	2.1	H					
01/10/2010	Sun	12:10AM LST	0.1	L	05:57AM LST	2.6	H	12:59PM LST	0.1	L	06:20PM LST	2.1	H		
01/11/2010	Mon	01:03AM LST	0.1	L	06:54AM LST	2.6	H	01:51PM LST	0.1	L	07:20PM LST	2.1	H		
01/12/2010	Tue	01:52AM LST	0.1	L	07:47AM LST	2.6	H	02:39PM LST	0.0	L	08:12PM LST	2.1	H		
01/13/2010	Wed	02:39AM LST	0.1	L	08:34AM LST	2.7	H	03:24PM LST	-0.1	L	08:58PM LST	2.3	H		
01/14/2010	Thu	03:25AM LST	0.1	L	09:16AM LST	2.8	H	04:07PM LST	-0.1	L	09:41PM LST	2.3	H		
01/15/2010	Fri	04:08AM LST	0.0	L	09:56AM LST	2.8	H	04:47PM LST	-0.2	L	10:20PM LST	2.3	H		
01/16/2010	Sat	04:50AM LST	0.0	L	10:33AM LST	2.8	H	05:24PM LST	-0.2	L	10:59PM LST	2.3	H		
01/17/2010	Sun	05:28AM LST	0.1	L	11:10AM LST	2.6	H	05:59PM LST	-0.1	L	11:36PM LST	2.3	H		
01/18/2010	Mon	06:05AM LST	0.1	L	11:46AM LST	2.5	H	06:31PM LST	-0.1	L					
01/19/2010	Tue	12:13AM LST	2.3	H	06:41AM LST	0.2	L	12:22PM LST	2.4	H	07:02PM LST	0.0	L		
01/20/2010	Wed	12:50AM LST	2.3	H	07:16AM LST	0.2	L	12:59PM LST	2.3	H	07:32PM LST	0.1	L		
01/21/2010	Thu	01:26AM LST	2.3	H	07:54AM LST	0.3	L	01:40PM LST	2.2	H	08:04PM LST	0.1	L		
01/22/2010	Fri	02:06AM LST	2.3	H	08:42AM LST	0.4	L	02:25PM LST	2.1	H	08:44PM LST	0.2	L		
01/23/2010	Sat	02:52AM LST	2.4	H	09:50AM LST	0.4	L	03:17PM LST	2.0	H	09:43PM LST	0.2	L		
01/24/2010	Sun	03:44AM LST	2.4	H	11:08AM LST	0.4	L	04:17PM LST	2.0	H	10:57PM LST	0.2	L		
01/25/2010	Mon	04:44AM LST	2.5	H	12:16PM LST	0.3	L	05:24PM LST	2.0	H					
01/26/2010	Tue	12:07AM LST	0.1	L	05:51AM LST	2.6	H	01:15PM LST	0.1	L	06:33PM LST	2.1	H		
01/27/2010	Wed	01:09AM LST	-0.1	L	06:58AM LST	2.8	H	02:11PM LST	-0.1	L	07:37PM LST	2.3	H		
01/28/2010	Thu	02:08AM LST	-0.2	L	07:59AM LST	3.0	H	03:04PM LST	-0.3	L	08:34PM LST	2.5	H		
01/29/2010	Fri	03:05AM LST	-0.4	L	08:53AM LST	3.2	H	03:56PM LST	-0.5	L	09:26PM LST	2.8	H		
01/30/2010	Sat	04:00AM LST	-0.6	L	09:44AM LST	3.3	H	04:45PM LST	-0.7	L	10:17PM LST	2.9	H		
01/31/2010	Sun	04:53AM LST	-0.6	L	10:33AM LST	3.3	H	05:32PM LST	-0.7	L	11:07PM LST	3.0	H		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

February - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
02/01/2010	Mon	05:45AM LST	-0.6	L	11:24AM LST	3.2	H	06:18PM LST	-0.7	L	11:59PM LST	3.0	H		
02/02/2010	Tue	06:35AM LST	-0.5	L	12:15PM LST	3.0	H	07:02PM LST	-0.6	L					
02/03/2010	Wed	12:53AM LST	3.0	H	07:26AM LST	-0.3	L	01:09PM LST	2.8	H	07:48PM LST	-0.4	L		
02/04/2010	Thu	01:46AM LST	2.9	H	08:20AM LST	-0.1	L	02:03PM LST	2.5	H	08:38PM LST	-0.2	L		
02/05/2010	Fri	02:39AM LST	2.8	H	09:20AM LST	0.1	L	02:57PM LST	2.3	H	09:34PM LST	0.1	L		
02/06/2010	Sat	03:33AM LST	2.6	H	10:28AM LST	0.2	L	03:53PM LST	2.1	H	10:38PM LST	0.2	L		
02/07/2010	Sun	04:28AM LST	2.5	H	11:35AM LST	0.3	L	04:52PM LST	2.0	H	11:42PM LST	0.3	L		
02/08/2010	Mon	05:26AM LST	2.4	H	12:35PM LST	0.3	L	05:55PM LST	2.0	H					
02/09/2010	Tue	12:40AM LST	0.3	L	06:27AM LST	2.4	H	01:27PM LST	0.2	L	06:57PM LST	2.0	H		
02/10/2010	Wed	01:31AM LST	0.2	L	07:23AM LST	2.5	H	02:14PM LST	0.1	L	07:51PM LST	2.1	H		
02/11/2010	Thu	02:19AM LST	0.2	L	08:12AM LST	2.6	H	02:58PM LST	0.1	L	08:37PM LST	2.3	H		
02/12/2010	Fri	03:04AM LST	0.1	L	08:54AM LST	2.6	H	03:39PM LST	-0.1	L	09:18PM LST	2.4	H		
02/13/2010	Sat	03:47AM LST	0.1	L	09:33AM LST	2.7	H	04:17PM LST	-0.1	L	09:55PM LST	2.4	H		
02/14/2010	Sun	04:28AM LST	0.0	L	10:09AM LST	2.7	H	04:54PM LST	-0.1	L	10:30PM LST	2.5	H		
02/15/2010	Mon	05:07AM LST	0.0	L	10:43AM LST	2.6	H	05:27PM LST	-0.1	L	11:03PM LST	2.5	H		
02/16/2010	Tue	05:44AM LST	0.0	L	11:17AM LST	2.6	H	05:58PM LST	-0.1	L	11:35PM LST	2.5	H		
02/17/2010	Wed	06:19AM LST	0.1	L	11:50AM LST	2.5	H	06:28PM LST	-0.1	L					
02/18/2010	Thu	12:06AM LST	2.5	H	06:53AM LST	0.1	L	12:26PM LST	2.4	H	06:56PM LST	0.1	L		
02/19/2010	Fri	12:40AM LST	2.5	H	07:29AM LST	0.2	L	01:06PM LST	2.3	H	07:27PM LST	0.1	L		
02/20/2010	Sat	01:22AM LST	2.5	H	08:11AM LST	0.3	L	01:55PM LST	2.1	H	08:06PM LST	0.2	L		
02/21/2010	Sun	02:12AM LST	2.5	H	09:12AM LST	0.4	L	02:50PM LST	2.1	H	09:02PM LST	0.3	L		
02/22/2010	Mon	03:09AM LST	2.5	H	10:35AM LST	0.4	L	03:53PM LST	2.1	H	10:25PM LST	0.3	L		
02/23/2010	Tue	04:14AM LST	2.6	H	11:50AM LST	0.3	L	05:01PM LST	2.1	H	11:46PM LST	0.2	L		
02/24/2010	Wed	05:26AM LST	2.6	H	12:53PM LST	0.1	L	06:13PM LST	2.3	H					
02/25/2010	Thu	12:53AM LST	0.0	L	06:37AM LST	2.8	H	01:49PM LST	-0.1	L	07:18PM LST	2.5	H		
02/26/2010	Fri	01:53AM LST	-0.2	L	07:40AM LST	3.0	H	02:41PM LST	-0.3	L	08:16PM LST	2.8	H		
02/27/2010	Sat	02:50AM LST	-0.4	L	08:35AM LST	3.2	H	03:32PM LST	-0.5	L	09:08PM LST	3.0	H		
02/28/2010	Sun	03:45AM LST	-0.6	L	09:26AM LST	3.2	H	04:20PM LST	-0.6	L	09:57PM LST	3.2	H		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

March - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
03/01/2010	Mon	04:38AM LST	-0.6	L	10:15AM LST	3.2	H	05:06PM LST	-0.7	L	10:45PM LST	3.2	H		
03/02/2010	Tue	05:28AM LST	-0.6	L	11:03AM LST	3.1	H	05:51PM LST	-0.6	L	11:34PM LST	3.2	H		
03/03/2010	Wed	06:17AM LST	-0.5	L	11:53AM LST	2.9	H	06:34PM LST	-0.4	L					
03/04/2010	Thu	12:24AM LST	3.1	H	07:05AM LST	-0.3	L	12:45PM LST	2.7	H	07:18PM LST	-0.2	L		
03/05/2010	Fri	01:15AM LST	3.0	H	07:55AM LST	-0.1	L	01:38PM LST	2.5	H	08:04PM LST	0.1	L		
03/06/2010	Sat	02:08AM LST	2.8	H	08:50AM LST	0.2	L	02:33PM LST	2.3	H	08:57PM LST	0.3	L		
03/07/2010	Sun	03:01AM LST	2.6	H	09:53AM LST	0.3	L	03:28PM LST	2.1	H	10:02PM LST	0.4	L		
03/08/2010	Mon	03:55AM LST	2.5	H	11:01AM LST	0.4	L	04:26PM LST	2.0	H	11:11PM LST	0.6	L		
03/09/2010	Tue	04:53AM LST	2.4	H	12:03PM LST	0.4	L	05:26PM LST	2.0	H					
03/10/2010	Wed	12:13AM LST	0.5	L	05:53AM LST	2.4	H	12:56PM LST	0.4	L	06:27PM LST	2.1	H		
03/11/2010	Thu	01:06AM LST	0.4	L	06:51AM LST	2.4	H	01:42PM LST	0.3	L	07:22PM LST	2.3	H		
03/12/2010	Fri	01:54AM LST	0.3	L	07:42AM LST	2.5	H	02:24PM LST	0.2	L	08:09PM LST	2.4	H		
03/13/2010	Sat	02:39AM LST	0.2	L	08:25AM LST	2.6	H	03:04PM LST	0.1	L	08:49PM LST	2.5	H		
03/14/2010	Sun	04:22AM LDT	0.1	L	10:05AM LDT	2.7	H	04:42PM LDT	0.0	L	10:25PM LDT	2.6	H		
03/15/2010	Mon	05:03AM LDT	0.1	L	10:41AM LDT	2.7	H	05:18PM LDT	-0.1	L	10:59PM LDT	2.7	H		
03/16/2010	Tue	05:43AM LDT	0.0	L	11:15AM LDT	2.6	H	05:53PM LDT	-0.1	L	11:30PM LDT	2.8	H		
03/17/2010	Wed	06:22AM LDT	0.0	L	11:49AM LDT	2.6	H	06:26PM LDT	0.0	L					
03/18/2010	Thu	12:00AM LDT	2.8	H	06:58AM LDT	0.0	L	12:24PM LDT	2.5	H	06:58PM LDT	0.0	L		
03/19/2010	Fri	12:31AM LDT	2.8	H	07:35AM LDT	0.1	L	01:02PM LDT	2.4	H	07:29PM LDT	0.1	L		
03/20/2010	Sat	01:07AM LDT	2.8	H	08:12AM LDT	0.2	L	01:46PM LDT	2.3	H	08:04PM LDT	0.2	L		
03/21/2010	Sun	01:53AM LDT	2.8	H	08:56AM LDT	0.3	L	02:39PM LDT	2.3	H	08:47PM LDT	0.3	L		
03/22/2010	Mon	02:48AM LDT	2.7	H	09:55AM LDT	0.4	L	03:38PM LDT	2.2	H	09:46PM LDT	0.4	L		
03/23/2010	Tue	03:51AM LDT	2.6	H	11:12AM LDT	0.4	L	04:41PM LDT	2.2	H	11:10PM LDT	0.4	L		
03/24/2010	Wed	04:57AM LDT	2.7	H	12:27PM LDT	0.3	L	05:47PM LDT	2.3	H					
03/25/2010	Thu	12:32AM LDT	0.3	L	06:06AM LDT	2.8	H	01:29PM LDT	0.1	L	06:55PM LDT	2.5	H		
03/26/2010	Fri	01:39AM LDT	0.1	L	07:16AM LDT	2.8	H	02:24PM LDT	-0.1	L	07:58PM LDT	2.7	H		
03/27/2010	Sat	02:39AM LDT	-0.1	L	08:19AM LDT	3.0	H	03:15PM LDT	-0.3	L	08:55PM LDT	3.0	H		
03/28/2010	Sun	03:35AM LDT	-0.3	L	09:15AM LDT	3.1	H	04:04PM LDT	-0.4	L	09:47PM LDT	3.2	H		
03/29/2010	Mon	04:29AM LDT	-0.4	L	10:06AM LDT	3.1	H	04:52PM LDT	-0.4	L	10:35PM LDT	3.4	H		
03/30/2010	Tue	05:21AM LDT	-0.5	L	10:54AM LDT	3.1	H	05:38PM LDT	-0.4	L	11:21PM LDT	3.4	H		
03/31/2010	Wed	06:10AM LDT	-0.5	L	11:42AM LDT	3.0	H	06:23PM LDT	-0.4	L					

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

April - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
04/01/2010	Thu	12:07AM LDT	3.4	H	06:58AM LDT	-0.4	L	12:30PM LDT	2.8	H	07:07PM LDT	-0.2	L		
04/02/2010	Fri	12:55AM LDT	3.2	H	07:44AM LDT	-0.2	L	01:21PM LDT	2.6	H	07:49PM LDT	0.0	L		
04/03/2010	Sat	01:45AM LDT	3.0	H	08:30AM LDT	0.0	L	02:15PM LDT	2.5	H	08:34PM LDT	0.2	L		
04/04/2010	Sun	02:36AM LDT	2.8	H	09:20AM LDT	0.2	L	03:09PM LDT	2.3	H	09:23PM LDT	0.4	L		
04/05/2010	Mon	03:28AM LDT	2.6	H	10:16AM LDT	0.4	L	04:03PM LDT	2.2	H	10:23PM LDT	0.7	L		
04/06/2010	Tue	04:22AM LDT	2.5	H	11:20AM LDT	0.5	L	04:57PM LDT	2.1	H	11:34PM LDT	0.7	L		
04/07/2010	Wed	05:16AM LDT	2.4	H	12:22PM LDT	0.5	L	05:53PM LDT	2.1	H					
04/08/2010	Thu	12:39AM LDT	0.7	L	06:12AM LDT	2.4	H	01:15PM LDT	0.4	L	06:50PM LDT	2.2	H		
04/09/2010	Fri	01:35AM LDT	0.6	L	07:08AM LDT	2.4	H	02:01PM LDT	0.4	L	07:44PM LDT	2.4	H		
04/10/2010	Sat	02:23AM LDT	0.4	L	08:01AM LDT	2.4	H	02:43PM LDT	0.3	L	08:32PM LDT	2.5	H		
04/11/2010	Sun	03:09AM LDT	0.3	L	08:49AM LDT	2.5	H	03:22PM LDT	0.2	L	09:13PM LDT	2.7	H		
04/12/2010	Mon	03:53AM LDT	0.2	L	09:31AM LDT	2.6	H	04:01PM LDT	0.1	L	09:50PM LDT	2.8	H		
04/13/2010	Tue	04:36AM LDT	0.1	L	10:10AM LDT	2.6	H	04:40PM LDT	0.1	L	10:24PM LDT	2.9	H		
04/14/2010	Wed	05:19AM LDT	0.0	L	10:47AM LDT	2.6	H	05:18PM LDT	0.1	L	10:57PM LDT	3.0	H		
04/15/2010	Thu	06:00AM LDT	0.0	L	11:24AM LDT	2.6	H	05:55PM LDT	0.1	L	11:30PM LDT	3.0	H		
04/16/2010	Fri	06:40AM LDT	0.0	L	12:03PM LDT	2.5	H	06:33PM LDT	0.1	L					
04/17/2010	Sat	12:06AM LDT	3.0	H	07:20AM LDT	0.0	L	12:46PM LDT	2.5	H	07:11PM LDT	0.2	L		
04/18/2010	Sun	12:48AM LDT	3.0	H	08:02AM LDT	0.1	L	01:36PM LDT	2.4	H	07:53PM LDT	0.2	L		
04/19/2010	Mon	01:39AM LDT	2.9	H	08:49AM LDT	0.2	L	02:32PM LDT	2.4	H	08:42PM LDT	0.3	L		
04/20/2010	Tue	02:38AM LDT	2.9	H	09:46AM LDT	0.3	L	03:32PM LDT	2.4	H	09:44PM LDT	0.4	L		
04/21/2010	Wed	03:41AM LDT	2.8	H	10:55AM LDT	0.3	L	04:32PM LDT	2.4	H	11:02PM LDT	0.4	L		
04/22/2010	Thu	04:44AM LDT	2.8	H	12:03PM LDT	0.2	L	05:34PM LDT	2.5	H					
04/23/2010	Fri	12:19AM LDT	0.3	L	05:48AM LDT	2.8	H	01:04PM LDT	0.1	L	06:36PM LDT	2.7	H		
04/24/2010	Sat	01:25AM LDT	0.2	L	06:53AM LDT	2.8	H	01:58PM LDT	-0.1	L	07:37PM LDT	2.9	H		
04/25/2010	Sun	02:24AM LDT	0.0	L	07:55AM LDT	2.8	H	02:48PM LDT	-0.2	L	08:33PM LDT	3.1	H		
04/26/2010	Mon	03:19AM LDT	-0.2	L	08:53AM LDT	2.9	H	03:36PM LDT	-0.2	L	09:25PM LDT	3.3	H		
04/27/2010	Tue	04:12AM LDT	-0.3	L	09:45AM LDT	2.9	H	04:24PM LDT	-0.3	L	10:12PM LDT	3.4	H		
04/28/2010	Wed	05:03AM LDT	-0.3	L	10:34AM LDT	2.9	H	05:11PM LDT	-0.2	L	10:57PM LDT	3.4	H		
04/29/2010	Thu	05:52AM LDT	-0.3	L	11:21AM LDT	2.8	H	05:57PM LDT	-0.1	L	11:42PM LDT	3.4	H		
04/30/2010	Fri	06:38AM LDT	-0.2	L	12:09PM LDT	2.7	H	06:41PM LDT	0.0	L					

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

May - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
05/01/2010	Sat	12:28AM LDT	3.2	H	07:23AM LDT	-0.1	L	12:59PM LDT	2.5	H	07:24PM LDT	0.2	L		
05/02/2010	Sun	01:16AM LDT	3.0	H	08:07AM LDT	0.1	L	01:51PM LDT	2.4	H	08:07PM LDT	0.4	L		
05/03/2010	Mon	02:06AM LDT	2.8	H	08:51AM LDT	0.2	L	02:44PM LDT	2.3	H	08:53PM LDT	0.6	L		
05/04/2010	Tue	02:56AM LDT	2.6	H	09:40AM LDT	0.4	L	03:36PM LDT	2.3	H	09:46PM LDT	0.7	L		
05/05/2010	Wed	03:46AM LDT	2.5	H	10:34AM LDT	0.5	L	04:26PM LDT	2.3	H	10:50PM LDT	0.8	L		
05/06/2010	Thu	04:36AM LDT	2.4	H	11:31AM LDT	0.6	L	05:16PM LDT	2.3	H	11:57PM LDT	0.8	L		
05/07/2010	Fri	05:27AM LDT	2.4	H	12:25PM LDT	0.5	L	06:06PM LDT	2.3	H					
05/08/2010	Sat	12:56AM LDT	0.7	L	06:19AM LDT	2.3	H	01:13PM LDT	0.4	L	06:57PM LDT	2.4	H		
05/09/2010	Sun	01:48AM LDT	0.6	L	07:13AM LDT	2.3	H	01:56PM LDT	0.3	L	07:46PM LDT	2.6	H		
05/10/2010	Mon	02:36AM LDT	0.4	L	08:05AM LDT	2.4	H	02:37PM LDT	0.3	L	08:30PM LDT	2.8	H		
05/11/2010	Tue	03:22AM LDT	0.3	L	08:53AM LDT	2.4	H	03:19PM LDT	0.2	L	09:11PM LDT	2.9	H		
05/12/2010	Wed	04:07AM LDT	0.2	L	09:37AM LDT	2.5	H	04:01PM LDT	0.2	L	09:50PM LDT	3.0	H		
05/13/2010	Thu	04:53AM LDT	0.1	L	10:19AM LDT	2.5	H	04:44PM LDT	0.1	L	10:28PM LDT	3.1	H		
05/14/2010	Fri	05:38AM LDT	0.0	L	11:01AM LDT	2.6	H	05:29PM LDT	0.1	L	11:07PM LDT	3.2	H		
05/15/2010	Sat	06:22AM LDT	-0.1	L	11:45AM LDT	2.5	H	06:13PM LDT	0.1	L	11:49PM LDT	3.2	H		
05/16/2010	Sun	07:07AM LDT	-0.1	L	12:33PM LDT	2.5	H	06:59PM LDT	0.1	L					
05/17/2010	Mon	12:37AM LDT	3.1	H	07:52AM LDT	-0.1	L	01:27PM LDT	2.5	H	07:47PM LDT	0.2	L		
05/18/2010	Tue	01:32AM LDT	3.1	H	08:40AM LDT	0.0	L	02:25PM LDT	2.5	H	08:39PM LDT	0.2	L		
05/19/2010	Wed	02:31AM LDT	3.0	H	09:34AM LDT	0.1	L	03:23PM LDT	2.6	H	09:40PM LDT	0.3	L		
05/20/2010	Thu	03:31AM LDT	2.9	H	10:34AM LDT	0.1	L	04:20PM LDT	2.7	H	10:52PM LDT	0.4	L		
05/21/2010	Fri	04:29AM LDT	2.8	H	11:37AM LDT	0.1	L	05:18PM LDT	2.8	H					
05/22/2010	Sat	12:04AM LDT	0.3	L	05:28AM LDT	2.8	H	12:36PM LDT	0.1	L	06:16PM LDT	2.9	H		
05/23/2010	Sun	01:09AM LDT	0.2	L	06:30AM LDT	2.7	H	01:30PM LDT	0.0	L	07:14PM LDT	3.0	H		
05/24/2010	Mon	02:08AM LDT	0.1	L	07:31AM LDT	2.6	H	02:20PM LDT	-0.1	L	08:10PM LDT	3.2	H		
05/25/2010	Tue	03:02AM LDT	0.0	L	08:31AM LDT	2.6	H	03:10PM LDT	-0.1	L	09:02PM LDT	3.3	H		
05/26/2010	Wed	03:55AM LDT	-0.1	L	09:25AM LDT	2.6	H	03:58PM LDT	-0.1	L	09:50PM LDT	3.3	H		
05/27/2010	Thu	04:45AM LDT	-0.1	L	10:15AM LDT	2.6	H	04:47PM LDT	0.0	L	10:36PM LDT	3.3	H		
05/28/2010	Fri	05:33AM LDT	-0.1	L	11:03AM LDT	2.6	H	05:34PM LDT	0.1	L	11:20PM LDT	3.2	H		
05/29/2010	Sat	06:19AM LDT	-0.1	L	11:50AM LDT	2.6	H	06:19PM LDT	0.2	L					
05/30/2010	Sun	12:04AM LDT	3.1	H	07:02AM LDT	0.0	L	12:37PM LDT	2.5	H	07:01PM LDT	0.3	L		
05/31/2010	Mon	12:49AM LDT	3.0	H	07:43AM LDT	0.1	L	01:26PM LDT	2.4	H	07:43PM LDT	0.4	L		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

June - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
06/01/2010	Tue	01:36AM LDT	2.8	H	08:23AM LDT	0.2	L	02:16PM LDT	2.4	H	08:25PM LDT	0.6	L		
06/02/2010	Wed	02:23AM LDT	2.6	H	09:04AM LDT	0.3	L	03:04PM LDT	2.3	H	09:10PM LDT	0.7	L		
06/03/2010	Thu	03:09AM LDT	2.5	H	09:47AM LDT	0.4	L	03:50PM LDT	2.3	H	10:04PM LDT	0.8	L		
06/04/2010	Fri	03:54AM LDT	2.4	H	10:35AM LDT	0.4	L	04:34PM LDT	2.4	H	11:07PM LDT	0.8	L		
06/05/2010	Sat	04:40AM LDT	2.4	H	11:26AM LDT	0.5	L	05:18PM LDT	2.4	H					
06/06/2010	Sun	12:11AM LDT	0.8	L	05:28AM LDT	2.3	H	12:17PM LDT	0.4	L	06:04PM LDT	2.5	H		
06/07/2010	Mon	01:08AM LDT	0.7	L	06:20AM LDT	2.3	H	01:06PM LDT	0.4	L	06:53PM LDT	2.6	H		
06/08/2010	Tue	02:00AM LDT	0.5	L	07:16AM LDT	2.3	H	01:52PM LDT	0.3	L	07:43PM LDT	2.8	H		
06/09/2010	Wed	02:49AM LDT	0.3	L	08:12AM LDT	2.3	H	02:39PM LDT	0.3	L	08:31PM LDT	2.9	H		
06/10/2010	Thu	03:38AM LDT	0.2	L	09:04AM LDT	2.4	H	03:27PM LDT	0.2	L	09:18PM LDT	3.1	H		
06/11/2010	Fri	04:27AM LDT	0.1	L	09:53AM LDT	2.5	H	04:16PM LDT	0.1	L	10:03PM LDT	3.2	H		
06/12/2010	Sat	05:16AM LDT	-0.1	L	10:40AM LDT	2.6	H	05:07PM LDT	0.1	L	10:49PM LDT	3.3	H		
06/13/2010	Sun	06:04AM LDT	-0.2	L	11:28AM LDT	2.6	H	05:58PM LDT	0.0	L	11:37PM LDT	3.3	H		
06/14/2010	Mon	06:51AM LDT	-0.2	L	12:19PM LDT	2.7	H	06:48PM LDT	-0.1	L					
06/15/2010	Tue	12:28AM LDT	3.3	H	07:37AM LDT	-0.2	L	01:14PM LDT	2.8	H	07:38PM LDT	0.0	L		
06/16/2010	Wed	01:22AM LDT	3.2	H	08:25AM LDT	-0.2	L	02:11PM LDT	2.8	H	08:32PM LDT	0.1	L		
06/17/2010	Thu	02:19AM LDT	3.1	H	09:15AM LDT	-0.1	L	03:08PM LDT	2.9	H	09:30PM LDT	0.2	L		
06/18/2010	Fri	03:16AM LDT	3.0	H	10:09AM LDT	-0.1	L	04:03PM LDT	2.9	H	10:36PM LDT	0.3	L		
06/19/2010	Sat	04:12AM LDT	2.8	H	11:07AM LDT	0.0	L	04:57PM LDT	3.0	H	11:46PM LDT	0.3	L		
06/20/2010	Sun	05:08AM LDT	2.6	H	12:07PM LDT	0.1	L	05:53PM LDT	3.0	H					
06/21/2010	Mon	12:52AM LDT	0.3	L	06:07AM LDT	2.5	H	01:03PM LDT	0.1	L	06:50PM LDT	3.0	H		
06/22/2010	Tue	01:51AM LDT	0.2	L	07:09AM LDT	2.4	H	01:56PM LDT	0.1	L	07:47PM LDT	3.1	H		
06/23/2010	Wed	02:45AM LDT	0.1	L	08:10AM LDT	2.4	H	02:47PM LDT	0.1	L	08:41PM LDT	3.1	H		
06/24/2010	Thu	03:37AM LDT	0.1	L	09:07AM LDT	2.5	H	03:37PM LDT	0.2	L	09:31PM LDT	3.1	H		
06/25/2010	Fri	04:26AM LDT	0.1	L	09:58AM LDT	2.5	H	04:25PM LDT	0.2	L	10:17PM LDT	3.1	H		
06/26/2010	Sat	05:13AM LDT	0.0	L	10:44AM LDT	2.5	H	05:13PM LDT	0.2	L	11:00PM LDT	3.1	H		
06/27/2010	Sun	05:57AM LDT	0.0	L	11:29AM LDT	2.5	H	05:57PM LDT	0.3	L	11:42PM LDT	3.0	H		
06/28/2010	Mon	06:38AM LDT	0.0	L	12:13PM LDT	2.5	H	06:39PM LDT	0.3	L					
06/29/2010	Tue	12:23AM LDT	2.9	H	07:16AM LDT	0.1	L	12:58PM LDT	2.5	H	07:19PM LDT	0.4	L		
06/30/2010	Wed	01:05AM LDT	2.8	H	07:52AM LDT	0.1	L	01:42PM LDT	2.4	H	07:58PM LDT	0.5	L		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

July - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
07/01/2010	Thu	01:47AM LDT	2.7	H	08:27AM LDT	0.2	L	02:26PM LDT	2.4	H	08:38PM LDT	0.6	L		
07/02/2010	Fri	02:29AM LDT	2.5	H	09:01AM LDT	0.3	L	03:07PM LDT	2.4	H	09:22PM LDT	0.7	L		
07/03/2010	Sat	03:11AM LDT	2.4	H	09:38AM LDT	0.4	L	03:47PM LDT	2.5	H	10:16PM LDT	0.8	L		
07/04/2010	Sun	03:54AM LDT	2.3	H	10:22AM LDT	0.4	L	04:28PM LDT	2.5	H	11:21PM LDT	0.8	L		
07/05/2010	Mon	04:40AM LDT	2.3	H	11:14AM LDT	0.5	L	05:11PM LDT	2.6	H					
07/06/2010	Tue	12:26AM LDT	0.7	L	05:32AM LDT	2.2	H	12:13PM LDT	0.5	L	06:00PM LDT	2.6	H		
07/07/2010	Wed	01:24AM LDT	0.6	L	06:31AM LDT	2.2	H	01:10PM LDT	0.4	L	06:56PM LDT	2.8	H		
07/08/2010	Thu	02:18AM LDT	0.4	L	07:34AM LDT	2.3	H	02:05PM LDT	0.3	L	07:55PM LDT	2.9	H		
07/09/2010	Fri	03:11AM LDT	0.2	L	08:34AM LDT	2.4	H	02:59PM LDT	0.2	L	08:51PM LDT	3.1	H		
07/10/2010	Sat	04:02AM LDT	0.1	L	09:29AM LDT	2.5	H	03:54PM LDT	0.1	L	09:43PM LDT	3.3	H		
07/11/2010	Sun	04:53AM LDT	-0.1	L	10:20AM LDT	2.7	H	04:49PM LDT	-0.1	L	10:33PM LDT	3.4	H		
07/12/2010	Mon	05:43AM LDT	-0.2	L	11:10AM LDT	2.8	H	05:42PM LDT	-0.2	L	11:22PM LDT	3.4	H		
07/13/2010	Tue	06:31AM LDT	-0.3	L	12:02PM LDT	2.9	H	06:35PM LDT	-0.2	L					
07/14/2010	Wed	12:13AM LDT	3.4	H	07:17AM LDT	-0.4	L	12:55PM LDT	3.0	H	07:26PM LDT	-0.2	L		
07/15/2010	Thu	01:06AM LDT	3.3	H	08:03AM LDT	-0.3	L	01:50PM LDT	3.0	H	08:19PM LDT	-0.1	L		
07/16/2010	Fri	02:01AM LDT	3.1	H	08:50AM LDT	-0.3	L	02:46PM LDT	3.1	H	09:15PM LDT	0.1	L		
07/17/2010	Sat	02:57AM LDT	2.9	H	09:40AM LDT	-0.1	L	03:40PM LDT	3.1	H	10:17PM LDT	0.2	L		
07/18/2010	Sun	03:52AM LDT	2.8	H	10:36AM LDT	0.1	L	04:34PM LDT	3.0	H	11:25PM LDT	0.3	L		
07/19/2010	Mon	04:48AM LDT	2.5	H	11:38AM LDT	0.2	L	05:29PM LDT	3.0	H					
07/20/2010	Tue	12:32AM LDT	0.3	L	05:47AM LDT	2.4	H	12:38PM LDT	0.3	L	06:26PM LDT	3.0	H		
07/21/2010	Wed	01:33AM LDT	0.3	L	06:49AM LDT	2.3	H	01:35PM LDT	0.3	L	07:25PM LDT	2.9	H		
07/22/2010	Thu	02:27AM LDT	0.3	L	07:52AM LDT	2.3	H	02:28PM LDT	0.3	L	08:21PM LDT	3.0	H		
07/23/2010	Fri	03:18AM LDT	0.2	L	08:50AM LDT	2.4	H	03:18PM LDT	0.3	L	09:12PM LDT	3.0	H		
07/24/2010	Sat	04:05AM LDT	0.2	L	09:40AM LDT	2.5	H	04:06PM LDT	0.3	L	09:57PM LDT	3.0	H		
07/25/2010	Sun	04:50AM LDT	0.1	L	10:24AM LDT	2.5	H	04:52PM LDT	0.3	L	10:39PM LDT	3.0	H		
07/26/2010	Mon	05:31AM LDT	0.1	L	11:06AM LDT	2.6	H	05:35PM LDT	0.3	L	11:18PM LDT	3.0	H		
07/27/2010	Tue	06:09AM LDT	0.1	L	11:46AM LDT	2.6	H	06:16PM LDT	0.3	L	11:56PM LDT	2.9	H		
07/28/2010	Wed	06:45AM LDT	0.1	L	12:25PM LDT	2.6	H	06:54PM LDT	0.3	L					
07/29/2010	Thu	12:33AM LDT	2.8	H	07:18AM LDT	0.1	L	01:03PM LDT	2.6	H	07:32PM LDT	0.4	L		
07/30/2010	Fri	01:11AM LDT	2.7	H	07:50AM LDT	0.2	L	01:41PM LDT	2.5	H	08:08PM LDT	0.5	L		
07/31/2010	Sat	01:49AM LDT	2.5	H	08:19AM LDT	0.3	L	02:18PM LDT	2.5	H	08:46PM LDT	0.6	L		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

August - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
08/01/2010	Sun	02:29AM LDT	2.4	H	08:50AM LDT	0.4	L	02:56PM LDT	2.6	H	09:30PM LDT	0.7	L			
08/02/2010	Mon	03:12AM LDT	2.3	H	09:25AM LDT	0.4	L	03:37PM LDT	2.6	H	10:29PM LDT	0.7	L			
08/03/2010	Tue	04:00AM LDT	2.3	H	10:14AM LDT	0.5	L	04:23PM LDT	2.6	H	11:43PM LDT	0.7	L			
08/04/2010	Wed	04:54AM LDT	2.2	H	11:23AM LDT	0.6	L	05:17PM LDT	2.7	H						
08/05/2010	Thu	12:51AM LDT	0.6	L	05:56AM LDT	2.2	H	12:36PM LDT	0.5	L	06:19PM LDT	2.8	H			
08/06/2010	Fri	01:51AM LDT	0.4	L	07:03AM LDT	2.3	H	01:40PM LDT	0.3	L	07:25PM LDT	3.0	H			
08/07/2010	Sat	02:45AM LDT	0.2	L	08:09AM LDT	2.4	H	02:39PM LDT	0.2	L	08:28PM LDT	3.1	H			
08/08/2010	Sun	03:38AM LDT	0.1	L	09:07AM LDT	2.6	H	03:36PM LDT	0.0	L	09:24PM LDT	3.3	H			
08/09/2010	Mon	04:29AM LDT	-0.2	L	10:00AM LDT	2.9	H	04:32PM LDT	-0.2	L	10:15PM LDT	3.5	H			
08/10/2010	Tue	05:18AM LDT	-0.3	L	10:50AM LDT	3.1	H	05:26PM LDT	-0.3	L	11:05PM LDT	3.5	H			
08/11/2010	Wed	06:05AM LDT	-0.4	L	11:40AM LDT	3.2	H	06:19PM LDT	-0.3	L	11:55PM LDT	3.4	H			
08/12/2010	Thu	06:51AM LDT	-0.4	L	12:31PM LDT	3.3	H	07:10PM LDT	-0.3	L						
08/13/2010	Fri	12:46AM LDT	3.3	H	07:36AM LDT	-0.4	L	01:25PM LDT	3.3	H	08:02PM LDT	-0.2	L			
08/14/2010	Sat	01:40AM LDT	3.1	H	08:22AM LDT	-0.2	L	02:19PM LDT	3.2	H	08:55PM LDT	0.0	L			
08/15/2010	Sun	02:36AM LDT	2.9	H	09:11AM LDT	-0.1	L	03:14PM LDT	3.1	H	09:54PM LDT	0.2	L			
08/16/2010	Mon	03:32AM LDT	2.6	H	10:06AM LDT	0.2	L	04:08PM LDT	3.0	H	11:01PM LDT	0.4	L			
08/17/2010	Tue	04:29AM LDT	2.5	H	11:09AM LDT	0.4	L	05:03PM LDT	2.9	H						
08/18/2010	Wed	12:09AM LDT	0.4	L	05:28AM LDT	2.4	H	12:15PM LDT	0.5	L	06:01PM LDT	2.8	H			
08/19/2010	Thu	01:12AM LDT	0.4	L	06:30AM LDT	2.3	H	01:16PM LDT	0.5	L	07:01PM LDT	2.8	H			
08/20/2010	Fri	02:06AM LDT	0.4	L	07:32AM LDT	2.3	H	02:10PM LDT	0.4	L	07:58PM LDT	2.8	H			
08/21/2010	Sat	02:54AM LDT	0.3	L	08:29AM LDT	2.4	H	02:59PM LDT	0.4	L	08:50PM LDT	2.9	H			
08/22/2010	Sun	03:39AM LDT	0.2	L	09:18AM LDT	2.5	H	03:45PM LDT	0.3	L	09:34PM LDT	2.9	H			
08/23/2010	Mon	04:20AM LDT	0.2	L	10:00AM LDT	2.6	H	04:29PM LDT	0.3	L	10:14PM LDT	3.0	H			
08/24/2010	Tue	04:59AM LDT	0.1	L	10:39AM LDT	2.7	H	05:11PM LDT	0.3	L	10:51PM LDT	3.0	H			
08/25/2010	Wed	05:36AM LDT	0.1	L	11:15AM LDT	2.8	H	05:51PM LDT	0.3	L	11:27PM LDT	2.9	H			
08/26/2010	Thu	06:10AM LDT	0.1	L	11:50AM LDT	2.8	H	06:30PM LDT	0.3	L						
08/27/2010	Fri	12:02AM LDT	2.8	H	06:43AM LDT	0.2	L	12:22PM LDT	2.8	H	07:06PM LDT	0.3	L			
08/28/2010	Sat	12:36AM LDT	2.6	H	07:13AM LDT	0.2	L	12:54PM LDT	2.8	H	07:41PM LDT	0.4	L			
08/29/2010	Sun	01:12AM LDT	2.5	H	07:42AM LDT	0.3	L	01:27PM LDT	2.7	H	08:17PM LDT	0.5	L			
08/30/2010	Mon	01:51AM LDT	2.4	H	08:11AM LDT	0.4	L	02:05PM LDT	2.7	H	08:57PM LDT	0.6	L			
08/31/2010	Tue	02:37AM LDT	2.3	H	08:46AM LDT	0.4	L	02:52PM LDT	2.7	H	09:50PM LDT	0.7	L			

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

September - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
09/01/2010	Wed	03:30AM LDT	2.3	H	09:34AM LDT	0.6	L	03:46PM LDT	2.7	H	11:06PM LDT	0.7	L		
09/02/2010	Thu	04:29AM LDT	2.2	H	10:48AM LDT	0.6	L	04:47PM LDT	2.8	H					
09/03/2010	Fri	12:22AM LDT	0.6	L	05:33AM LDT	2.3	H	12:12PM LDT	0.6	L	05:53PM LDT	2.8	H		
09/04/2010	Sat	01:25AM LDT	0.4	L	06:41AM LDT	2.4	H	01:22PM LDT	0.3	L	07:02PM LDT	3.0	H		
09/05/2010	Sun	02:20AM LDT	0.2	L	07:47AM LDT	2.6	H	02:23PM LDT	0.2	L	08:06PM LDT	3.1	H		
09/06/2010	Mon	03:12AM LDT	0.0	L	08:46AM LDT	2.9	H	03:20PM LDT	-0.1	L	09:03PM LDT	3.3	H		
09/07/2010	Tue	04:02AM LDT	-0.2	L	09:39AM LDT	3.1	H	04:15PM LDT	-0.2	L	09:55PM LDT	3.4	H		
09/08/2010	Wed	04:50AM LDT	-0.4	L	10:28AM LDT	3.4	H	05:09PM LDT	-0.3	L	10:45PM LDT	3.4	H		
09/09/2010	Thu	05:37AM LDT	-0.4	L	11:17AM LDT	3.5	H	06:01PM LDT	-0.4	L	11:34PM LDT	3.4	H		
09/10/2010	Fri	06:23AM LDT	-0.4	L	12:06PM LDT	3.5	H	06:52PM LDT	-0.3	L					
09/11/2010	Sat	12:24AM LDT	3.2	H	07:09AM LDT	-0.3	L	12:57PM LDT	3.4	H	07:42PM LDT	-0.2	L		
09/12/2010	Sun	01:17AM LDT	3.0	H	07:54AM LDT	-0.1	L	01:50PM LDT	3.3	H	08:34PM LDT	0.0	L		
09/13/2010	Mon	02:14AM LDT	2.8	H	08:42AM LDT	0.1	L	02:45PM LDT	3.1	H	09:30PM LDT	0.2	L		
09/14/2010	Tue	03:11AM LDT	2.5	H	09:36AM LDT	0.3	L	03:41PM LDT	3.0	H	10:33PM LDT	0.4	L		
09/15/2010	Wed	04:09AM LDT	2.4	H	10:39AM LDT	0.6	L	04:37PM LDT	2.8	H	11:41PM LDT	0.6	L		
09/16/2010	Thu	05:07AM LDT	2.3	H	11:50AM LDT	0.7	L	05:34PM LDT	2.7	H					
09/17/2010	Fri	12:45AM LDT	0.6	L	06:07AM LDT	2.3	H	12:54PM LDT	0.7	L	06:32PM LDT	2.6	H		
09/18/2010	Sat	01:38AM LDT	0.4	L	07:07AM LDT	2.4	H	01:48PM LDT	0.6	L	07:29PM LDT	2.7	H		
09/19/2010	Sun	02:24AM LDT	0.4	L	08:02AM LDT	2.4	H	02:36PM LDT	0.5	L	08:20PM LDT	2.8	H		
09/20/2010	Mon	03:05AM LDT	0.3	L	08:50AM LDT	2.6	H	03:20PM LDT	0.4	L	09:05PM LDT	2.8	H		
09/21/2010	Tue	03:44AM LDT	0.2	L	09:31AM LDT	2.7	H	04:03PM LDT	0.3	L	09:45PM LDT	2.9	H		
09/22/2010	Wed	04:22AM LDT	0.2	L	10:08AM LDT	2.8	H	04:45PM LDT	0.2	L	10:22PM LDT	2.9	H		
09/23/2010	Thu	04:58AM LDT	0.1	L	10:43AM LDT	2.9	H	05:26PM LDT	0.2	L	10:58PM LDT	2.8	H		
09/24/2010	Fri	05:34AM LDT	0.1	L	11:14AM LDT	2.9	H	06:05PM LDT	0.2	L	11:32PM LDT	2.7	H		
09/25/2010	Sat	06:07AM LDT	0.2	L	11:44AM LDT	2.9	H	06:43PM LDT	0.2	L					
09/26/2010	Sun	12:06AM LDT	2.6	H	06:40AM LDT	0.2	L	12:14PM LDT	2.9	H	07:19PM LDT	0.3	L		
09/27/2010	Mon	12:42AM LDT	2.5	H	07:11AM LDT	0.3	L	12:47PM LDT	2.9	H	07:56PM LDT	0.4	L		
09/28/2010	Tue	01:24AM LDT	2.4	H	07:44AM LDT	0.4	L	01:29PM LDT	2.8	H	08:37PM LDT	0.5	L		
09/29/2010	Wed	02:14AM LDT	2.3	H	08:23AM LDT	0.4	L	02:21PM LDT	2.8	H	09:30PM LDT	0.6	L		
09/30/2010	Thu	03:13AM LDT	2.3	H	09:15AM LDT	0.6	L	03:23PM LDT	2.8	H	10:41PM LDT	0.6	L		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

October - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
10/01/2010	Fri	04:15AM LDT	2.3	H	10:31AM LDT	0.6	L	04:27PM LDT	2.8	H	11:57PM LDT	0.5	L		
10/02/2010	Sat	05:18AM LDT	2.4	H	11:57AM LDT	0.5	L	05:33PM LDT	2.8	H					
10/03/2010	Sun	01:00AM LDT	0.3	L	06:23AM LDT	2.5	H	01:07PM LDT	0.3	L	06:40PM LDT	2.9	H		
10/04/2010	Mon	01:55AM LDT	0.1	L	07:26AM LDT	2.8	H	02:08PM LDT	0.1	L	07:44PM LDT	3.0	H		
10/05/2010	Tue	02:45AM LDT	-0.1	L	08:24AM LDT	3.0	H	03:04PM LDT	-0.1	L	08:42PM LDT	3.2	H		
10/06/2010	Wed	03:34AM LDT	-0.3	L	09:17AM LDT	3.3	H	03:59PM LDT	-0.3	L	09:34PM LDT	3.2	H		
10/07/2010	Thu	04:22AM LDT	-0.4	L	10:06AM LDT	3.5	H	04:52PM LDT	-0.3	L	10:24PM LDT	3.2	H		
10/08/2010	Fri	05:09AM LDT	-0.4	L	10:53AM LDT	3.6	H	05:44PM LDT	-0.4	L	11:13PM LDT	3.1	H		
10/09/2010	Sat	05:56AM LDT	-0.3	L	11:41AM LDT	3.5	H	06:34PM LDT	-0.3	L					
10/10/2010	Sun	12:03AM LDT	3.0	H	06:42AM LDT	-0.2	L	12:30PM LDT	3.4	H	07:23PM LDT	-0.2	L		
10/11/2010	Mon	12:55AM LDT	2.8	H	07:28AM LDT	0.0	L	01:22PM LDT	3.2	H	08:12PM LDT	0.0	L		
10/12/2010	Tue	01:51AM LDT	2.6	H	08:15AM LDT	0.2	L	02:16PM LDT	3.0	H	09:03PM LDT	0.2	L		
10/13/2010	Wed	02:49AM LDT	2.4	H	09:06AM LDT	0.4	L	03:12PM LDT	2.8	H	10:01PM LDT	0.4	L		
10/14/2010	Thu	03:46AM LDT	2.3	H	10:07AM LDT	0.6	L	04:07PM LDT	2.7	H	11:05PM LDT	0.5	L		
10/15/2010	Fri	04:43AM LDT	2.3	H	11:16AM LDT	0.7	L	05:02PM LDT	2.6	H					
10/16/2010	Sat	12:07AM LDT	0.6	L	05:38AM LDT	2.3	H	12:23PM LDT	0.7	L	05:56PM LDT	2.5	H		
10/17/2010	Sun	01:00AM LDT	0.5	L	06:33AM LDT	2.3	H	01:19PM LDT	0.6	L	06:50PM LDT	2.5	H		
10/18/2010	Mon	01:46AM LDT	0.4	L	07:26AM LDT	2.4	H	02:07PM LDT	0.5	L	07:42PM LDT	2.5	H		
10/19/2010	Tue	02:26AM LDT	0.3	L	08:14AM LDT	2.6	H	02:52PM LDT	0.4	L	08:29PM LDT	2.6	H		
10/20/2010	Wed	03:05AM LDT	0.2	L	08:57AM LDT	2.8	H	03:35PM LDT	0.3	L	09:12PM LDT	2.6	H		
10/21/2010	Thu	03:43AM LDT	0.2	L	09:34AM LDT	2.9	H	04:18PM LDT	0.2	L	09:52PM LDT	2.6	H		
10/22/2010	Fri	04:20AM LDT	0.1	L	10:09AM LDT	3.0	H	05:00PM LDT	0.2	L	10:29PM LDT	2.6	H		
10/23/2010	Sat	04:58AM LDT	0.1	L	10:41AM LDT	3.0	H	05:41PM LDT	0.1	L	11:06PM LDT	2.6	H		
10/24/2010	Sun	05:35AM LDT	0.2	L	11:13AM LDT	3.0	H	06:21PM LDT	0.1	L	11:42PM LDT	2.5	H		
10/25/2010	Mon	06:12AM LDT	0.2	L	11:46AM LDT	3.0	H	07:01PM LDT	0.2	L					
10/26/2010	Tue	12:22AM LDT	2.4	H	06:49AM LDT	0.2	L	12:23PM LDT	2.9	H	07:41PM LDT	0.2	L		
10/27/2010	Wed	01:08AM LDT	2.4	H	07:29AM LDT	0.3	L	01:10PM LDT	2.9	H	08:25PM LDT	0.3	L		
10/28/2010	Thu	02:02AM LDT	2.3	H	08:13AM LDT	0.3	L	02:06PM LDT	2.8	H	09:17PM LDT	0.3	L		
10/29/2010	Fri	03:02AM LDT	2.3	H	09:09AM LDT	0.4	L	03:09PM LDT	2.8	H	10:21PM LDT	0.4	L		
10/30/2010	Sat	04:03AM LDT	2.4	H	10:22AM LDT	0.5	L	04:12PM LDT	2.8	H	11:30PM LDT	0.3	L		
10/31/2010	Sun	05:03AM LDT	2.5	H	11:42AM LDT	0.4	L	05:15PM LDT	2.8	H					

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

November - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
11/01/2010	Mon	12:33AM LDT	0.2	L	06:04AM LDT	2.6	H	12:52PM LDT	0.3	L	06:18PM LDT	2.8	H		
11/02/2010	Tue	01:27AM LDT	0.0	L	07:04AM LDT	2.9	H	01:53PM LDT	0.1	L	07:20PM LDT	2.8	H		
11/03/2010	Wed	02:18AM LDT	-0.2	L	08:02AM LDT	3.1	H	02:49PM LDT	-0.1	L	08:20PM LDT	2.9	H		
11/04/2010	Thu	03:07AM LDT	-0.3	L	08:55AM LDT	3.3	H	03:43PM LDT	-0.3	L	09:14PM LDT	2.9	H		
11/05/2010	Fri	03:55AM LDT	-0.3	L	09:45AM LDT	3.5	H	04:35PM LDT	-0.3	L	10:05PM LDT	2.9	H		
11/06/2010	Sat	04:44AM LDT	-0.3	L	10:32AM LDT	3.5	H	05:26PM LDT	-0.3	L	10:55PM LDT	2.9	H		
11/07/2010	Sun	04:32AM LST	-0.3	L	10:19AM LST	3.4	H	05:16PM LST	-0.3	L	10:44PM LST	2.8	H		
11/08/2010	Mon	05:19AM LST	-0.1	L	11:06AM LST	3.3	H	06:03PM LST	-0.2	L	11:35PM LST	2.6	H		
11/09/2010	Tue	06:05AM LST	0.0	L	11:55AM LST	3.1	H	06:49PM LST	-0.1	L					
11/10/2010	Wed	12:28AM LST	2.5	H	06:51AM LST	0.2	L	12:47PM LST	2.9	H	07:36PM LST	0.1	L		
11/11/2010	Thu	01:24AM LST	2.4	H	07:38AM LST	0.4	L	01:41PM LST	2.7	H	08:25PM LST	0.3	L		
11/12/2010	Fri	02:18AM LST	2.3	H	08:31AM LST	0.6	L	02:33PM LST	2.5	H	09:19PM LST	0.4	L		
11/13/2010	Sat	03:11AM LST	2.2	H	09:33AM LST	0.7	L	03:23PM LST	2.4	H	10:17PM LST	0.4	L		
11/14/2010	Sun	04:02AM LST	2.3	H	10:40AM LST	0.7	L	04:13PM LST	2.4	H	11:11PM LST	0.4	L		
11/15/2010	Mon	04:52AM LST	2.3	H	11:41AM LST	0.7	L	05:04PM LST	2.3	H	11:59PM LST	0.4	L		
11/16/2010	Tue	05:42AM LST	2.4	H	12:33PM LST	0.5	L	05:57PM LST	2.3	H					
11/17/2010	Wed	12:42AM LST	0.3	L	06:31AM LST	2.5	H	01:20PM LST	0.4	L	06:48PM LST	2.3	H		
11/18/2010	Thu	01:23AM LST	0.2	L	07:16AM LST	2.6	H	02:06PM LST	0.3	L	07:37PM LST	2.4	H		
11/19/2010	Fri	02:03AM LST	0.2	L	07:58AM LST	2.8	H	02:50PM LST	0.2	L	08:21PM LST	2.4	H		
11/20/2010	Sat	02:44AM LST	0.1	L	08:36AM LST	2.9	H	03:35PM LST	0.1	L	09:02PM LST	2.4	H		
11/21/2010	Sun	03:26AM LST	0.1	L	09:13AM LST	3.0	H	04:19PM LST	0.0	L	09:42PM LST	2.4	H		
11/22/2010	Mon	04:08AM LST	0.1	L	09:49AM LST	3.0	H	05:02PM LST	-0.1	L	10:23PM LST	2.4	H		
11/23/2010	Tue	04:52AM LST	0.1	L	10:28AM LST	3.0	H	05:45PM LST	-0.1	L	11:07PM LST	2.4	H		
11/24/2010	Wed	05:35AM LST	0.1	L	11:11AM LST	3.0	H	06:28PM LST	-0.1	L	11:56PM LST	2.4	H		
11/25/2010	Thu	06:20AM LST	0.1	L	12:01PM LST	2.9	H	07:13PM LST	0.0	L					
11/26/2010	Fri	12:51AM LST	2.4	H	07:08AM LST	0.1	L	12:57PM LST	2.9	H	08:02PM LST	0.0	L		
11/27/2010	Sat	01:50AM LST	2.4	H	08:04AM LST	0.2	L	01:57PM LST	2.8	H	08:58PM LST	0.1	L		
11/28/2010	Sun	02:48AM LST	2.5	H	09:11AM LST	0.3	L	02:56PM LST	2.7	H	10:00PM LST	0.1	L		
11/29/2010	Mon	03:45AM LST	2.6	H	10:26AM LST	0.3	L	03:55PM LST	2.6	H	11:02PM LST	0.0	L		
11/30/2010	Tue	04:43AM LST	2.7	H	11:36AM LST	0.2	L	04:56PM LST	2.6	H					

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

December - Gooseneck Point, bridge

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
12/01/2010	Wed	12:00AM	LST	-0.1	L	05:42AM	LST	2.9	H	12:38PM	LST	0.0	L	05:58PM	LST	2.5	H
12/02/2010	Thu	12:52AM	LST	-0.2	L	06:40AM	LST	3.0	H	01:34PM	LST	-0.1	L	07:00PM	LST	2.5	H
12/03/2010	Fri	01:43AM	LST	-0.2	L	07:35AM	LST	3.1	H	02:28PM	LST	-0.2	L	07:57PM	LST	2.6	H
12/04/2010	Sat	02:33AM	LST	-0.3	L	08:26AM	LST	3.2	H	03:20PM	LST	-0.3	L	08:50PM	LST	2.6	H
12/05/2010	Sun	03:23AM	LST	-0.2	L	09:14AM	LST	3.2	H	04:10PM	LST	-0.3	L	09:39PM	LST	2.6	H
12/06/2010	Mon	04:12AM	LST	-0.2	L	10:00AM	LST	3.2	H	04:58PM	LST	-0.3	L	10:27PM	LST	2.5	H
12/07/2010	Tue	04:59AM	LST	-0.1	L	10:45AM	LST	3.1	H	05:43PM	LST	-0.2	L	11:14PM	LST	2.5	H
12/08/2010	Wed	05:44AM	LST	0.0	L	11:31AM	LST	2.9	H	06:26PM	LST	-0.2	L				
12/09/2010	Thu	12:04AM	LST	2.4	H	06:27AM	LST	0.1	L	12:18PM	LST	2.8	H	07:07PM	LST	-0.1	L
12/10/2010	Fri	12:54AM	LST	2.3	H	07:10AM	LST	0.3	L	01:06PM	LST	2.6	H	07:48PM	LST	0.1	L
12/11/2010	Sat	01:44AM	LST	2.2	H	07:55AM	LST	0.4	L	01:54PM	LST	2.5	H	08:31PM	LST	0.2	L
12/12/2010	Sun	02:32AM	LST	2.2	H	08:46AM	LST	0.6	L	02:41PM	LST	2.3	H	09:17PM	LST	0.3	L
12/13/2010	Mon	03:18AM	LST	2.2	H	09:47AM	LST	0.6	L	03:27PM	LST	2.2	H	10:09PM	LST	0.3	L
12/14/2010	Tue	04:04AM	LST	2.2	H	10:53AM	LST	0.6	L	04:15PM	LST	2.1	H	11:02PM	LST	0.3	L
12/15/2010	Wed	04:51AM	LST	2.3	H	11:53AM	LST	0.6	L	05:07PM	LST	2.0	H	11:52PM	LST	0.3	L
12/16/2010	Thu	05:40AM	LST	2.4	H	12:45PM	LST	0.4	L	06:02PM	LST	2.0	H				
12/17/2010	Fri	12:39AM	LST	0.2	L	06:30AM	LST	2.5	H	01:34PM	LST	0.3	L	06:58PM	LST	2.1	H
12/18/2010	Sat	01:25AM	LST	0.2	L	07:19AM	LST	2.6	H	02:22PM	LST	0.1	L	07:49PM	LST	2.1	H
12/19/2010	Sun	02:12AM	LST	0.1	L	08:05AM	LST	2.8	H	03:09PM	LST	0.0	L	08:37PM	LST	2.3	H
12/20/2010	Mon	02:59AM	LST	0.0	L	08:48AM	LST	2.9	H	03:56PM	LST	-0.1	L	09:21PM	LST	2.4	H
12/21/2010	Tue	03:47AM	LST	-0.1	L	09:31AM	LST	3.0	H	04:42PM	LST	-0.2	L	10:06PM	LST	2.4	H
12/22/2010	Wed	04:35AM	LST	-0.2	L	10:15AM	LST	3.1	H	05:27PM	LST	-0.3	L	10:52PM	LST	2.5	H
12/23/2010	Thu	05:23AM	LST	-0.2	L	11:01AM	LST	3.1	H	06:12PM	LST	-0.3	L	11:42PM	LST	2.5	H
12/24/2010	Fri	06:11AM	LST	-0.2	L	11:51AM	LST	3.0	H	06:56PM	LST	-0.3	L				
12/25/2010	Sat	12:36AM	LST	2.5	H	07:00AM	LST	-0.2	L	12:45PM	LST	2.9	H	07:42PM	LST	-0.3	L
12/26/2010	Sun	01:32AM	LST	2.6	H	07:54AM	LST	-0.1	L	01:41PM	LST	2.8	H	08:33PM	LST	-0.2	L
12/27/2010	Mon	02:28AM	LST	2.6	H	08:56AM	LST	0.1	L	02:38PM	LST	2.6	H	09:29PM	LST	-0.2	L
12/28/2010	Tue	03:23AM	LST	2.7	H	10:07AM	LST	0.1	L	03:35PM	LST	2.5	H	10:31PM	LST	-0.1	L
12/29/2010	Wed	04:20AM	LST	2.8	H	11:17AM	LST	0.1	L	04:35PM	LST	2.4	H	11:32PM	LST	-0.1	L
12/30/2010	Thu	05:18AM	LST	2.8	H	12:21PM	LST	0.1	L	05:38PM	LST	2.3	H				
12/31/2010	Fri	12:30AM	LST	-0.1	L	06:18AM	LST	2.9	H	01:19PM	LST	-0.1	L	06:42PM	LST	2.3	H

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

Soil and Sediment Sample Descriptions
Fort Monmouth Main Post and Charles Wood Area
2010 BEE Sampling Event

Sample ID	Description
CW3-SD1	Reddish brown organic silt
CW3-SD2	Reddish brown organic silt
CW3-SD3	Gray coarse sand, medium sand and gravel
CW3-SD4	Dark gray-light gray medium to coarse sand and gravel
CW3-SD5	Brown fine sand and silt
CW3-SD6	Gray medium sand grading to dark brown silt, some organic matter
CW3-SD7	Gray sand and silt, dark brown silt
CW3-SD8	Gray medium to coarse sand and gravel - grading into dark brown silt - organic matter
CW6-SD1	Dark brown organic silt and roots
CW6-SD2	Dark brown organic silt and roots
CW6-SD3	Dark brown organic silt and roots
CW6-SD4	Dark brown organic silt, little roots, leaf matter
CW6-SD6	Red to fine reddish brown sand and silt
CW6-SS1	Reddish brown organic and fine sand, roots
CW6-SS2	Brown organic and fine sand, some roots and gravel
CW6-SS3	Reddish brown organic and fine sand, little roots
CW6-SS4	Brown organic silt, lots of roots
CWA-SD1	Dark gray to brown, medium to fine sand and silt, some organic matter, some gravel
M14-SD10	Dark brown, organic silt and fine sand, trace olive-green silt and clay
M14-SD11	Borwn, organic silt, trace fine sand with roots and peat
M14-SD12	Gray organic silt, some roots
M14-SD13	Light brown medium-fine sand and silt, trace gravel
M14-SD14	Gray, medium-coarse sand, little silt and fine sand, trace gravel, some organic detritus
M14-SD2	Dark gray, medium to coarse sand
M14-SD4	Dark gray, medium to coarse sand - little gravel, little silt
M14-SD5	Dark gray, medium to coarse sand, little brown and light gray sand
M14-SD6	Dark gray, medium to coarse sand and gravel, some fines
M14-SD7	Gray medium to coarse sand and gravel, some fine sand.
M14-SD8	Brown, medium to fine sand, little coarse sand and gravel, little silt
M14-SD9	Sand and gravel, coarse, brown
M15-SD1	Dark gray-orange silt, medium to fine sand with little peat
M15-SD2	Dark gray-orange silt, medium to fine sand
M15-SD3	Dark gray silt and medium to fine sand, trace amount white clay
M15-SD4	Dark gray silt and medium to fine sand, some clay
M16-SD1	Top 2" dark brown silt-sand, grades into medium yellow fine to medium sand
M16-SD2	Dark gray silt and very fine sand
M16-SD3	Dark gray silt and very fine sand
M18-SD1	Organic muck
M18-SD2	Dark brown medium sand and gravel
M18-SD3	Organic muck, glauconitic clay, some gravel and medium-coarse clay
M18-SD4	Glauconitic sand and yellow fine sand
M18-SD4	Dark olive-green glauconitic sand, trace gravel
M18-SD5	Dark gray, medium to fine glauconitic sand, little gravel
M20-SD1	Dark gray, fine sand and silt, some peat, trace gravel
M20-SD2	Dark gray, fine sand and silt, some peat, trace gravel
M2-SD1	Dark gray medium to coarse sand and gravel, little fine sand and silt
M2-SD10	Dark brown, medium to coarse sand, grading to dark brown silt and fine sand with little clay
M2-SD11	Dark brown medium to fine sand and silt, some roots
M2-SD12	Dark gray silt and clay, little gravel and medium-coarse sand
M2-SD13	Brown medium-fine sand and silt, roots and branches
M2-SD14	Dark brown, medium to fine sand and silt, some woody matter

Soil and Sediment Sample Descriptions
Fort Monmouth Main Post and Charles Wood Area
2010 BEE Sampling Event

Sample ID	Description
M2-SD3	Dark brown medium-coarse sand, little fine sand and silt, some gravel and organic matter
M2-SD4	Dark gray to light brown, medium to fine sand, little coarse sand and gravel
M2-SD5	Brown, medium to coarse sand and gravel, gray fine sand and silt
M2-SD6	Dark gray to reddish brown, medium to coarse sand and gravel, some fine sand and silt
M2-SD7	Brown, medium to coarse sand and gravel, little fine sand and silt
M2-SD8	Dark brown, organic silt and fine sand
M2-SD9	Brown, medium-coarse sand, little fine sand and silt, trace gravel
M3-SD1	Dark brown organic silt, some root, some coarse sand
M3-SD10	Dark brown medium-coarse sand, little silte and fine sand, trace gravel
M3-SD11	Dark gray, fine to medium sand, little fine sand and silt
M3-SD12	Dark gray, medium to coarse sand, little fine sand and silt, trace gravel
M3-SD13	Reddish brown-gray fine sand and silt, little clay with some glauconite, trace coarse sand and gravel
M3-SD2	Dark brown organic silt, little fine sand, some roots
M3-SD3	Dark brown organic silt, little fine sand, some roots
M3-SD4	Dark brown organic silt, grading to gray medium-fine sand
M3-SD5	Dark gray organic silt, medium-fine sand
M3-SD6	Dark gray organic silt, grading to medium-fine sand
M3-SD7	Dark brown organic silt, little medium-fine sand, some roots and wood
M3-SD8	Dark brown, fine to medium sand and silt
M3-SD9	Dark gray, medium-fine sand and silt, little coarse sand, trace gravel
M4-SD1	Dark gray coarse sand and gravel, little dark gray medium to fine sand and silt
M4-SD2	Dark gray coarse sand and gravel, little dark gray medium to fine sand and silt
M4-SD4	Dark gray coarse sand and gravel, little dark gray medium to fine sand and silt, some glauconitic sand
M4-SD5	Dark gray coarse sand and gravel, little dark gray medium to fine sand and silt, some glauconitic sand
M4-SD6	Medium to coarse sand and gravel, little fine sand and silt
M5-SD1	Dark gray, medium to fine sand, some coarse sand and gravel
M5-SD2	Brown, medium-coarse sand and gravel, little fine sand and silt
M5-SD3	Dark brown, medium-coarse sand, some fine sand and silt
M5-SD4	Brown, medium-coarse sand and gravel, little fine sand and silt
M5-SD6	Brown, medium-fine sand, little silt, little coarse sand and gravel, some organic roots
M8-SD1	Dark gray, glauconitic sand and silt, little clay
M8-SD1	Dark gray, medium to fine sand and silt, glauconitic
M8-SD10	Dark gray organic silt, medium to fine sand, some coarse sand and gravel
M8-SD11	Dark fine to medium sand, some silt
M8-SD12	Brown, medium to coarse sand, some fine sand and silt
M8-SD2	Dark gray, medium to fine sand, some silt and clay
M8-SD3	Dark gray-brown, medium to fine sand and organic silt, some glauconitic clay
M8-SD4	Dark gray, organic silt, medium to fine sand, some glauconite
M8-SD5	Dark gray, medium to fine sand
M8-SD6	Dark gray, medium to fine sand and silt, little coarse sand
M8-SD6	Dark brown, medium-coarse sand, little silt, trace gravel
M8-SD7	Black organic silt
M8-SD7	Dark brown, organic silt, little fine sand, roots
M8-SD8	Dark gray, organic silt and fine sand, some roots
M8-SD9	Dark gray to light gray fine sand (silt/glauconitic sand/clay and gravel)
M2-SD2	Brown, medium to coarse sand, gray medium to fine sand, little gravel
MP-SD1	Dark gray-olive green glauconitic sand and silt
MP-SD2	Dark gray organic silt and fine sand, some clay and gravel
MP-SD3	Brown fine sand and silt, little organic matter

6/14/10 FT Monmouth Bora Sampling

0800 Met at bldg 173 for kickoff and tailgate safety mtng & JSA M. Maguss, D. Duh, M. Murray, J. Filosa, J. Myers, H. Horning of TVS Darwin & Chemtech

0915 M/S to 1st sampling location. M16 SD/1, M16-SW1

0945 Depth 50" - YSI readings collected - tide early high. Refer to Chemtech notes for YSI parameters. Tidal current flowing out (ebbing) very slowly - likely beginning of ebb.

0950 Surface water samples collected. J. Myers & J. Filosa collected samples. Weather cond. Overcast, wind calm, Air temp 70°F D. Duh call to lab to check on bottle count. PID background 1.5 ppm

1004 Collected sediment sample 1 auger sample collected.

Description - Top 2" dk br. silty sand, quartz int. med yellow. fine to med sand. VOA sample collected first. N. PID reading in sample.

1014 Completed sample collection at M16 SD/SW1.

1030 - Began sample collection at Location M16-SW/SD 2. Moved GPS location slightly to improve access. Depth 47" In situ parameters collected by Darwin of Chemtech. M. Maguss leaves work crew.

1032 Collected surface water sample.

1044 - Collected sediment sample Dk gray silt & very fine sand. PID 7.0 ppm

1055 Collected GPS coordinates. Completed sample collection at M16-SW/SD 2. Visitors on site Chuck Appleby.

6/14/10

Main Post Sampling Continued

1106 Began sample collection at M16SD3
Depth 4'.
Collected in-situ parameters.
See ChemTech notes.

1110 - Sediment sample collected same sed description as M16SD2
PID 4.1 ppm, DUP-SD01
Duplicate sample collected here. 2 cores composited.

1130 Completed sample collection at Location M16SD3

1135 Sample location M16SW/SD4 located off of drain pipe

1145 - Collected surface water grab sample at M16SW04
In situ parameters collected previously.

1155 Collected sediment sample.
PID reading 33.0 ppm

1205 Completed sample collection at M16SW/SD4
Loaded truck for TRP site M15

(3)

1230 Lunch break.

1330 Began sample collection at Depth 21" M15SW/SD1
In situ parameters collected. see ChemTech notes.

1340 Collected surface water sample.

1345 Collected Sediment sample.
PID 3.2 ppm
DK grey - org. silt - med to fine sand, little peat

1352 Completed sampling at M15SW/SD1
GPS data collected

1357 Began sample collection at M15SW/SD2
In situ parameters collected
See ChemTech notes.
Depth 27"

1400 Surface water sample collected.

1410 Sediment sample collected
Note - Lab notified of that 3 8oz soil jars are required

PID 1.9 ppm - Descr. same prev. - no peat.

(4)

1415 Completed sampling at M15SW/SD2

6/14/10 Ft Monmouth BERA Sampling

1425 MIS SD 3 located.
Insitu parameters collected.
(See Clean Tech notes)
Depth 24"
Sample collected 1430
PID 3.4 ppm
DK gray silt & med to
fine sand, trace white clay.
1440 Completed sample collection
at MIS SD3.
1450 Began sample collection
at MIS SW/SD4
in situ parameters collected
(See Clean Tech notes)
1455 - Collected surface water
samples.
1502 Collected sediment
sample - 2 cores composite
PID 3.3 ppm
DK gray silt & med to fine
sand - some clay.
1510 Completed sample collection
at MIS SW/SD4.

Mon 6/14/10

(5)

6/15/10

Met at bldg 173 - work area for
day. Joe Filosa, Darwin, M. Murray
Melissa and Rocco. From Ft. Mon.
0800 Conducted JSA & tailgate safety
mtng. Prepared to mob for
docks.
0820 Darwin of Clean Tech
calibrating YSI meter
Weather - clear 60°F
air temp. - wind W 10-15 mph.
Travelled to sampling stations.
Could not access M14SDSW2
or pond SW2 due to fence.
Will continue with M14SD1.
Little current in creek.
Melissa & Rocco met at station.
Tide low.
0855 Station: M14SD1. 6 in/min
Depth 17". parameters
0900. Surface water ~~sample~~ collected
MS/MSD collected from
for sediment.
0910 Sediment sample collected.
Screen material in water
near pipe.

(6)

6/15/10

0937 Began sample collection at M14SD2
Depth 19.5'
In situ parameters collected.
Sediment only collected.
0940 Sediment sample collected
PID 0.1 ppm.
Dk gray med sand, coarse.
0950 Completed sampling at M14SD2.
1000 - Location M14SD3 not
GPS collected - station marked with temp stake.
Sediment & SW collected here.
1008 In-situ parameters collected - see ChemTech notes.
Depth 20.5'
Flood tide beginning.
1020 Surface water sample collected.
1025 Sediment sample collected - PID 0.6ppm
1035 Comp'd sample

(7)

6/15/10

1050 Began sampling at M14SD4 located on N side in depositional area
Depth 32.5 inches
In situ parameters collected.
(See ChemTech notes)
1050 Sediment sample collected.
PID - 0.0 ppm
Coarse. Dk gray med to coarse sand - little gravel, little silt. Amphipods observed.
1110 Completed sampling at location M14SD4.
1130 Located and GPS station M14SD5 - no depositional area this reach -
In-Situ parameters collected.
(See ChemTech notes)
Water level rising but no movement.
Depth 33" at sample location
1136 Sediment sample collected
Dk gray - med to coarse sand, little brown & light gray sand
PID 0.0 ppm.
1155 Completed sampling at M14SD5.

(8)

6/15/10

1200 Station M14SD6 located & GPS coor. taken. Depth 36"

1210 Sediment sample collected. PID 0.0 ppm. Dk gray medium to coarse sand and gravel - some fines.

1230 Completed sample collection at M14SD6. Break for lunch.

1350 Arrived at location P61SW1. In situ parameters collected (See Chem Tech notes). GPS Coord. collected.

1401 Sample collected - (SW) no pesticides in analysis this location. Small eel sighted. Substantial surface film - no oil sheen.

1410 Completed sample collection at P61SW1.

1430 Began sampling at location M14SD7. Depth 30"

6/15/10

1435 In situ parameters collected (See Chem Tech notes)

1433 - Sediment sample collected by J. Lilosa. Sample description. gray medium to coarse sand & gravel, some fine sand. Quartz subrounded gravel. PID 0.0 ppm.

1440 weather - clear temp 77°F breeze west at ~10 mph. Sample M14SD7 collected about 6 ft. off of drain pipe. No flow at time of sampling. 18" pipe.

1450 Sampling completed at M14SD7.

1501 Surface water collected at M14SW8. In situ parameters collected (See Chem Tech notes). Surface water MS/MSD collected this location. Depth 26.5"

M1450/SW & cont. 6/15/10

1523 Sediment sample collected. Sample desc. Brown medium sand, little coarse sand & gravel little silt. PID - 0.0 ppm.

1548 Sampling complete at M1450/SW8

1555 ~~Begin sample collection at station M1450E.~~ mm 6/15

Sample not collected at M1450E. Due to time. Rinse blank will be collected as last sample of day.

1602 Rinse blank sample collected. DI water poured over decontaminated auger into SS bowl. FB 06/15/10

Darwin reports that no trip blanks sent with sample bottles.

End of sampling for day.

Return to Bldg 173.

MM 6/15/10

6/16/10

0730 Assemble at Building 173 Arrange Vehicle + Fill Decon Buckets.

0745 Conducted Tailgate Safety Meeting. (See JSA + Tailgate Safety Form

0815 Called ChemTech. to find out where Sampler Is?

0830 Call from ChemTech. Just received message of switching personnel will take 1 hour + to get here

0840 Called Mark Mahoney to inform him

0845 Headed to MP to flag Locations flagged M14- 14, 13, 11, + 10 P69-SD1 will need key to gate to Murphy Drive/Oceanport Ck.

0940 Call from Chem Tech. They've arrived. Called Mark. He'll escort him to first station.

10:10 All set up at first station Mark, Divya Mehta from ChemTech

6/16/10

(13)

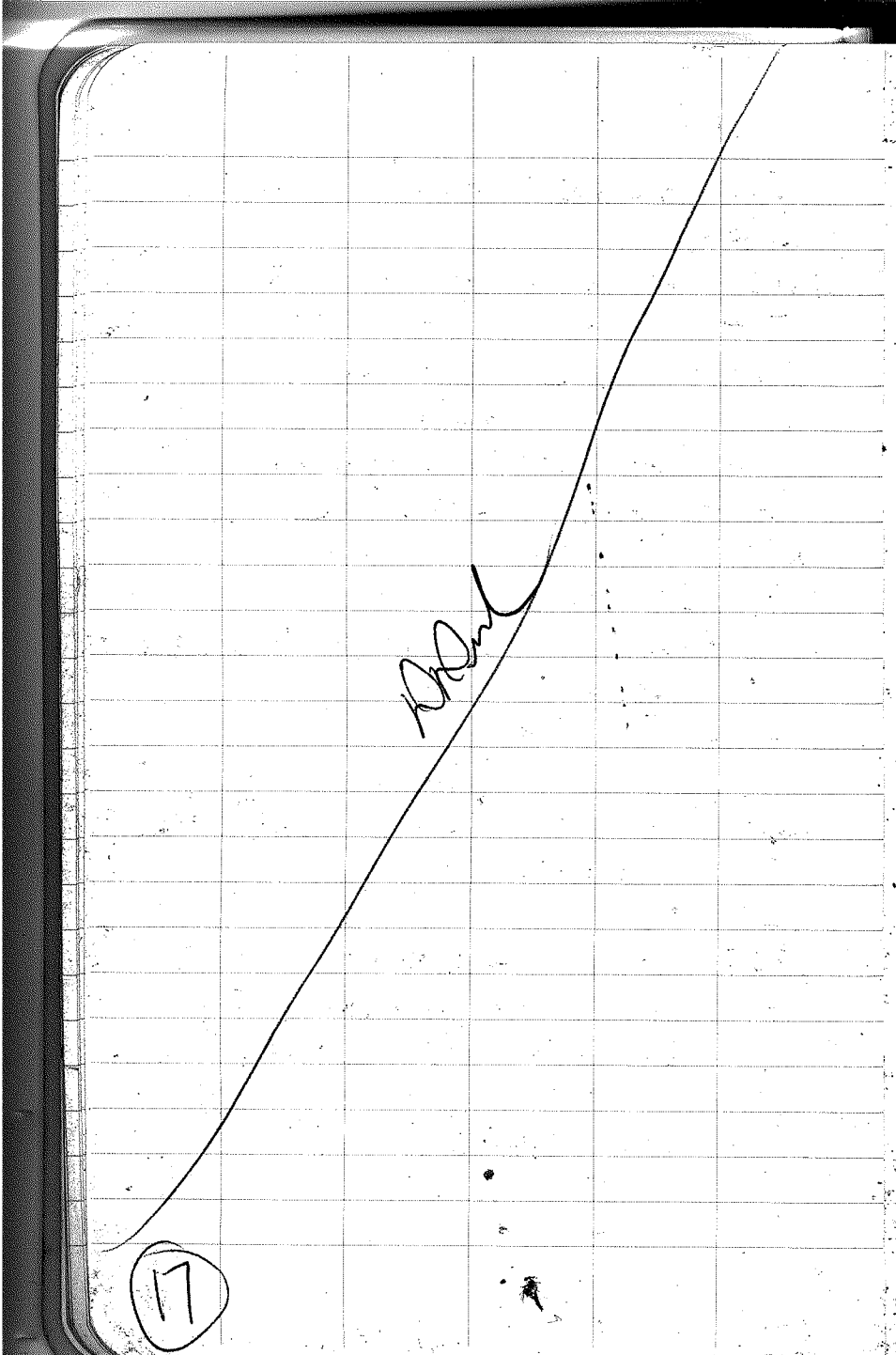
TimPeck Have Arrived.
Conducted H&S Meeting
Set Up For Sampling
10:45 At M14-SD9. Take Parameters
Depth of Water 6½ inches
10:50 Sampled Sediment M14-SD9, Two Cores
Sand + Gravel / Coarse / Brown
PID 0.1 ppm
Took GPS Reading
11:12 Head To M14-SD10
11:15 Measured Parameters
Depth of Water 6½"
11:22 Sampled Sediment M14-SD10, 2 cores
Dark Brown Org Silt + Fine Sand
Trace Olive-Green Silt + Clay
PID 0.1 PPM
Took GPS Reading
11:45 Head To M14-SD11
Measured Parameters
Depth of water 11"
11:50 Sampled Sediment M14-SD11, 3 cores
Brown Org Silt, Trace Fine Sand
Roots, Peat
PID 0.0 ppm, Took GPS Reading

(14)

1200 HEAD TO M14-SD13/M14-SW13
COLLECT PARAMETERS
1210 COLLECT M14-SW13
AND DUP-SW01
DEPTH OF WATER 16"
1248 COLLECT SEDIMENT
LIGHT BROWN MED-FINE SAND
SILT, TRACE GRAVEL
PID 0.0 PPM
TOOK GPS READINGS
1330 HEAD TO M14-SD14/M14-SW14
1345 COLLECT PARAMETERS
NEW LOCATION ~70 feet upstream
of OLD LOCATION, DUE TO EXCESSIVE
POISON IVY
1403 COLLECT WATER M14-SW14
1412 COLLECT SEDIMENT M14-SD14
GRAY, MED-COARSE SAND, LITTLE
SILT + FINE SAND, TRACE GRAVEL
SOME ORG. DETRITUS
PID 00PPM, TAKE GPS READING
1430 CALL HAROLD HORNUNG FOR
KEY TO M18 LANDFILL
WALTER MET US @ GAS STATION

15

16



17

And took ~~Us To~~ Joe To Sign Out Key

1502 Arrive At M18 Landfill + Set Up For Sampling

1520 Head To M18-SD1 300 ft through thorny brush & 90 ft through Phragmites + Sedge to waters edge.

1545 Arrive At M18-SD1
Collect Parameters
Collect Sediment M18-SD1
Organic Muck
PID 0.0 PPM
Gather GPS Info.

1630 Arrive At M18-~~SD3~~ SD3
Take Parameters
Depth 14"

1636 Collect Sediment
Organic Muck, Glauconic Clay
Some Gravel + Med-Coarse Clay
PID 0.0 PPM
GPS Info

END

18

1655 HEAD TO M18-SD4
TAKE PARAMETERS
DEPTH WATER ~3 feet
RIP RAP PREVENTS MEAN
SHORE SAMPLING
1700 COLLECT SAMPLE
GLAUCONIC ~~CLAY~~ SAND
+ Yellow sand-fine,
PID 0.0PPM
COLLECT GPS
1730 COLLECTED FIELD BLANK
1800 HEADED BACK TO BLDG 173
1815 173 LOCKED, SO COULDN'T UNLOAD
& RECHARGE
1830 FINISHED

6/16/10

7 mm

6/16/10 Ft Monmouth BERA Sampling

0730 D. DeL & M. Murray arrive at Bldg 173, organize equipment.
0745 Calibrate PID 99ppm.
0800 Conduct JSA/ tailgate safety meeting.
0830 Arrived at Claypit Hill M18. Prepared for sampling.
0900 Soil sample collected OK brown med sand & gravel. Change of plans - water not collected due to water access at M18SD2
0930 Collected Surface water sample at M18SW3. Sediment sample collected here previous day.
0950 Collected surface water sample at M18SW5 Depth 12.5 inches
1000 Sediment sample collected see Chain Tech notes for in-situ parameters. mm 6/17/10
OK grey mud to ~~coarse~~ fine glauconic sand - little gravel.
PID. 0.0ppm

6/12/10

1010 continue to sample surface water and sediment at M18SD1/SW5

1027 Arrive At M8-SD1 + Take Parameters

1035 Collect Sediment At M8-SD1 Depth 2½ feet Dark Gray Glauconitic Sand+ Silt, Little Clay

1046 Collected M8SD2 sediment sample. Dk gray mod to fine sand - some silt + clay In-situ parameters not collected. (See Chem Tech notes.) GPS Coord. collected. PID 0.0 ppm. Depth 1.5 Ft.

1100 Move to location M8SD9 Sediment only station. Weather cond. Clear - Air temp 78°F - Wind W20 mph - Parked vehicle at West end of road due to Construction.

(21)

6/12/10

1135 Sample collected at M8SD9 Depth 13.5 inches DUP-SD02 collected at M8SD9. water quality parameters collected - (see Chem Tech notes). PID 0.0 Sample Description: Dk gray to light gray fine sand/silt glauconitic sand/clay & gravel.

1150 Completed sample collection at M8SD9.

1158 Sediment sample collected at M8SD10 In-situ parameters collected (See Chem Tech notes) Depth 25.5" Description Dk gray organic silt - mix fine sand, some coarse sand & gravel. PID 0.0 ppm.

1200 Completed sampling at location M8SD10

(22)

6/17/10

1218 - Sediment sample Collected at M5 SD1
In situ parameters collected (see ChemTech notes.
Sed. description - Dk gray Med. to fine sand, some coarse sand & gravel.

1240 Location M8 SW/SD12
In situ parameters collected. (see ChemTech notes)

1245 Surface water sample collated.

1250 Sediment sample collated at location M8 SW/SD12
Depth 24".
Sample description: Brown med to coarse sand - some fine sand and silt. Trace gravel. PID 0.0ppm.

1300 Completed sampling at M8 SW/SD12.
Break for lunch.

1340 Bogar sample collation at M8 SD8
Depth 24"

(23)

6/17/10

1345 M8 SD8 sediment sample coll.
Sample description - Dk gray organic silt & fine sand some roots.
PID 0.0ppm

1350 Completed sampling at location M8 SD8. In situ param collated (see ChemTech notes)
MS/MSD sample collated this location.

1415 ARRIVE AT ~~SD8~~ M8-SD7/M8-SW7
COLLECTED PARAMETERS

1425 COLLECTED M8-SW7

1440 COLLECTED M8-SD7
DEPTH OF WATER 4 feet
SEDIMENT BLACK ORGANIC SILT
PID 0.0 ppm

1525 Began sampling at M8 SD6
In situ samples collected.
(See ChemTech notes)

1528 Sediment sample collated at location M8 SD6.
Description Dk gray med to fine sand & silt, little coarse sand
PID 0.0 ppm.

(24)

6/17/10

1600 Sediment sample collected at M8SD5
Descr. Dk gray med-fine sand
PID 0.0

Descr. cont. Organic silt fine sand, root material.

1612 Completed sampling at M8SD5.
See ChemTech notes for in-situ parameters.

1615 Began sample Collection at Location: M8SW/SD3
In situ parameters collected. (see ChemTech notes)
Tide ebbing (also ebb tide during sample collection at M8SD5 and M8SD6.)

1618 Surface water sample collected at M8SW3

1624 Sediment sample collected.
Dark gray/brown med-fine sand and organic silt. some glauconite clay.
PID 0.0 ppm.

1630 Sampling completed at M8SW/SD3.

6/17/10

1640 Began sample collection at M8SD4.
In situ parameters collected (See ChemTech notes)

1644 Sediment sample collected.
Multiple cores attempted - many rocks below mud surface.

Description - Dark gray organic silt med to fine sand, some glauconite.
PID 0.0 ppm.

1655 Complete sample collection at M8SD4.
FB06172010 collected at 1645

1730 Chain of custody completed.

6/18/10

0730 ASSEMBLE AT BLDG 173
D. DUH, J. FILOSA, D. DeLEON
J MYERS.
CALIBRATE METERS (CHEMTECH)
0800 CONDUCT TAILGATE SAFETY MEETING
(SEE JSA + TAILGATE FORM)
HEAD TO M-3/M-5 LANDFILLS
JOE + JOE GET KEY TO
LOCK #6
0830 HEAD TO MS-SD4/MS-SW4
TAKE PARAMETERS
0845 COLLECT MS-SW4
0904 COLLECT MS-SD4
DEPTH OF WATER 4"
BROWN MED COARSE SAND + GRAVEL
LITTLE FINE SAND + SILT
TOOK GPS READINGS
PID 0.0 PPM
0919 ARRIVE AT MS-SD2
TAKE PARAMETERS
0923 COLLECT MS-SD2
DEPTH OF WATER

BROWN MED-COARSE SAND + GRAVEL
LITTLE FINE SAND + SILT
MS-SAMPLES COLLECTED NEAR
RIP RAP IN UNDISTURBED SEDIMENT
DEPOSITIONAL AREAS NEAREST
SHORE
PID 0.0 PPM
TAKE GPS READINGS
0933 ARRIVE AT MS-SD3
TAKE PARAMETERS
0937 COLLECT SEDIMENT MS-SD3
PID 0.0 PPM
DARK BROWN MED-COARSE SAND
AND ~~LITTLE~~ SOME FINE SAND + SILT
TAKE GPS READINGS
0953 ARRIVE AT MS-SD5
TAKE PARAMETERS
0957 COLLECT SEDIMENT MS-SD5
DEPTH OF WATER 9½"
COLLECTED FROM DEPOSITIONAL
~~AREA~~ NEAR SAND BAR
PID 0.0 PPM

1013 ARRIVE AT MS-SD6
TAKE PARAMETERS
DEPOSITIONAL AREA JUST
UP FROM LINE OF ROCKS
ACROSS CREEK
1017 COLLECT SEDIMENT MS-SD6
DEPTH 6"
BROWN MED-FINE SAND
LITTLE SILT, LITTLE COARSE
SAND+GRAVEL, SOME
ORGANIC ROOTS
TOOK GPS
1035 AT M3-SD1
TAKE PARAMETERS
1036 NO WATER CURRENTLY
IN DEPOSITIONAL ZONE
NEAR ~~LOAD~~ LOW-TIDE BUT
STILL OUTGOING
1038 COLLECT SEDIMENT
DARK BROWN ORGANIC SILT
SOME ROOT, SOME COARSE SAND
COLLECT GPS

1042 ARRIVE AT M3-S2
TAKE PARAMETERS
1050 COLLECT SEDIMENT
NO WATER PRESENT IN
DEPOSITIONAL AREA
ADJACENT TO LANDFILL
DARK BROWN ORGANIC SILT
LITTLE FINE SAND, SOME ROOTS
PID 0.0 PPM
TAKE GPS
MARK MACNESS CALLED RE:
SAMPLING SEDIMENTS AT LOW TIDE
1120 HEAD TO M3-SD3/M3-SW3
TOO LOW OF WATER FOR COLLECTING
WILL COLLECT LATER. TAKE PARAMETERS
1128 COLLECT SEDIMENT.
NO WATER PRESET IN DEPOSITIONAL
AREA NEAR LANDFILL
DARK BROWN ORGANIC SILT
LITTLE FINE SAND, SOME ROOT
TAKE GPS INFORMATION
1145 ARRIVE AT M3-SD4
TAKE PARAMETERS
1150 COLLECT SEDIMENT

DARK BROWN ORGANIC SILT
GRADING TO GRAY MED-FINE SAND
NO WATER AT PRESENT
TOOK GPS

1205 Water Direction APPEARS TO HAVE CHANGED FROM OUTGOING TO INCOMING.

TOOK PICTURES of SEDIMENT LOCATIONS

1 @ M3-SD1
2 @ M3-SD2
2 @ M3-SD3
2 @ M3-SD4
1 @ M3-SD5
1 @ M3-SD6
1 @ M3-SD7
1 @ M3-SD8
1 @ M3-SD9
1 @ M3-SD10
1 @ M3-SD11

Repositioned Vehicles + Decon Area

1320 HEAD TO M3-SD5
TAKE PARAMETERS
WATER DEPTH 9"
1333 COLLECT SEDIMENT M3-SD5
DARK GRAY ORGANIC SILT
MED-FINE SAND
TOOK GPS COORDINATES
1345 HEAD TO M3-SD6
TAKE PARAMETERS
1350 COLLECT SEDIMENT.
APPEARANCE OF POTENTIAL SEEP
RUST-COLORED FLOW from BELOW
RIP RAP. DEPTH OF WATER 9"
DARK GRAY ORGANIC SILT
GRADING TO MED-FINE SAND
1400 HEAD TO M3-SD7
1408 COLLECT SEDIMENT
DARK-BROWN ORGANIC SILT
LITTLE MED-FINE SAND
SOME ROOTS WOOD.
APPEARAPLE OF POTENTIAL SEEP.
YSI NOT WOR

1420 CALLED MARK MAGNESS. ADVICED US TO DO THE SOIL SAMPLES AT CWA.

1520 ARRIVE AT CW6 AREA

1523 AT CW6-SS1 COLLECT SOIL CW6-SS1 WITH MS/MSD 6 bottles + 9 ENCORES. REDDISH BROWN ORGANIC + FINE SAND ROOTS COLLECT GPS AREA IS LOW SPOT IN AREA

1538 ARRIVE AT CW6-SS2

1540 COLLECT SOIL IN LOW AREA BROWN ORGANIC + FINE SAND SOME ROOT + GRAVEL COLLECT GPS

1550 ARRIVE AT CW6-SS3 REDDISH BROWN ORGANIC FINE SAND, LITTLE ROOTS COLLECTED AT LOW POINT IN AREA.

1559 COLLECT CW6-SS4 BROWN ORGANIC SILT, LOTS of ROOTS COLLECTED IN LOW SPOT IN AREA

1614 AT WETLAND AREA NEAR WAMPUM BROOK COLLECT CW6-SD2 DARK BROWN ORGANIC SILT ROOTS

1632 AT WETLAND AREA CW6-SD1 COLLECT CW6-SD1 DARK BROWN ORGANIC SILT ROOTS

1642 AT WETLANDS AREA CW6-SD3 COLLECT SAMPLE DARK BROWN ORGANIC SILT ROOTS

1647 AT WETLANDS AREA CW6-SD4 COLLECT SAMPLE DK BROWN ORGANIC SILT, LITTLE ROOTS, LEAF MATTER THIS IS ON A RUNOFF COURSE TO WAMPUM BROOK

1725 COLLECT FIELD BLANK

1750 RETURN TO BLDG 173

6/21/10

0730 Assemble at Bldg 77
0745 Conduct Tailgate Safety Meeting (See JSA)
0800 Head Across to MP Stations
Key Available For M-3 but not M-2
0820 Arrive At M3-SW3
Outgoing Tide, Depth 10"
Sufficient Water For Sampling
0838 At M3-SW3. Depth 10"
Measure Parameters
Collect Sample
0850 At M3-SW6 Depth 10"
Measure Parameters
Collect Sample
Tide Still Outgoing.
0915 At M4-SW4
Tide Outgoing, Depth 1½'
0930 Head To M8-SD11/M8-SW11 Off-Post At Blades Run

0945 Arrive At M8-SW11
1100 Shrewsbury Visitors Arrived
Tom Menapace - Shrewsbury
Frank Clark - Foreman Public Works
Jill Gwydir - Chair of Env. Commission
Collect Parameters
1005 Collect M8-SW11
Water Depth 9"
Water Clear
1015 Collect Sediment M8-SD11 PID 0.1 ppm
Dark Fine-Med Sand, Some Silt
1030 Headed Back To Main Post
1100 Arrive At Landfill M2,
Water Too Low for Sampling At P43 but M2-SW6 and M2-SW11 are Fine.
1113 At M2-SW6
Depth of Water ~9"
Collect Parameters
1115 Collect Surface Water Only
1130 At M2-SW11 ~1' in Depth
Collect Parameters + Surface Water Sample.

TOOK PICTURES of M-5 + M-8 LOCATIONS

2 Pictures ~~M5-SD1~~ M8-SD12
~5 feet from Rip RAP, Depos. Mods

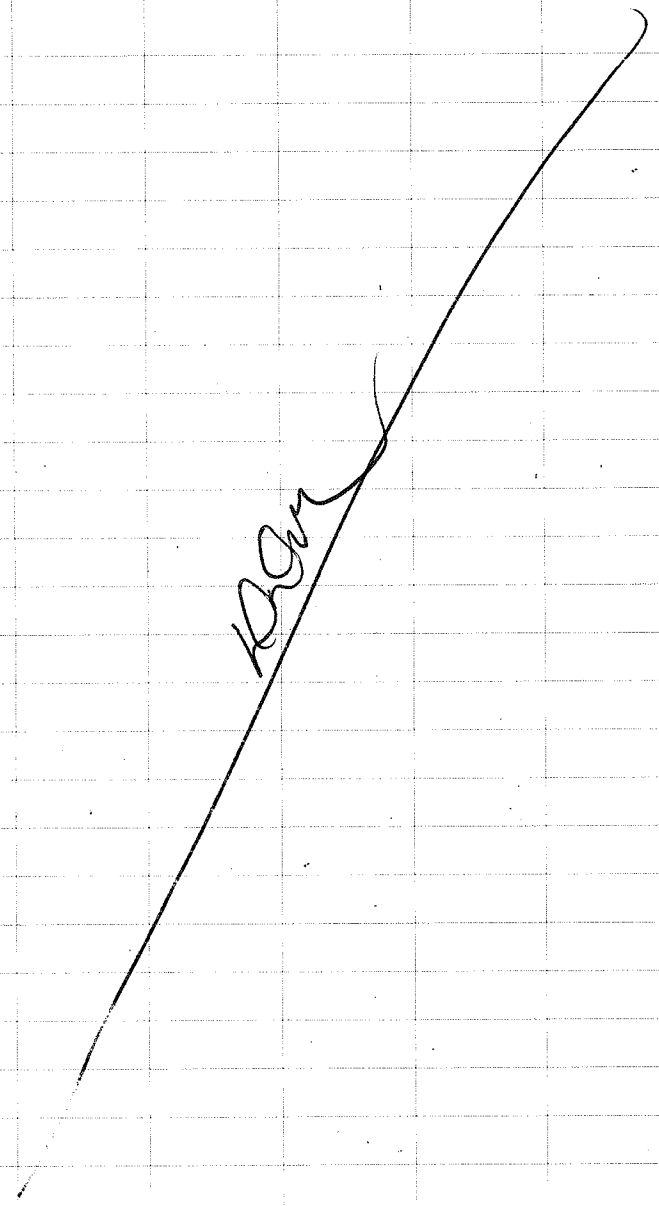
2 Pictures ~~M8-SD5~~ M8-5-SD1
~5 feet from Rip RAP, Deposits, Bar of Mud at confluence

2 Pictures M8-SD10
>6 feet from Rip RAP IN ORGANIC Muck

2 PICTURES M8-SD9
2 FT PAST LAST RIP RAP
BUT 6 FT FROM RIP RAP WALL
THESE FURTHEST RIP RAP
APPEAR TO HAVE FALLEN
DURING OR AFTER PLACEMENT
UPSTREAM OF STORM DRAINAGE

2 PICS OF M8-SD8
>15 FT PAST Rip RAP. JUST OFF
MOSSY LOGS. ORGANIC MUCK

2 PICS OF M7-SD7
IN MUD JUST OFF OF RIP-RAP



(39)

2 PICS OF M8-SD5
6" from LAST RIP RAP WHICH APPEARS FALLEN FROM MAIN WALL
4' from MAIN WALL
2 PICS OF M8-SD4
5' FEET FROM RIP RAP WALL
THOUGHT SMALL LINE OF RIP RAP STONES NEAR SAMPLE
2 PICS OF M8-SD3
3' FT FROM RIP RAP 1' PAST GULLY THAT APPEARS TO BE DISTURBANCE AREA
2 PICS OF M8-SD2
2 FT FROM LAST RIP RAP
>6' FROM WALL MUDS.
2 PICS OF M8-SD1 AREA
NO STICK PRESENT
STEEP WALL DROP OFF
1 PIC OF M18-SD5
NO RIP RAP
UNDISTURBED MUST
JUST UPSTREAM OF OUTFALL
1½ PICS OF M18-SD4
STEEP RIP RAP
COLLECTED JUST OFF EDGE

(40)

2 PICS M18-SD3
2-3 ft OFF OF RIP RAP
AT END OF RIP RAP
2 PICS OF M18-SD8 AREA
STAKE NOT FOUND

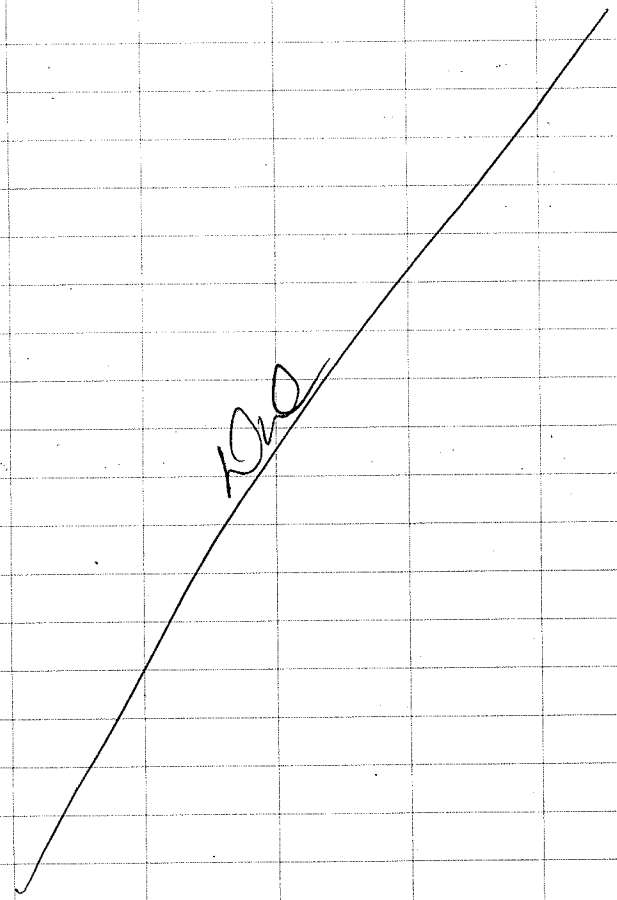
1330 MET WITH JOE FALLON
REGARDING SEDIMENTS
1400 RETURN TO M8 AREA
+SET UP FOR SEDIMENT
COLLECTIONS
1425 AT M3~~8~~-SD11
COLLECT PARAMETERS
COLLECT SAMPLE M3-SD11
DARK-~~BROWN~~-GRAY FINE-MED
SAND, LITTLE FINE SAND+SILT
POTENTIAL SEEPAGE AREA
~6' FROM RIP~~-RAP~~.
2 PICTURES TAKEN
1440 AT M3-SD8
COLLECT PARAMETERS M3-SD8
COLLECT SAMPLE ~~M8~~-SD8
DARK BROWN, FINE-MED SAND+SILT
POTENTIAL SEEPAGE AREA
2 PICS TAKEN. TIDE STILL
GOING OUT

(41)

1457 ARRIVE AT M3-SD9
COLLECT PARAMETERS. SAMPLE
TAKEN IN MUD BANK OFF
OF LEDGE
2 PICTURES TAKEN #146, #147
1459 COLLECT SEDIMENT M3-SD9
DARK GRAY, MED-FINE SAND+SILT,
LITTLE COARSE SAND, TRACE GRAVEL
1515 AT M3-SD10
COLLECT PARAMETERS
1518 COLLECT SEDIMENT IN DEPRESSION
AREA BEYOND MOSS BANK
ALSO COLLECT DUP-SD04
2 PIX TAKEN #148 + #149
DARK ~~GREY~~ BROWN MED-COARSE
SAND, LITTLE SILT + FINE SAND,
TRACE GRAVEL.
1530 HEAD UPSTREAM TO M3-SD12
1540 ARRIVE AT M3-SD12
COLLECT PARAMETERS
COLLECT SEDIMENT
DARK GRAY, MED-COARSE SAND
LITTLE FINE SAND + SILT
TRACE GRAVEL. 2 PIX.
#150 & #151

(42)

1600 HEAD TO M4 AREA
WATER IS TOO DEEP TO
IDENTIFY GOOD LOCATIONS
1630 COLLECT FB06212010
FOR SEDIMENT FIELD BLANK
1700 HEAD BACK TO BLDG 173



43

6/22/10

~~MER~~

11:15 ARRIVE ON SITE + SCOUT OUT ACCESS TO OTHER LOCATIONS ON PARKERS CREEK + OCEANPORT AVENUE.
ACCESS TO M20 SITES IS THROUGH LOCK #2 UPSTREAM OF GS BUILDING #259
ACCESS TO P69-SW2 AND M14-SW1SD2 ARE THROUGH DOUBLE FENCES WITH NO GATES ON INNER FENCE.
WILL HAVE TO FIND OTHER ACCESS
12:45 PHOTODOCUMENTING M-14
~~M8-SP~~ M14-SD8, Depositional Mud Center Channel. No Rip Rap on M14 side, present on M12 side, 5 feet from RIP-RAP
TWO pictures
AT M14-SD7, JUST BELOW CONFLUENCE, DEPOSITIONAL ZONE ~4 feet FROM RIP RAP
TWO PICS

44

Two Pix at M14-SD6
Depositional Zone
6 Feet From Rip Rap on M14
10 Feet From Rip Rap on M12
2 Pix at M14-SD5
Approx Mid Channel
Depositional Area
2 Pix, near old
Corrugated Pipe in ~~Smaller~~
Muddy Area
← This is M14-SD4
1 Picture of Pipe
5-6' Downstream of Pipe
At M14-SD3, near
Mid-Channel
6' From Each Wall
Two Pictures.
At M14-SD2, Mid Channel
Uniform Bottom
6-7' from Banks.
Two Pictures
At M14-SD1, Center
Channel, ~8 feet from Wall
Two Pictures.

(15)

Field Activity Daily Log

Shaw® Shaw Environmental & Infrastructure, Inc.

DATE	6	22	10
NO.			
SHEET	1	OF	4

Project Name: FT Monmouth BERA Sampling Project No. 135065

Field Activity Subject:

Description of Daily Activities and Events: Surface water and Sediment Sampling

0800 M. Murray conducts Tailgate safety mtng / JSA.
0805 Travel to location M3SW12. J. Filosa to get gate keys
0825 Wait at gate for J. Filosa. Open gate & move to M3SW12.
0743 Surface water sample collected at M3SW12. Tide flowing out. Water appears somewhat turbid. No sheen or oil visible - no seeps apparent.
0900 Completed sampling at M3SW12. Travel to P43SW3.
0909 Arrived at location P43SW3. Tide ebbing. Water appears less turbid this location. Numerous large carp observed in stream. No seeps or erosion areas.
0918 In-situ parameters collected. (See Chem Tech notes)
~~0923~~ Surface water sample collected at same transect, in-situ parameters at P43SW3
0935 Arrived at location P43SW2 - Collect in-situ parameters (See Chem Tech notes) Water fairly clear - carp observed at the location.
0936 Surface Water sample collected.
0944 Completed sampling at P43SW2. Travel to M18SW3.
0959 Arrived at location M18SW3. MS/MSD will be collected here. Tide flowing out - no mud banks visible. In-situ parameters collected (See Chem Tech notes) This is a re-collect.

VISITORS ON SITE: —	CHANGES FROM PLANS AND SPECIFICATIONS AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: —
WEATHER CONDITIONS: mostly clear warm - 73°F light W. wind	IMPORTANT TELEPHONE CALLS: —
SHAW E & I PERSONNEL ON SITE: M. Murray, J. Myers, J. Filosa	
SIGNATURE:	DATE: 6/22/10

0.25 in x 0.25 in

Form Number: 139_1
Rev. 07-21-06

Field Activity Daily Log

Shaw® Shaw Environmental & Infrastructure, Inc.

DATE	6	22	10
NO.			
SHEET	2	OF	4

Project Name: FT Monmouth BERA Sampling Project No. 135065

Field Activity Subject:

Description of Daily Activities and Events: Surface water and sediment sampling.

1008 Surface water sample collected at M18 SW3.
1030 Completed collection of sample at M18/SW3 plus MS/MSD.
Travel to location M14 SW3.
1055 Arrived at location M14 SW3. Tide still coming in. In situ parameters collected. (See chem tech notes).
1057 Water sample collected. Water only slightly turbid - rocks visible on bottom. mm 6/22
1103 Completed sample collection at M14SW3.
1120 Arrived at location M14 SW13 for resample. Duplicate will be collected.
1132 Surface water sample and duplicate sample collected at M14 SW13. Dup - SW02. Water fairly clear, running out of culvert pipe approx 40 ft. upstream of sample location.
1150 Completed sampling at M14SW13.
1202 Arrived at location M14 SW14 - Surface water sample from lake. Relocated to near outfall
1209 Surface water sample collected - sampler standing on rip-rap - dipping bottles with pole sampler.
1230 Completed sampling at location M14 SW14. See Chem Tech notes for in-situ parameters.
1245 Lunch break
1300 Document sediment sampling locations with Dan Duh. (Photodocumentation)
1339 Arrive at location M4 SD2 - Sediment only location. mm 6/22

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
none	none
WEATHER CONDITIONS: clear 82°F wind NW 5-10 mph.	IMPORTANT TELEPHONE CALLS: none
SHAW E & I PERSONNEL ON SITE: M. Murray,	F. Frosa, J. Myers.
SIGNATURE:	DATE: 6/22/10

0.25 in x 0.25 in

Form Number: 139_1
Rev. 07-21-06

Field Activity Daily Log

Shaw® Shaw Environmental & Infrastructure, Inc.

DATE	6	22	10
NO.			
SHEET	3	OF	4

Project Name: FT Monmouth BERA Sampling Project No. 135065

Field Activity Subject:

Description of Daily Activities and Events: Sediment Sampling.

1343 Began sample collection at location M4SD1. In situ parameters collected. -(Daran of ChemTech) See ChemTech notes for data. Photo of parameter collection at M4SD1. Large fish observed under bridge.

1355 Sediment sample collected MS/MSD at this location. Two photographs of sample collection in mid-stream. No deposit zoned area this location. Sample Description: Dk gray coarse sand & gravel. Little dk gray mud to fine sand & silt.

1410 Completed collection of sample and MS/MSD at location M4SD1.

1412 Began sample collection at M4SD2. In situ parameters collected. (See ChemTech notes)

1414 Sediment sample collected. GPS coordinates collected. Two photos taken of sample location. Description: same as location M4SD1.

1421 Completed sample collection at M4SD2

1428 Began sample collection at M4SD3. In situ parameters collected (See ChemTech notes)

1430 Sediment sample collated at location M4SD3. Two photos taken of sample location. GPS coordinates collated.

1440 Completed sampling at M4SD3.

1444 Began sampling at location M4SD4. In situ parameters collected (See chemTech notes)

1446 Sediment sample collated at M4SD4.

VISITORS ON SITE: —	CHANGES FROM PLANS AND SPECIFICATIONS AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: —
WEATHER CONDITIONS: Hot - humid - breeze light.	IMPORTANT TELEPHONE CALLS: —
SHAW E & I PERSONNEL ON SITE: M. Murray, D. Duh, J. Myers, J. Filosa.	
SIGNATURE: [signature]	DATE: 8/22/10

0.25 in x 0.25 in

Form Number: 139_1

Rev. 07-21-06

Field Activity Daily Log

Shaw® Shaw Environmental & Infrastructure, Inc.

DATE	6	22	10
NO.	1		
SHEET	4	OF	4

Project Name: FT Monmouth BERA Sampling Project No. 135065

Field Activity Subject:

Description of Daily Activities and Events: Sediment Sampling

1441 Two photographs taken of sampling location M4S04. Completed sampling at M4S04 - Sample description similar to previous - with some glauconitic sand.

1503 Began sample collection at M4S05. In situ parameters collected. (See Chem Tech notes)

1507 Sediment sample collected at M4S05 Two photographs taken of sample location Description - Similar sand/gravel to previous samples that regain some glauconic sand. Completed sample collection at M4S05

1515 Began sample collection at location M4S06 In situ parameters collected (See Chem Tech notes)

1530 Sediment sample M4S06 collected. Medium to coarse sand and gravel - little fine sand and silt. GPS coordinates collected. Two photographs of sample collection location.

1540 Completed sample collection at location M4S06.

1555 Collected field blank from decontaminated auger and SS bowl. FB 6222010.

1610 Completed sample collection for day. Completed Chain of Custody.

1625 Checked gate at M2 site key 23 required for gate. Returned to Bldg 173.

1645 Arrived at Bldg 173 - put equipment on chargers.

MM

VISITORS ON SITE: —	CHANGES FROM PLANS AND SPECIFICATIONS AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: —
WEATHER CONDITIONS: overcast - air temp 72°F wind E 5-10 mph	IMPORTANT TELEPHONE CALLS: —
SHAW E & I PERSONNEL ON SITE: M. Murray, J. Flora, J. Myers	
SIGNATURE:	DATE: 6/22/10

0.25 in x 0.25 in

Form Number: 139_1

Rev. 07-21-06

6/23/10

0710 MET WITH HAROLD HORNUNG HE KNOWS NO ACCESS TO P69-SW2 OR M14-SD12/M14-SW12. OR OF LAUNCHING FROM FIREHOUSE SUGGESTS BOAT LAUNCHED AT THE MARINA.

0730 TEAM ASSEMBLES.

0745 CONDUCT HEALTH & SAFETY MEETING (SEE JSA)
CALIBRATED METERS.

0805 HEADED TO M-18 LANDFILL

0811 ARRIVE AT M-18 LANDFILL AND HEAD TO P49-SW3. ACCESS IS THROUGH MUD + PHRAGMITES.

0840 COLLECT PARAMETERS AT P49-SW3
COLLECT SW SAMPLE
OUTGOING TIDE NEAR HIGH
HEAD TO P49-SW3
LOCATION IS JUST DOWNSTREAM OF OUTFALL

0853 COLLECT PARAMETERS AT P49-SW2
COLLECT SW SAMPLE
WATER CLEAR

(4)

0920 HEAD TO M-20 LOCATIONS
0945 AT M-20-SW1
COLLECT PARAMETERS
COLLECT SAMPLE
STILL OUTGOING NEAR HIGH
TIDE, WATER CLEAR
0950 COLLECT SEDIMENT M20-SD1
~~0950~~ DARK GRAY, FINE SAND + SILT
SOME PEAT, TRACE GRAVEL
1005 ARRIVE AT M20-SW2
COLLECT PARAMETERS
1010 COLLECT SURFACE WATER M20-SW2
DEPOSITION COVE SANDY BEACH
1015 COLLECT SEDIMENT
DARK GREY, FINE SAND + SILT
SOME PEAT, TRACE GRAVEL
1020 HEAD OUT OF M20 AREA.
1050 HEAD OVER TO M8
FOR RESAMPLING M8-SW7
AND M8-SW12
1105 COLLECTED PARAMETER +
SAMPLE AT M8-SW7
1120 COLLECTED PARAMETERS +
SAMPLES AT M8-SW12

1135 HEAD TO MARINA
1145 AT MARINA
1155 COLLECT PARAMETERS +
SURFACE WATER AT M16SW1
TIDE STILL OUTGOING ~ MID
DEPTH
1205 COLLECT PARAMETERS +
~~SED~~ DO SURFACE WATER AT M16-SW2
COLLECT PARAMETERS +
1218 SURFACE WATER AT M16-SW4
THIS IS SURFACE FLOC IN
AREA
1220 HEAD TO M-18 LANDFILL TO
RECOLLECT M18-SD4
1243 ARRIVE AT M18 LANDFILL
WATER STILL TOO DEEP TO
SAMPLE
1252 HEAD TO M-8 LANDFILL
1305 COLLECT PARAMETERS AT
M8-SD1. COLLECT SEDIMENT
~ 5 feet OFF RIP RAP WALL
DARK-GRAY, MED-FINE SAND + SILT
GLAUCONITIC
2 PIX TAKEN

1329 COLLECT PARAMETERS + SEDIMENT AS ~~SE~~ M8-SD6
DARK-BROWN MED-COARSE SAND
LITTLE SILT TRACE GRAVEL
~10 FEET OFF RIP RAP
WALL ~4 feet FROM
LAST TRACE OF FALLEN RIP RAP
2 PIX TAKEN

1330 PREPARE FIELD BLANK
FB06232010

1338 COLLECT PARAMETERS AT
M8-SD7
COLLECT SEDIMENT
DARK BROWN ORGANIC SILT
LITTLE FINE SAND, ROOTS
>6' off WALL LARGE ROCKS/LOGS
NEARBY

1410 HEAD TO M18-SD4
TOO DEEP + RIPRAP TOO STEEP
TO GET SAMPLE. MOVED
LOCATION 30' UPSTREAM
STILL WITHIN RIPRAP

1420 COLLECT SEDIMENT
DK OLIVE GREENISH GLAUCONITIC SAND
TRACE GRAVEL 2 PIXS
3-4' OFF RIPRAP

1500 RETURNED KEYS TO PD +
CALLED IN BOTTLE ORDER FOR
TOMORROW

1520 PUT PIN FLAGS AT M2 LANDFILL

1550 WENT TO LOOK FOR OCEANPORT
CREEK ACCESS FOR SAMPLING

6/24/10 Ft Mon. BERA Sampling

0800 Conducted tailgate safety mtng. Darwin calibrated YSI meter
0815 Collect water for decon. Travel to CWA. Weather: warm, 80°F-humid hazy.
0834 Arrived at location CWA SD/SW1 offset Maxwell Place.
0849 In-situ parameters collected (see chem Tech notes.
0855 Surface water sample collected. Numerous small fish and frogs observed.
0900 Sediment sample collected. Description- Olgray to brown-med to fine sand and silt - some organic matter - some gravel.
0915 Completed sample collection at CWA SD/SW1. Two photos of location taken.

(S1)

6/24/10

0920 Travel to vicinity of location CW6 SD SW5 No access due to fence around old housing area.
0925 Travel to CW6 SW/SD6 In-situ parameters collected (See Chem Tech notes)
0933 Surface water sample collected. Area heavily vegetated - Japanese knotweed. Water strider observed. Creek flow toward east.
0940 Sediment sample collected. Red to fine reddish brown sand and silt. Stream very straight. No depositional zone. One photo taken of GPS coordinates being collected.
0955 Completed sample collection at CW6 SD/SW6.
0925 Arrived at location CW6 SD/SW5. Collect in-situ parameters (see chem tech notes)

(S2)

6/24/10

1029 Collect surface water at CW6 SO/SW5 Sediment sample will be collected from depositional area on bend in creek

1035 Sediment sample collected. No rip rap this stream Water fairly clear - water striders - no other aquatic organisms observed. GPS coordinates collected some difficulty due to tree cover. Two photos taken.

1100 Completed samples at CW6 SO/SW5. Travel to CW3 area.

1125 Arrived at location P28 SW2 - No access for commercial vehicles at Corrugador gate. Access difficult - steep heavily vegetated bank

1133 In situ parameters collected (see Chem Tech notes)

(S3)

1134 Surface water sample collected directly off of old drain pipe. Algae on water. GPS data Collected. Two photos taken.

1150 Sample location P28SW1 In situ parameters collected Water quite shallow - 2-3 inches. See chem Tech notes for onsite parameters.

1154 Surface water sample collected. Care taken not to get sediment in sample due to very shallow water. GPS data collected and photos (2) taken.

1205 Completed sample collection at P28SW1

1215 Arrive at P15SW3 Collect onsite parameters. Water very shallow. GPS data difficult due to tree cover.

1230 Completed sampling at P15 SW3 - Two photos taken.

(S4)

6/24/10

1230 Arrive at P15 SW1
Collect in situ parameters
(See Chem Tech notes)

1233 Surface water sample
collected at P15 SW1.
Deep pool at this location
near concrete wall.
GPS difficult - few
satellites - only 19 seconds
of data collected.
Two photos taken.
Sampling completed at
location P15 SW1

1250 Bottle inventory.

1315 Break for lunch

1345 Travel to ICP Site M2

1400 Arrived at location
M2-SD14.

1410 In situ parameters
collected. (See Chem Tech)

1415 Sediment sample
collected.
GPS coordinates +
2 photos taken Two
outfalls at this location

(55)

Diver. Brown med to fine sand &
silt. some woody matter.

1420 Completed sampling at
M2 SD 14.

1430 Arrived at location
M2-SD15 SW2.
In situ parameters collected.
Station adjacent to sewer
Authority facility.

1433 Surface water sample
collected (M2-SW2)
Good amount of stream flow
depth 1.0 ft. Stream
mostly shaded this location.

1440 Sediment sample collected.
Description: Brown med to
coarse sand, gray med to
fine sand, little gravel.
GPS & Two photos taken.
GPS difficult because of
canopy. 40 sec of data
collected.

1457 Completed sampling at
M2 SD15 SW2.

(56)

6/24/10

1508 Arrived at location M2503
Sediment only
In situ parameter collected
mw (See Chem Tech notes)
1509 Sediment sample collected
Dk brown med to coarse sand - little fine sand & silt. Some gravel and organic matter.
GPS data collected
Two photos taken
1521 Completed M2503 - begin sampling at M2504.
1524 Sediment sample collected at M2504.
In situ parameter collected previously (See Chem Tech notes)
Description: Dk gray to Lt brown med to fine sand - little coarse sand and gravel.
GPS coordinates collated.
Two photographs taken.
1535 Completed sampling at M2504

6/24/10

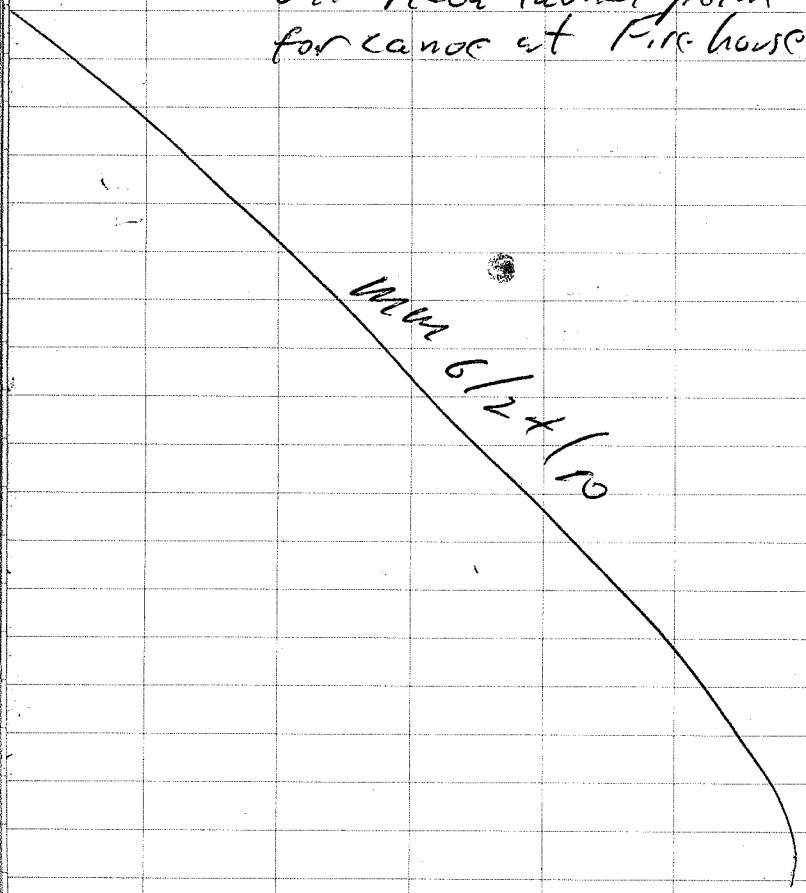
1536 Arrived at location M2505
In situ parameters collected.
Sediment sample collected.
Description: Brown med to coarse sand & gravel, gray fine sand and silt.
GPS coordinates collected.
Two photos taken.
1545 Completed sampling at M2505
Moved to location M2505WB
Only sediment collected here today
1553 Sediment sample collected at location M2506.
Description: Dk gray to reddish brown med to coarse sand & gravel - some fine sand and silt.
1557 Distant thunder heard.
GPS coordinates collated
Two photos taken.
Closer thunder - rain begins.
1605 Field blank FB-62420W collected.

Note: water used to be collated at location M2 SWB.

6/24/10

1627 Completed Chain of custody Forms.

1655 Returned to Bldg 173 Put instruments on charger. Completed work for day. Will recon launch point for canoe at Fire house.



6/25/10

0730 Assemble at Bldg 173
J Myers D Dunn J Filosa
D DeLeon
Calibrate Meters
Conduct Tailgate Safety Meeting (See JSA)

0825 Head to MZ Landfill

0845 at MZ-SD7
Collect Parameters
Collect Sediment / MS / MSD
Sample ~8 ft From Wall
Towards Mid Stream
Depth ~2"
Brown Med-Coarse Sand & Gravel
Little Fine Sand & Silt
2 Pix #64 & 465

0905 at MZ-SD8
Collect Parameters
Collect Sediment + DUP_SD05
~6 feet from Rip Rap Wall
~2" Deep
2 Pix #66 + #67
Dark Brown Organic Silt & Fine Sand

0925 AT M2-SD9
COLLECT PARAMETERS
COLLECT SEDIMENT PID 0.2ppm
~3 FEET FROM RIP RAP
AREA IS MORE CHANNELIZED
BROWN MED-COARSE SAND
LITTLE FINE SAND & SILT
~~SOME~~ TRACE GRAVEL
2 PIX #68 + #69

0940 AT M2-SD10
COLLECT SEDIMENT PID 0.1ppm
DEPTH ~18"
COLLECTED ~3' FROM RIPRAP
LOCATED ABOUT 20' EAST
OF STORMWATER OUTFALL FROM
OPPOSITE SIDE
DARK BROWN MED-COARSE SAND
GRADES TO DARK BROWN SILT-FINE
SAND W/ LITTLE CLAY.
3 PIX #70, #71, + #72

0955 AT M2-SD11
COLLECT SEDIMENT PID 0.1 ppm
DEPTH 2-3". COLLECTED
NEARER TO MIDDLE WHERE

(61)

DEPOSITION IS OCCURRING
LOCATED ~30' EAST OF
STORMWATER OUTFALL ON OPPOSITE
SIDE
DARK BROWN MED-FINE SAND + SILT
SOME ROOTS
3 PIX #73 - #75

1010 AT M2-SD12
COLLECT PARAMETERS
COLLECT SEDIMENT FROM
DEPOSITIONAL AREA WEST
OF ~~SAND~~-GRAVEL BAR ~~LITTLE~~
DARK GRAY SILT + CLAY, GRAVEL
+ MED-COARSE SAND AT SURFACE
2 PIX #76 + #77

1030 AT M2-SD13
COLLECT PARAMETERS
COLLECT SEDIMENT.
LOCATED 40' DOWNSTREAM OF
CULVERT. NEARER CULVERT
IS TOO DEEP + COATED WITH
RIP RAP
3 PIX TAKEN AT M2-SD14
SHOWING OUTFALLS

(62)

PIX OF CULVERT NEAR
M2-SD13 #81
2 PIX OF M2-SD13 #82, #83
LOCATION ABOUT 3' FROM
RIP RAP
BROWN MED-FINE SAND + SILT
ROOTS + BRANCHES

1050 LEAVE M2 AREA

1105 ARRIVE AT CALVARY CHAPEL
PARKING LOT

1115 COLLECT PARAMETERS AT
M3-SD13/MW-SD13
COLLECT SURFACE WATER
M3-SW13
LOCATION ABOUT 50'
DOWNSTREAM OF ROAD

1125 COLLECT SEDIMENT M3-SD13
FROM POOLED DEPOSITIONAL AREA
MOST OF STREAM IS SCOURED
+ RUNNING WATER.
REDDISH BROWN-GRAY
FINE SAND + SILT, LITTLE (SOME GLAUCONITIC) CLAY
TRACE COARSE SAND + GRAVEL
2 PIX TAKEN

(63)

1155 COLLECT PARAMETERS AT
MP-SW1. COLLECT SURFACE WATER
~50' UPSTREAM OF ROAD
SLOW MOVING 12" DEEP

1205 SEDIMENT COLLECTED MP-SD1
~2' FROM BANK
DARK GRAY-OLIVE GREEN
GLAUCONITIC SAND + SILT

1230 BREAK FOR LUNCH
SET UP FOR NEXT SAMPLES

1300 HEAD TO PARK ON RT 35
HEAD TO M2-SD1/M2-SW1
OFF AR COMMUNICATIONS
PROPERTY

1335 COLLECT PARAMETERS
COLLECT SURFACE WATER M2-SW1
STREAM HAS STRONG FLOW
DEPOSITIONAL AREAS TOWARDS
BANK

1340 COLLECT SEDIMENT
~3 ft FROM BANK ON
NORTH SIDE
DARK-GRAY MED-COARSE SAND + GRAVEL
LITTLE FINE SAND + SILT

(64)

2 PIX TAKEN OF MP-SD1 AREA. NOTE NAILED ON SOUTH SIDE.

1402 AT MP-SD2/MP-SW2
COLLECT PARAMETERS
COLLECT SURFACE WATER 50' DOWN FROM OVERFLOW FROM LAKE. WATER SLUGGISH. ~3' DEEP

1415 COLLECT SEDIMENT ~5' FROM S BULKHEAD DARK GRAY, ORGANIC SILT + FINE SAND, SOME CLAY + GRAVEL

1435 LEAVE PARK AREA

1445 ARRIVE AT MP-SD3/MP-SW3 ON BROAD ST. CREEK IS SLOW MOVING ~6" DEEP, DEPOSITIONAL AREAS

1458 COLLECT PARAMETERS
COLLECT SURFACE WATER @ MP-SW3

1505 COLLECT SEDIMENT

1 PICTURE TAKEN
SAMPLES COLLECTED ~50 ft UPSTREAM OF ROAD. BROWN FINE SAND + SILT, LITTLE ORGANIC MATTER.

1515 HEAD TO CWA
PARK NEAR P27

1545 COLLECT PARAMETERS + SAMPLE AT P27-SW2 DOWNSTREAM OF OUTFALL UPSTREAM OF CULVERT

1558 COLLECT PARAMETERS + SAMPLE AT P27-SW1 AT OUTFALL
PIX TAKEN OF P27-SW1 + P27-SW2

1610 FIELD BLANK COLLECTED
CHAIN-OF-CUSTODY COMPLETED

1 FLAGGED CW3 STATIONS

1700 FINISHED. RETURN TO BLDG 173

5/28/10 Ft Monmouth sampling
0800 Tailgate safety mtng & JSA conducted by D. Dyk.
Instruments calibrated.
0825 Arrived at location of Landfill CW3.
Prepared to sample CW3 SD1 through CW3 SD3.
0850 Arrived at location CW3 SD1.
Collected sediment sample.
PID 0.6 ppm
Description Reddish brown organic silt.
Two Photos taken
In situ parameter taken (see ChemTech notes)
0900 Completed sample collection at CW3 SD1
0905 Collected sample at CW3 SD2 mw 1120/10
In situ parameters collected by Darren of ChemTech - (see ChemTech notes)

Description: Reddish brown organic silt.
PID 0.0 ppm
Two photos taken.
0915 Completed sampling at CW3 SD2
0918 Arrived at CW3 SD3.
Collected sediment sample. ChemTech Darren collects in-situ sample.
Description: Grey coarse sand also medium sand some gravel. Little fine sand.
PID - 0.0.
Two photos taken.
0925 Completed sampling at CW3 SD3
0940 Prepare to sample CW3 SW1 SW4.
0950 Collected water sample at CW3 SW4.
In situ parameter collected (see chemtech notes)

6/30/10 FT Monmouth BERA Sampling
Station CW3 SW 504 cont.
0952 Sediment sample collected CW3 504.
Description: Dk gray to light gray med to coarse sand and gravel.
PID malfunction.
GPS coord. water collected.
Two photos taken.
1000 Completed sampling at CW3 SW 504!
1014 Arrived at CW3 501/SW5
Collected in situ parameters (See Chem Tech notes.)
1015 Surface water sample collected - Little water movement.
1020 Sediment sample collected.
GPS data collected.
Two photographs taken.
Description: Brown fine sand and silt.
1028 Completed sample collection at CW3 501/SW5.

1030 Take photographs of general CW3 area. Five photos taken.
Prepare to sample CW3 506.
1040 Arrived at CW3 506
In situ parameters collected.
Substrate rocky at GPS location. Moved approx 30 ft downstream to depositional area.
1048 Sediment sample collected at CW3 506.
Description: Gray medium sand grading to dk brown silt - some organic matter.
GPS data and in situ parameters collected See Chem Tech notes for in-situ data.
Two photos taken of sample location.
1100 Completed sampling at location CW3 506!
Travelled to RSLK works office.
Checked in with office to notify them of sampling activities

6/28/10

1125 Public Works stream access

1135 Arrived at location CW3 SD SW 7
In situ parameters collected. (See Chem Lab Notes)
Surface water sample collected. Water turbid. Film on surface

1140 Sediment sample collected. Description: Gray sand and silt – dk brown silt.
GPS coordinates collected.
Two photographs collected.

1210 Arrived at location CW3-SD/SW 8
Insufficient water at this location.
Sediment sample collected.
Location SW7 (CW3SD7) is furthest upstream location with sufficient water for sampling.
Description: 1-2 inches grey mud to coarse sand and gravel - grading into dk brown silt - organic matter.

1218 Two photographs taken at CW3 SW8.
Dan Gizzi

GPS coordinates collected.

1227 Completed sampling at CW3 SD8.

1315 Reached campground & gear near ocean port storage House for station P69 SW2

1330 Arrived at location P69 SW2 - Collected surface water sample. Tide ebbing.
Two photographs taken.

1339 Completed sampling at P69 SW2.

1345 Arrived at MH SW/SD12 Collected water sample, water fairly clear, some surface algae.

1353 Sediment sample collected. Description - Gray organic silt - some roots.

6/28/10

1400 GPS coordinates collected.
Two photographs taken of sediment sample location.

1405 Completed sample collection at MW4SWSD12.
Returned to shore.

1415 Collected Field Blank EBG282010.
DI water poured over decontaminated auger into decontaminated SS bowl.

1420 Light rain begins. Then clearing.

1440 Sampling completed. Packed samples and equipment.

MM 6/28/10

Appendix H

Fort Monmouth
Maximum Background Concentrations

CENAB-EN-HM

U.S. Army Corps of Engineers
Baltimore District

FINAL

Site Investigation
Fort Monmouth, New Jersey
Main Post and Charles Wood Areas

Site Investigation Report

Contract Number DACA31-92-D-0018

Delivery Order 0041/0045/0047

December 1995

Prepared for:

U.S. ARMY CORPS OF ENGINEERS
10 South Howard Street
Baltimore, Maryland 21201

Prepared by:

Roy F. Weston, Inc.
West Chester,
Pennsylvania 19380-1499

95P-4674

PRINTED ON RECYCLED PAPER

FINAL

SITE INVESTIGATION
FORT MONMOUTH, NEW JERSEY
MAIN POST AND CHARLES WOOD AREAS

Prepared For:

U.S. ARMY CORPS OF ENGINEERS
Baltimore District
10 South Howard Street
Baltimore, MD 21201

Under:

Contract DACA31-92-D-0018

Prepared By:

ROY F. WESTON, INC.
1 Weston Way
West Chester, PA 19380-1499

December 1995

Table 4.1-6

Fort Monmouth - Main Post

Summary of Site-Specific and Monmouth County

Soil and Groundwater Maximum Background Concentrations

COMPOUNDS	SOILS		GROUNDWATER	
	Site Specific (maximum)	Monmouth County[1] (maximum)	Site Specific (maximum)	Monmouth County[2] (maximum)
SVOC'S	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Phenol	0.420 J	-	ND	-
Acenaphthylene	0.041 J	-	ND	-
Acenaphthene	0.100 J	-	ND	-
Dibenzofuran	0.060 J	-	ND	-
Diethylphthalate	ND	-	ND	-
Fluorene	0.074 J	-	ND	-
Phenanthrene	0.39	-	ND	-
Anthracene	0.100 J	-	ND	-
Di-n-butylphthalate	2.2 B	-	ND	-
Fluoranthene	0.46	-	ND	-
Pyrene	1.5	-	ND	-
Benzo(a)anthracene	0.65	-	ND	-
Chrysene	0.65	-	3 J	-
bis(2-Ethylhexyl)phthalate	.19 J	-	5 J	-
Benzo(b)fluoranthene	0.9	-	ND	-
Benzo(k)fluoranthene	0.43	-	ND	-
Benzo(a)pyrene	0.6	-	ND	-
Indeno(1,2,3-cd)pyrene	0.46	-	ND	-
Dibenzo(a,h)anthracene	0.079 JB	-	ND	-
Benzo(g,h,i)perylene	0.64 B	-	ND	-
PESTICIDE / PCB	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Heptachlor epoxide	ND	-	0.041 J	-
4,4-DDD	0.0096 P	-	ND	-
4,4'-DDE	0.0096 P	-	ND	-
4,4'-DDT	0.11	-	ND	-
METALS TOTAL	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Aluminum	15200	NLE	121000	NLE
Antimony	ND	NLE	20.7	NLE
Arsenic	22.9	4.56	89.3	NLE
Barium	32.3	NLE	699	400
Beryllium	2	0.09	2.1	7
Calcium	921	NLE	45400	7300
Cadmium	ND	0.116	9.5	6
Cobalt	2.5	NLE	18.3	NLE
Chromium	269	0.104	191	< 50
Copper	8	6.05	65.6	730
Cyanide	ND	NLE	ND	NLE
Iron	55800	11	431000	27000
Lead	19.5	25.9	22.7	< 100
Magnesium	7230	NLE	62700	25000
Mercury	ND	NLE	0.26	NLE
Manganese	90.7	59	331	480
Nickel	8.4	3.2	187	NLE
Potassium	15400	NLE	137000	10000
Silver	1.1	0.21	ND	< 10
Sodium	51.6	NLE	21500	197000
Selenium	1.9	0.11	29.6	NLE
Thallium	ND	NLE	5.5	NLE
Vanadium	94.1	1.3	108	NLE
Zinc	81.4	44.6	233	60

ND - Not detected at the quantification limits

NLE - No level established

[1] - Sample 35 in Fields et al., 1992

[2] - From Table 9 in Harriman and Sargent, 1985

- Literature search was not completed for SVOC and Pest/PCB compounds.

Table 4.1-7

Fort Monmouth - Charles Wood

Summary of Site Specific and Monmouth County

Soil and Groundwater Maximum Background Concentrations

COMPOUNDS	SOILS		GROUNDWATER	
	Site Specific (maximum)	Monmouth County[1] (maximum)	Site Specific (maximum)	Monmouth County[2] (maximum)
SVOC'S	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Phenol	ND	-	ND	-
Acenaphthylene	ND	-	ND	-
Acenaphthene	ND	-	ND	-
Dibenzofuran	ND	-	ND	-
Diethylphthalate	ND	-	1 J	-
Fluorene	ND	-	ND	-
Phenanthrene	ND	-	ND	-
Anthracene	ND	-	ND	-
Di-n-butylphthalate	2 B	-	ND	-
Fluoranthene	0.042 J	-	ND	-
Pyrene	0.048 J	-	ND	-
Benzo(a)anthracene	0.046 J	-	ND	-
Chrysene	0.083 J	-	ND	-
bis(2-Ethylhexyl)phthalate	0.170 J	-	600	-
Benzo(b)fluoranthene	0.078 J	-	ND	-
Benzo(k)fluoranthene	0.041 J	-	ND	-
Benzo(a)pyrene	0.047 J	-	ND	-
Indeno(1,2,3-cd)pyrene	ND	-	ND	-
Dibenzo(a,h)anthracene	ND	-	ND	-
Benzo(g,h,i)perylene	0.042 J	-	ND	-
PESTICIDE / PCB	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Heptachlor epoxide	ND	-	ND	-
4,4-DDD	ND	-	ND	-
4,4'-DDE	0.071	-	ND	-
4,4'-DDT	0.053	-	ND	-
METALS TOTAL	(mg/kg)	(mg/kg)	(µg/L)	(µg/L)
Aluminum	15700	NLE	8210	NLE
Antimony	ND	NLE	ND	NLE
Arsenic	31.6	10.7	25.1	NLE
Barium	26	NLE	192	400
Beryllium	1.7	0.88	2.8	7
Calcium	653	NLE	8700	7300
Cadmium	ND	0.135	3.7	6
Cobalt	4.5	NLE	30.6	NLE
Chromium	128	0.14	49.6	< 50
Copper	6.6	7.27	9.8	730
Cyanide	0.41	NLE	ND	NLE
Iron	45500	23.7	19600	27000
Lead	11.1	15.1	7.3	< 100
Magnesium	3960	NLE	7160	25000
Mercury	ND	NLE	ND	NLE
Manganese	48.7	120	232	480
Nickel	8.3	8.3	48.3	NLE
Potassium	10600	NLE	4630	10000
Silver	ND	0.26	ND	< 10
Sodium	56.8	NLE	36400	197000
Selenium	0.85	0.17	3.8	NLE
Thallium	ND	NLE	ND	NLE
Vanadium	59.6	14	28.9	NLE
Zinc	55.6	28.1	133	60

ND - Not detected at the quantification limits

NLE - No level established

[1] - Sample 36 in Fields et al., 1992

[2] - From Table 9 in Harriman and Sargent, 1985

- Literature search was not completed for SVOC and Pest/PCB compounds.

Table 4.1-8
Fort Monmouth - Main Post
Surface Water and Sediment Maximum Background Concentrations

COMPOUND	SEDIMENTS (mg/kg)	SURFACE WATER	
		Total	Soluable
VOCs			
Acetone	0.47 B	ND	ND
2-Butanone	0.1	ND	ND
SVOCs			
Phenanthrene	0.39 J	ND	ND
Anthracene	0.061 J	ND	ND
Carbazole	0.051 J	ND	ND
Di-n-butylphthalate	0.26 JB	ND	ND
Fluoranthene	1.5	ND	ND
Pyrene	2	ND	ND
Benzo(a)anthracene	1.3	ND	ND
Chrysene	0.37 J	ND	ND
bis(2-Ethylhexyl)phthalate	0.43 J	ND	ND
Benzo(b)fluoranthene	1.8	ND	ND
Benzo(k)fluoranthene	0.58	ND	ND
Benzo(a)pyrene	1.2	ND	ND
Indeno(1,2,3-cd)pyrene	0.7	ND	ND
Dibenzo(a,h)anthracene	0.12 J	ND	ND
Benzo(g,h,i)perylene	0.67	ND	ND
Total Organic Carbon	5.7	ND	ND
PESTICIDES/PCBs			
Heptachlor epoxide	0.014 P	ND	ND
Endosulfan I	0.0024 J	ND	ND
4,4'-DDE	0.0092 J	ND	ND
4,4'-DDD	0.013	ND	ND
4,4'-DDT	0.0057 JP	ND	ND
alpha-Chlordane	0.011 P	ND	ND
gamma-Chlordane	0.0092 P	ND	ND
METALS			
Aluminum	9060	748	ND
Arsenic	14.5	2.6	ND
Barium	87.6	44.7	39.4
Beryllium	3.2	ND	ND
Calcium	3180	31600	30900
Cobalt	119	8.1	4.1
Chromium	88.1	7.5	ND
Copper	48.4	3.2	4
Iron	61900	6210	405
Mercury	1.7	ND	ND
Potassium	10200	5060	4280
Magnesium	3280	5440	5120
Manganese	70.2	113	98.6
Sodium	189	26700	26200
Nickel	131	22.9	16.1
Lead	64.1	10	ND
Selenium	1.7	ND	ND
Vanadium	49.1	5.8	ND
Zinc	162	35.1	23.8
Cyanide	3.1	ND	ND

Table 4.1-9
Fort Monmouth - Charles Wood
Surface Water and Sediment Maximum Background Concentrations

COMPOUND	SEDIMENT	SURFACE WATER	
		(Total)	(Soluble)
SVOCs (mg/kg)			
bis-(2-Ethylhexy)phthalate	0.23 J	1 J	ND
Di-n-butylphthalate	0.12 J	ND	ND
PAHs (mg/kg)			
Benzo (a)anthracene	0.09 J	ND	ND
Benzo (a)pyrene	0.1 J	ND	ND
Benzo (b)fluoranthene	0.16 J	ND	ND
Benzo (g,h,i)perylene	0.21 J	ND	ND
Chrysene	0.14 J	ND	ND
Fluoranthene	0.12 J	ND	ND
Indeno (1,2,3-cd)perylene	0.19 J	ND	ND
Phenanthrene	0.079 J	ND	ND
Pyrene	0.41 J	ND	ND
PESTICIDES/PCBs (mg/kg)			
4,4'-DDD	0.015 PD	ND	ND
4,4'-DDE	0.096	ND	ND
4,4'-DDT	0.11	ND	ND
METALS TOTAL (mg/kg)			
Aluminum	6660	265	160
Antimony	ND	26.8	ND
Arsenic	5.8	ND	ND
Barium	45.7	77.1	78.2
Calcium	2960	22900	24000
Chromium	36.9	ND	ND
Cobalt	4.2	2.8	ND
Copper	24.5	8	10.2
Iron	19600	715	435
Lead	142	5.3	65.9
Magnesium	2560	7050	7390
Manganese	65.1	97.4	100
Nickel	11.3	ND	ND
Potassium	1700	3590	4040
Selenium	0.68	ND	ND
Sodium	271	156000	164000
Vanadium	39.5	ND	ND
Zinc	126	204	215

J - Estimated Concentrations

D - Diluted Analysis

P - Percent difference between two columns, the smaller of two is reported

ND - Compound was not detected at or above the quantification limit.

APPENDIX I
NJDEP Correspondence

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
SITE REMEDIATION, PUBLICLY FUNDED REMEDIATION ELEMENT
P.O. BOX 413
TRENTON, NEW JERSEY 08625-0413

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

April 28, 2010

Ms. Wanda Green
BRAC Environmental Coordinator
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703

RE: Final Baseline Ecological Evaluation Work Plan
Fort Monmouth, NJ

Dear Ms. Green:

The NJDEP Site Remediation Program (SRP) has reviewed the Final Baseline Ecological Evaluation (BEE) Work Plan, Fort Monmouth Main Post and Charles Wood Area, dated January 2010, by Shaw Environmental, Inc.

As all of our previous comments have been addressed, the NJDEP hereby approves the Final BEE Workplan.

You may contact me at 609-633-0766 with any questions on the BEE Work Plan, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn

Larry Quinn, P.E., Site Manager
Bureau of Investigation, Design and Construction

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
PUBLICLY FUNDED REMEDIATION ELEMENT
P.O. BOX 413
TRENTON, NJ 08625-0413

JON S. CORZINE
Governor

MARK N. MAURIELLO
Acting Commissioner

September 1, 2009

Ms. Wanda Green
BRAC Environmental Coordinator
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703

RE: Draft Final Baseline Ecological Evaluation Work Plan
Fort Monmouth, NJ

Dear Ms. Green:

The NJDEP Site Remediation Program (SRP) has completed its review of the Draft Final Baseline Ecological Evaluation (BEE) Work Plan, dated July 2009, by Shaw Environmental, Inc. Our comments on the document are attached.

As you will see in the comments, we feel that a justification should be documented for the site remediation areas of concern (AOCs) that aren't proposed for inclusion in the BEE. Aside from that, the SRP is generally pleased with the Draft Final BEE Work Plan and the Army's initiative in conducting the BEE. The sampling and analyses that are proposed in the Draft Final BEE Work Plan go beyond the minimum requirements for a BEE. The resulting data will be useful in assessing the need for additional investigations and/or remedial actions at many of Fort Monmouth's AOCs.

You or your staff may contact me at 609-633-0766 with any questions on the enclosed comments, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn

Larry Quinn, P.E., Site Manager
Bureau of Investigation, Design and Construction

Attachment

NJDEP COMMENTS on DRAFT FINAL BEE WORKPLAN
FORT MONMOUTH, NJ

1. General. NJDEP wants to ensure that the BEE will assess all sites with the potential for impacts to ecological receptors. The fourth paragraph of Section 1.0 and the first paragraph of Section 3.0 discuss the total numbers of Installation Restoration Program (IRP) sites and Environmental Condition of Property (ECP) sites, and the number of sites included in the BEE. Table 3-1 lists the sites included in the BEE and Sections 3.1 and 3.2 discuss each included site in detail. However, the workplan contains no discussion of the areas of concern (AOCs) that aren't included in the planned BEE, some of which have or had the potential for impacts to ecological receptors (the Former Main Post Sewage Treatment Plant (FTMM-20) and Site CW-7 are two examples). To provide assurances that all necessary sites or AOCs will be addressed in the BEE, the BEE Workplan must include the following:

   a) a list and summary of all (active and closed) IRP, underground storage tank (UST), and ECP sites, and
   b) a brief technical justification for the non-inclusion of the IRP, UST, and ECP sites that are not included in the BEE.

2. Report References. The third paragraph of Section 3.1.8, Water Tank (M-15), states that a Remedial Action Report (RAR) was submitted to NJDEP in February 2007. Similarly, the third paragraph of Section 3.1.9, Pesticide Storage, Building 498 (M-16) states that an RAR was submitted to NJDEP. NJDEP has not received either of the referenced RARs.

3. Sediment Sampling. The sections listed below all end with the statement that "In order to facilitate the BEE, sediment and surface water sampling within...(the adjacent stream)...are recommended." However, the workplan doesn't include sediment sampling at these AOCs, because existing sediment data is to be used (Table 4-2). The narratives should be corrected.

   3.1.11 Building 1122, Unknown Discharge
   3.1.12 Building 283, Leaking UST, Gasoline
   3.1.14 Buildings 283, 288, 291, 292, 293, 295 (ECP Parcel 49)
   3.1.15 Building 1075 (ECP Parcel 61)
   3.1.16 Building 900 (ECP Parcel 69)
   3.2.3 Building 2700 (ECP Parcel 15)
   3.2.4 Buildings 2507 and 2704 (ECP Parcel 27)
   3.2.5 Building 2525 (ECP Parcel 28)

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
PUBLICLY FUNDED REMEDIATION ELEMENT
P.O. BOX 413
TRENTON, NJ 08625-0413

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

October 28, 2008

Mr. Joseph Fallon, CHMM
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703

RE: Draft Site Investigation Report
Fort Monmouth, NJ

Dear Mr. Fallon:

The NJDEP Division of Remediation Management & Response (DRMR) has reviewed the Draft Site Investigation Report dated July 21, 2008 by Shaw Environmental, Inc., which was prepared under Phase II of the Environmental Condition of Property (ECP) assessment of Fort Monmouth. Our comments are attached.

You or your staff may contact me at 609-633-0766 with any questions on the enclosed comments, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn

Larry Quinn, P.E., CHMM, Site Manager
Bureau of Design and Construction

Attachment

NJDEP COMMENTS on
SITE INVESTIGATION REPORT
FORT MONMOUTH, NJ

General Comments

1. USTs at Parcels 14, 28, 51, 76, and 79. The recommendation of no further action (NFA) for the suspected underground storage tanks (USTs) is not acceptable to the NJDEP. The suspected USTs are subject to New Jersey regulations N.J.A.C. 7:26E – Technical Requirements for Site Remediation (the Technical Requirements). Under the Technical Requirements, Fort Monmouth is required to do at least the following in regard to the suspected USTs:

    a) Verify the tank contents and collect a sample of any contents for analysis as specified at 7:26E-3.9(a)3.iii,
    b) Collect and analyze at least 4 soil samples within 2 feet of each tank as specified at 7:26E-3.9(a)3.i,
    c) Conduct a site investigation for ground water in accordance with 7:26E-3.7 and 3.4,
    d) Implement remedial action and tank closure in accordance with 7:26E-6.3(b).

    The soil and ground water sampling conducted during the Army's Site Investigation (SI) are a good starting point. However, since suspected USTs have been identified by geophysical surveys, the specific sampling requirements of 7:26E-3.4, 3.7, and 3.9 must now be followed.

    The suspected USTs are **also** subject to N.J.A.C. 7:14B - Underground Storage Tanks. Under 7:14B-1.4(b)3, tanks of any size used to store heating oil for onsite consumption in a residential building (such as a barracks) are exempted from the requirements of the UST regulations. However, all other hazardous substance USTs of any size are regulated due to the aggregate volume provision found in the definition of "Tank capacity" in 7:14B-1.6. All confirmed regulated USTs at Fort Monmouth must be registered and closed in accordance with 7:14B.

2. Septic System at Parcel 28. Similarly, the recommendation of NFA for the septic tank, septic box, and septic piping at Parcel 28 is also unacceptable. The septic system components must be sampled as specified at 7:26E – 3.9(e)3 and the ground water sampling requirements of 7:26E-3.7 must also be followed.

3. Action Levels, page 2-14. Analytical results were compared to NJDEP criteria, specifically the non-residential direct contact soil cleanup criteria (NRDCSCC) and the impact-to-ground water soil cleanup criteria (IGWSCC). Subsequent to the start of the site investigation, NJDEP has promulgated new Soil Remediation Standards (SRS). The NJDEP has provided for a phase in period for the new SRS. If a Remedial Action Workplan (RAW) is submitted to the Department on or before December 2, 2008 (6 months after the June 2, 2008 promulgation date) then the

subsequent cleanup may be conducted using the previous SCC. However, any remedial actions not approved by NJDEP by the December 2, 2008 deadline must follow the new SRS. Detailed guidance can be found at the following website: http://www.nj.gov/dep/srp/guidance/rs/.

4. Sediments at Parcels 15, 27, 28, 39, 43, 49, 61, and 69. NJDEP concurs with the recommendations to further evaluate sediments at these Parcels as part of a facility-wide baseline ecological evaluation.

5. Indoor Air at Parcels 15, 34, 43, 50, and 52. NJDEP concurs with the recommendations to conduct one additional round of indoor air sampling at these Parcels.

6. Section 4.1.2, Surface and Subsurface Soil Investigations. This section discusses the results of soil sampling at multiple areas of concern (AOCs) relative to the NJDEP **Non-Residential** Direct Contact Soil Cleanup Criteria (NRDCSCC). Further evaluation of soil contamination is recommended at some, but not all, soil AOCs.

   The future use of most Parcels at Fort Monmouth is not yet certain. Since future residential use is possible, **all** areas of soil contamination must be delineated to the **Residential** Direct Contact Soil Cleanup Criteria (RDCSCC). Remediation of soils by the Army to the NRDCSCC prior to property transfer would be acceptable, but deed notices would be required to document remaining soil contamination above the RDCSCC, and appropriate engineering controls must be implemented and documented.

Parcel-Specific Comments

Parcel 13 – Former Barracks (Buildings 2004-2016)

1. The recommendations of NFA for soil and ground water are acceptable based upon the sampling results and the results of the geophysical survey.

2. The Report states that no suspected USTs were located by the geophysical surveys, however it further indicates that no UST removals have been documented at the locations of numerous former barracks within Parcel 13. The Report should provide a possible explanation(s) for why no USTs were found.

Parcel 14 – Northwest Portion of CWA

1. See General Comment #1 above.

Parcel 15 – Building 2700

1. The Report states that no suspected USTs were located by the geophysical surveys, however it further indicates that no UST removals have been documented at the locations of numerous former barracks within Parcel 15. The Report should provide a possible explanation(s) for why no USTs were found.

2. It is unclear why an NFA for ground water is being recommended when a ground water remediation is currently being implemented for the CW-1 area. If the Army wants to identify individual AOCs within Parcel 15 for an NFA designation, they should make that case for those individual AOCs.

3. The recommendation of NFA for soil is acceptable based upon the sampling results and the results of the geophysical survey.

4. The report states that well UST-2337-65 could not be located. If the well has been surveyed, an attempt shall be made to locate the well using the State Plane Coordinates.

Parcel 27 – Southwestern Corner CWA

1. The report states that numerous USTs were removed from this parcel and are summarized in the Phase I ECP Report. Appendix A of that document states that the Department sent UST closure approval letters for 7 of the 12 USTs that were removed, and that the Army is waiting for Department approval of the remaining 5 UST closures.

   NFA for soil and ground water cannot be approved until documentation on all 12 USTs, including the closure reports for the remaining 5 USTs, are reviewed by the NJDEP project team. NJDEP requests that the Army provide a brief summary of the 7 USTs that received Department approval. This summary should include a figure showing the former UST locations and the soil and ground water sampling locations and results.

Parcel 28 - Former Eatontown Laboratory

1. See General Comment #2 above.

2. Former installation plans and figures show three separate septic tanks and leach fields and one underground transformer vault. These potential AOCs must be shown on Figure 3.5-1 to allow comparison with sample locations.

3. Figure 3.5-2 shows that only one suspected septic tank, one suspected septic distribution tank, and one suspected pipe were found. The Report should provide a possible explanation(s) for why the suspected three septic tanks and leach fields and one underground transformer vault weren't located.

4. There is no recommendation or proposal for the former storage areas and possible former tank pads.

Parcel 34 – Building 2567

No specific comments. NJDEP hopes to review the Remedial Investigation Report and Remedial Action Workplan (dated 10-28-05) on Building 2567 in the coming months.

Parcel 38 – Former Outdoor Pistol Range (1940-1955)

1. The NFA proposal is not acceptable. Since the site may have been re-worked, the surface soil sampling results are not a reliable indicator of potential ground water contamination, and a site investigation for ground water must be performed in accordance with 7:26E-3.7. Ground water samples should be analyzed for lead.

Parcel 39 - Building 1150 (Vail Hall)

1. The report states that no metal contaminants were detected in soil above the NJDEP NRDCSCC. The recommendation of NFA for soil is acceptable, however, soil contaminants must be compared to and delineated to the RDCSCC, so that a deed notice can be filed when necessary.

Parcel 43 – Building 1122 (Do-it-yourself Auto Repair)

No specific comments. NJDEP recently provided comments on reports specific to Building 1122.

Parcel 49 - Former Squier Laboratory Complex

1. NJDEP concurs with the recommendations to conduct additional sampling of surface soils to delineate contaminants above NJDEP criteria.

2. The proposal to add benzene and bromodichloromethane to the proposed CEA for the M-18 Landfill should be included in a future CEA proposal.

3. The SI Report must include some discussion regarding the source of the VOC contaminants in ground water or the remediation of the contamination, as required by N.J.A.C. 7:26E-3.13(b)4ii(1) and N.J.A.C. 7:26E-3.13(b)4ii(4).

Parcel 50, IRP Sites FTMM-54, FTMM-55 and FTMM-61

No specific comments. The comments previously provided by NJDEP on the M-18 Landfill, Building 296, and Building 290 sites in a letter dated August 14, 2007 need to be addressed.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings

1. See General Comment #1 above.

Parcel 52 – Building 699 - Army Exchange Services Gas Station

No specific comments. NJDEP hopes to begin reviewing the available Remedial Action Progress Reports on Building 699 in the coming months.

Parcel 57 – Former Coal Storage and Railroad Unloading – 800 Area

1. NJDEP concurs with the general recommendation to conduct additional soil and ground water sampling. A remedial investigation (RI) of ground water is required pursuant to N.J.A.C. 7:26E-4.4. A RI workplan for all proposed investigation work shall be submitted for NJDEP approval.

2. Previous NJDEP comments requested that the analytical parameters for soils include PCBs, due to reported historical coal storage and fuel unloading activities. The requested PCB analyses were not performed. Soil sample collection and analysis for PCBs must be included in the RI work plan.

Parcel 61 – Building 1075 - Patterson Health Clinic

1. NJDEP concurs with the recommendations to conduct additional soil sampling to evaluate base neutral contamination.

2. Previous NJDEP comments requested that the analytical parameters for soils include PCBs, due to reported historical coal storage and fuel unloading activities. The requested PCB analyses were not performed. Soil samples must be re-collected and analyzed for PCBs.

Parcel 69 - Building 900 Former Vehicle Repair/Motor Pool

1. The proposed NFA for soil is not acceptable. Sample analysis at this AOC should have included analysis for PCBs, due to the former waste oil tank, as stated in previous NJDEP comments. Soil samples must be re-collected and analyzed for PCBs.

2. All sediment samples collected adjacent to Parcel 69 must include PCB analysis.

3. NJDEP concurs with the recommendations to further evaluate ground water. Pursuant to N.J.A.C. 7:26E-4.4, a remedial investigation of ground water is required. An investigation workplan must be submitted for NJDEP review and approval.

Parcel 70 – Building 551 – Former Photoprocessing

1. NJDEP concurs with the recommendations for no further action (NFA).

Parcel 76 – 200 Area, 300 Area – Former Barracks

1. See General Comment #1 above.

Parcel 79 – 400 Area Former Barracks

1. See General Comment #1 above.

Parcel 80 – Former Buildings 105 and 106 – Photoprocessing

1. The footprint of the former building 105 and 106 should be shown on Figure 3.20-1. On the current Figure, it cannot be determined where the former buildings were located in relation to the Geoprobe borings, so NFA for soil can't be approved.

2. The NJDEP concurs with the recommendation for further evaluation of ground water. Pursuant to N.J.A.C. 7:26E-4.4, a remedial investigation of ground water is required. An RI workplan must be submitted for NJDEP review and approval.

Parcel 83 - Northeast MP

1. Former structures, buildings and other areas of concern are discussed in the text and in the tables but are not indicated on the Figure 3.21-1. All areas of concern, whether existing or former structures, must be depicted on the site figures.

2. The NFA proposal for ground water is acceptable, based on the ground water sampling results presented in the report.

Sanitary Sewer System

No comments.

Electrical Substations

1. As discussed in General Comment #6, a Deed Notice and engineering controls are required at the 2 locations where PCBs were found above the RDCSCC of 0.49 ppm.

APPENDIX J

Fort Monmouth Surface Water Salinity Data for Main Post (2004-2009)

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #3 (ppt)	Tide
3	03/17/2004	1Q	3/17/2004	4	H - O
3	06/29/2004	2Q	6/29/2004	2	H - O
3	08/26/2004	3Q	8/26/2004	6	H - O
3	11/23/2004	4Q	11/23/2004	1	NR
3	03/03/2005	1Q	3/3/2005	1	NR
3	06/15/2005	2Q	6/15/2005	0	NR
3	09/13/2005	3Q	9/13/2005	0	NR
3	12/01/2005	4Q	12/1/2005	0	NR
3	02/22/2006	1Q	2/22/2006	0	NR
3	05/31/2006	2Q	5/31/2006	0	NR
3	09/20/2006	3Q	9/20/2006	0	NR
3	12/11/2006	4Q	12/11/2006	0	NR
3	03/13/2007	1Q	3/13/2007	0	NR
3	06/26/2007	2Q	6/26/2007	0	NR
3	09/13/2007	3Q	9/13/2007	0	NR
3	12/19/2007	4Q	12/19/2007	0	NR
3	03/25/2008	1Q	3/25/2008	0	NR
3	06/26/2008	2Q	6/26/2008	0	NR
3	09/30/2008	3Q	9/30/2008	0	NR
3	03/24/2009	1Q	3/24/2009	24	NR
3	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #5 (ppt)	Tide
5	03/17/2004	1Q	3/17/2004	7	H - O
5	06/29/2004	2Q	6/29/2004	9	H - O
5	08/26/2004	3Q	8/26/2004	13	H - O
5	11/23/2004	4Q	11/23/2004	2	NR
5	03/03/2005	1Q	3/3/2005	1	NR
5	06/15/2005	2Q	6/15/2005	0	NR
5	09/13/2005	3Q	9/13/2005	0	NR
5	12/01/2005	4Q	12/1/2005	0	NR
5	02/22/2006	1Q	2/22/2006	0	NR
5	05/31/2006	2Q	5/31/2006	0	NR
5	09/20/2006	3Q	9/20/2006	0	NR
5	12/11/2006	4Q	12/11/2006	0	NR
5	03/13/2007	1Q	3/13/2007	0	NR
5	06/28/2007	2Q	6/28/2007	0	NR
5	09/13/2007	3Q	9/13/2007	0	NR
5	12/19/2007	4Q	12/19/2007	0	NR
5	03/25/2008	1Q	3/25/2008	0	NR
5	06/26/2008	2Q	6/26/2008	0	NR
5	09/30/2008	3Q	9/30/2008	0	NR
5	03/24/2009	1Q	3/24/2009	0	NR
5	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #9 (ppt)	Tide
9	03/17/2004	1Q	3/17/2004	19	H - O
9	06/29/2004	2Q	6/29/2004	20	H - O
9	08/26/2004	3Q	8/26/2004	16	H - O
9	11/23/2004	4Q	11/23/2004	5	NR
9	03/03/2005	1Q	3/3/2005	0	NR
9	06/14/2005	2Q	6/14/2005	7	NR
9	09/12/2005	3Q	9/12/2005	4	NR
9	11/30/2005	4Q	11/30/2005	0	NR
9	02/22/2006	1Q	2/22/2006	0	NR
9	05/30/2006	2Q	5/30/2006	0	NR
9	09/19/2006	3Q	9/19/2006	0	NR
9	12/11/2006	4Q	12/11/2006	0	NR
9	03/13/2007	1Q	3/13/2007	0	NR
9	06/26/2007	2Q	6/26/2007	0	NR
9	09/13/2007	3Q	9/13/2007	0	NR
9	12/19/2007	4Q	12/19/2007	0	NR
9	03/26/2008	1Q	3/26/2008	0	NR
9	06/26/2008	2Q	6/26/2008	0	NR
9	09/30/2008	3Q	9/30/2008	0	NR
9	03/24/2009	1Q	3/24/2009	0	NR
9	09/25/2009	3Q	9/25/2009	10	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #11 (ppt)	Tide
11	03/17/2004	1Q	3/17/2004	0	H - O
11	06/29/2004	2Q	6/29/2004	0	H - O
11	08/26/2004	3Q	8/26/2004	0	H - O
11	11/23/2004	4Q	11/23/2004	1	NR
11	03/03/2005	1Q	3/3/2005	0	NR
11	06/14/2005	2Q	6/14/2005	0	NR
11	09/12/2005	3Q	9/12/2005	0	NR
11	11/30/2005	4Q	11/30/2005	0	NR
11	02/22/2006	1Q	2/22/2006	0	NR
11	05/30/2006	2Q	5/30/2006	0	NR
11	09/19/2006	3Q	9/19/2006	0	NR
11	12/11/2006	4Q	12/11/2006	0	NR
11	03/13/2007	1Q	3/13/2007	0	NR
11	06/26/2007	2Q	6/26/2007	0	NR
11	09/13/2007	3Q	9/13/2007	0	NR
11	12/19/2007	4Q	12/19/2007	0	NR
11	03/25/2008	1Q	3/25/2008	0	NR
11	06/26/2008	2Q	6/26/2008	0	NR
11	09/30/2008	3Q	9/30/2008	0	NR
11	03/24/2009	1Q	3/24/2009	0	NR
11	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #12 (ppt)	Tide
12	03/17/2004	1Q	3/17/2004	0	H - O
12	06/29/2004	2Q	6/29/2004	0	H - O
12	08/26/2004	3Q	8/26/2004	0	H - O
12	11/23/2004	4Q	11/23/2004	1	NR
12	03/03/2005	1Q	3/3/2005	0	NR
12	06/14/2005	2Q	6/14/2005	0	NR
12	09/12/2005	3Q	9/12/2005	0	NR
12	11/30/2005	4Q	11/30/2005	0	NR
12	02/22/2006	1Q	2/22/2006	0	NR
12	05/30/2006	2Q	5/30/2006	0	NR
12	09/19/2006	3Q	9/19/2006	0	NR
12	12/11/2006	4Q	12/11/2006	0	NR
12	03/13/2007	1Q	3/13/2007	0	NR
12	06/26/2007	2Q	6/26/2007	0	NR
12	09/13/2007	3Q	9/13/2007	0	NR
12	12/19/2007	4Q	12/19/2007	1	NR
12	03/25/2008	1Q	3/25/2008	0	NR
12	06/26/2008	2Q	6/26/2008	0	NR
12	09/30/2008	3Q	9/30/2008	0	NR
12	03/24/2009	1Q	3/24/2009	0	NR
12	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #13 (ppt)	Tide
13	03/17/2004	1Q	3/17/2004	0	H - O
13	06/29/2004	2Q	6/29/2004	0	H - O
13	08/26/2004	3Q	8/26/2004	0	H - O
13	11/23/2004	4Q	11/23/2004	2	NR
13	03/03/2005	1Q	3/3/2005	0	NR
13	06/14/2005	2Q	6/14/2005	0	NR
13	09/12/2005	3Q	9/12/2005	0	NR
13	11/30/2005	4Q	11/30/2005	0	NR
13	02/22/2006	1Q	2/22/2006	0	NR
13	05/30/2006	2Q	5/30/2006	0	NR
13	09/19/2006	3Q	9/19/2006	0	NR
13	12/11/2006	4Q	12/11/2006	0	NR
13	03/13/2007	1Q	3/13/2007	2	NR
13	06/26/2007	2Q	6/26/2007	0	NR
13	09/13/2007	3Q	9/13/2007	0	NR
13	12/19/2007	4Q	12/19/2007	2	NR
13	03/25/2008	1Q	3/25/2008	0	NR
13	06/26/2008	2Q	6/26/2008	0	NR
13	09/30/2008	3Q	9/30/2008	0	NR
13	03/24/2009	1Q	3/24/2009	0	NR
13	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #14 (ppt)	Tide
14	03/17/2004	1Q	3/17/2004	0	H - O
14	06/29/2004	2Q	6/29/2004	0	H - O
14	08/26/2004	3Q	8/26/2004	0	H - O
14	11/23/2004	4Q	11/23/2004	0	NR
14	03/03/2005	1Q	3/3/2005	0	NR
14	06/14/2005	2Q	6/14/2005	0	NR
14	09/12/2005	3Q	9/12/2005	0	NR
14	11/30/2005	4Q	11/30/2005	0	NR
14	02/22/2006	1Q	2/22/2006	0	NR
14	05/30/2006	2Q	5/30/2006	0	NR
14	09/19/2006	3Q	9/19/2006	0	NR
14	12/11/2006	4Q	12/11/2006	0	NR
14	03/13/2007	1Q	3/13/2007	0	NR
14	06/26/2007	2Q	6/26/2007	0	NR
14	09/13/2007	3Q	9/13/2007	0	NR
14	12/19/2007	4Q	12/19/2007	0	NR
14	03/25/2008	1Q	3/25/2008	0	NR
14	06/26/2008	2Q	6/26/2008	0	NR
14	09/30/2008	3Q	9/30/2008	0	NR
14	03/24/2009	1Q	3/24/2009	0	NR
14	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #15 (ppt)	Tide
15	03/17/2004	1Q	3/17/2004	4	H - O
15	06/29/2004	2Q	6/29/2004	5	H - O
15	08/26/2004	3Q	8/26/2004	7	H - O
15	11/23/2004	4Q	11/23/2004	2	NR
15	03/03/2005	1Q	3/3/2005	0	NR
15	06/14/2005	2Q	6/14/2005	0	NR
15	09/12/2005	3Q	9/12/2005	0	NR
15	11/30/2005	4Q	11/30/2005	0	NR
15	02/22/2006	1Q	2/22/2006	0	NR
15	05/30/2006	2Q	5/30/2006	0	NR
15	09/19/2006	3Q	9/19/2006	0	NR
15	12/11/2006	4Q	12/11/2006	0	NR
15	03/13/2007	1Q	3/13/2007	0	NR
15	06/26/2007	2Q	6/26/2007	0	NR
15	09/13/2007	3Q	9/13/2007	0	NR
15	12/19/2007	4Q	12/19/2007	0	NR
15	03/25/2008	1Q	3/25/2008	0	NR
15	06/26/2008	2Q	6/26/2008	0	NR
15	09/30/2008	3Q	9/30/2008	0	NR
15	03/24/2009	1Q	3/24/2009	0	NR
15	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #19 (ppt)	Tide
19	03/17/2004	1Q	3/17/2004	10	H - O
19	06/29/2004	2Q	6/29/2004	2	H - O
19	08/26/2004	3Q	8/26/2004	1	H - O
19	11/23/2004	4Q	11/23/2004	2	NR
19	03/03/2005	1Q	3/3/2005	0	NR
19	06/14/2005	2Q	6/14/2005	0	NR
19	09/12/2005	3Q	9/13/2005	0	NR
19	11/30/2005	4Q	11/30/2005	0	NR
19	02/22/2006	1Q	2/22/2006	0	NR
19	05/30/2006	2Q	5/30/2006	0	NR
19	09/19/2006	3Q	9/19/2006	0	NR
19	12/11/2006	4Q	12/11/2006	0	NR
19	03/13/2007	1Q	3/13/2007	0	NR
19	06/26/2007	2Q	6/26/2007	0	NR
19	09/13/2007	3Q	9/13/2007	0	NR
19	12/19/2007	4Q	12/19/2007	0	NR
19	03/25/2008	1Q	3/25/2008	0	NR
19	06/26/2008	2Q	6/26/2008	0	NR
19	09/30/2008	3Q	9/30/2008	0	NR
19	03/24/2009	1Q	3/24/2009	0	NR
19	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #21 (ppt)	Tide
21	03/17/2004	1Q	3/17/2004	21	H - O
21	06/29/2004	2Q	6/29/2004	23	H - O
21	08/26/2004	3Q	8/26/2004	20	H - O
21	11/23/2004	4Q	11/23/2004	15	NR
21	03/03/2005	1Q	3/3/2005	14	NR
21	06/15/2005	2Q	6/15/2005	21	NR
21	09/13/2005	3Q	9/13/2005	20	NR
21	12/01/2005	4Q	12/1/2005	7	NR
21	02/22/2006	1Q	2/22/2006	15	NR
21	05/31/2006	2Q	5/31/2006	20	NR
21	09/19/2006	3Q	9/19/2006	16	NR
21	12/11/2006	4Q	12/11/2006	18	NR
21	03/13/2007	1Q	3/13/2007	15	NR
21	06/26/2007	2Q	6/26/2007	18	NR
21	09/13/2007	3Q	9/13/2007	19	NR
21	12/19/2007	4Q	12/19/2007	11	NR
21	03/26/2008	1Q	3/26/2008	11	NR
21	06/26/2008	2Q	6/26/2008	22	NR
21	09/30/2008	3Q	9/30/2008	14	NR
21	03/24/2009	1Q	3/24/2009	17	NR
21	09/25/2009	3Q	9/25/2009	24	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #22 (ppt)	Tide
22	03/17/2004	1Q	3/17/2004	21	H - O
22	06/29/2004	2Q	6/29/2004	23	H - O
22	08/26/2004	3Q	8/26/2004	19	H - O
22	11/23/2004	4Q	11/23/2004	16	NR
22	03/03/2005	1Q	3/3/2005	18	NR
22	06/15/2005	2Q	6/15/2005	20	NR
22	09/13/2005	3Q	9/13/2005	21	NR
22	12/01/2005	4Q	12/1/2005	7	NR
22	02/22/2006	1Q	2/22/2006	15	NR
22	05/31/2006	2Q	5/31/2006	16	NR
22	09/19/2006	3Q	9/19/2006	16	NR
22	12/11/2006	4Q	12/11/2006	20	NR
22	03/13/2007	1Q	3/13/2007	0	NR
22	06/26/2007	2Q	6/26/2007	19	NR
22	09/13/2007	3Q	9/13/2007	18	NR
22	12/19/2007	4Q	12/19/2007	13	NR
22	03/26/2008	1Q	3/26/2008	13	NR
22	06/26/2008	2Q	6/26/2008	21	NR
22	09/30/2008	3Q	9/30/2008	10	NR
22	03/24/2009	1Q	3/24/2009	1	NR
22	09/25/2009	3Q	9/25/2009	22	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #24 (ppt)	Tide
24	03/17/2004	1Q	3/17/2004	4	H - O
24	06/29/2004	2Q	6/29/2004	7	H - O
24	08/26/2004	3Q	8/26/2004	9	H - O
24	11/23/2004	4Q	11/23/2004	0	NR
24	03/03/2005	1Q	3/3/2005	0	NR
24	06/15/2005	2Q	6/15/2005	0	NR
24	09/13/2005	3Q	9/13/2005	0	NR
24	12/01/2005	4Q	12/1/2005	0	NR
24	02/22/2006	1Q	2/22/2006	0	NR
24	05/30/2006	2Q	5/30/2006	0	NR
24	09/19/2006	3Q	9/19/2006	0	NR
24	12/11/2006	4Q	12/11/2006	0	NR
24	03/13/2007	1Q	3/13/2007	0	NR
24	06/26/2007	2Q	6/26/2007	0	NR
24	09/13/2007	3Q	9/13/2007	0	NR
24	12/19/2007	4Q	12/19/2007	0	NR
24	03/25/2008	1Q	3/26/2008	0	NR
24	06/26/2008	2Q	6/26/2008	0	NR
24	09/30/2008	3Q	9/30/2008	0	NR
24	03/24/2009	1Q	3/24/2009	0	NR
24	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

Stream Sampling Point	Date and Quarter		Date	Sampling Point #26 (ppt)	Tide
26	03/17/2004	1Q	3/17/2004	6	H - O
26	06/29/2004	2Q	6/29/2004	6	H - O
26	08/26/2004	3Q	8/26/2004	9	H - O
26	11/23/2004	4Q	11/23/2004	2	NR
26	03/03/2005	1Q	3/3/2005	1	NR
26	06/15/2005	2Q	6/15/2005	0	NR
26	09/13/2005	3Q	9/13/2005	0	NR
26	12/01/2005	4Q	12/1/2005	0	NR
26	02/22/2006	1Q	2/22/2006	0	NR
26	05/31/2006	2Q	5/31/2006	0	NR
26	09/20/2006	3Q	9/20/2006	0	NR
26	12/11/2006	4Q	12/11/2006	0	NR
26	03/13/2007	1Q	3/13/2007	0	NR
26	06/28/2007	2Q	6/26/2007	0	NR
26	09/13/2007	3Q	9/13/2007	0	NR
26	12/19/2007	4Q	12/19/2007	0	NR
26	03/26/2008	1Q	3/26/2008	0	NR
26	06/26/2008	2Q	6/26/2008	0	NR
26	09/30/2008	3Q	9/30/2008	0	NR
26	03/24/2009	1Q	3/24/2009	0	NR
26	09/25/2009	3Q	9/25/2009	0	NR

Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

Fort Monmouth Salinty Table
3/31/2011

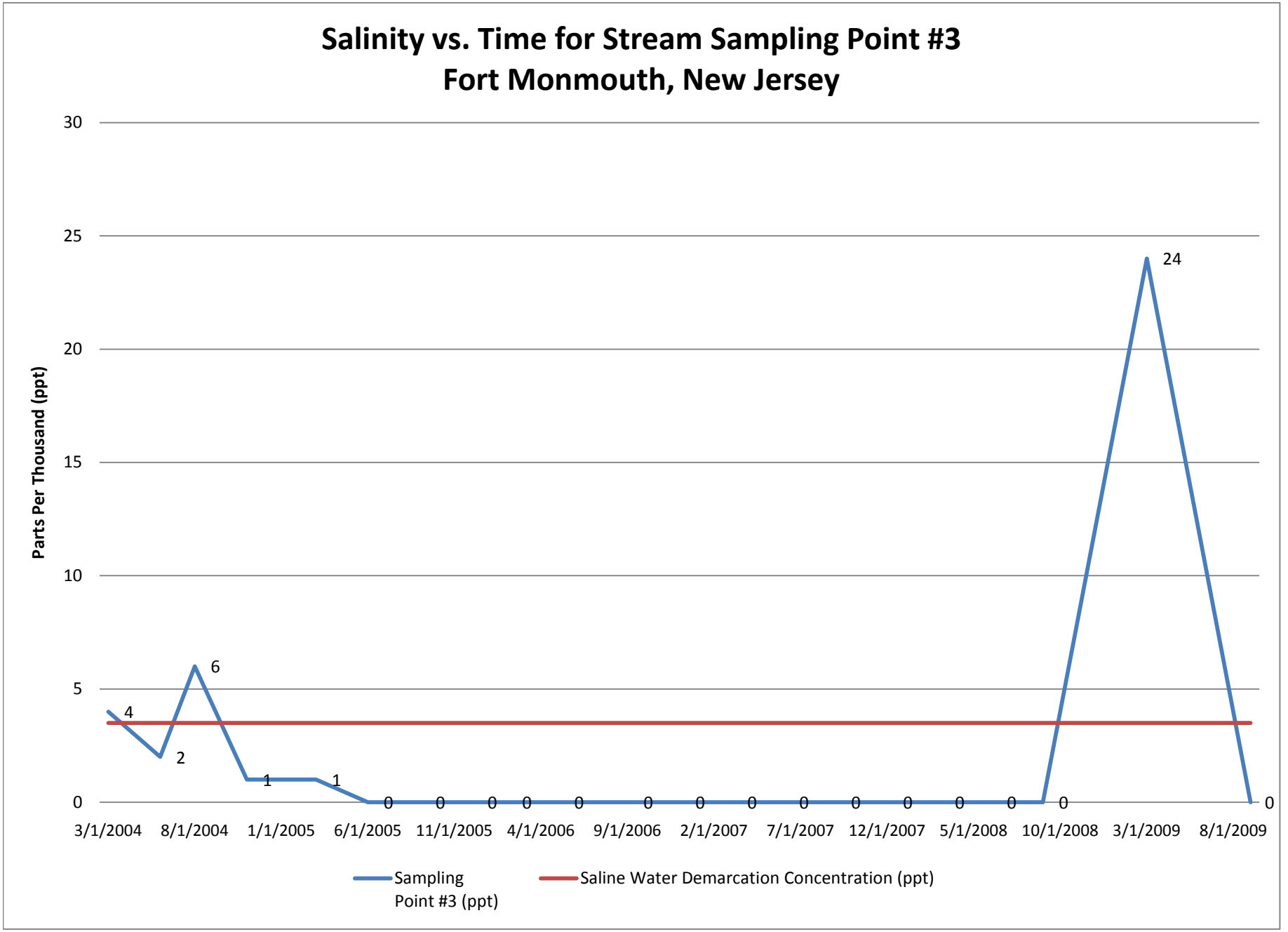
Stream Sampling Point	Date and Quarter		Date	Sampling Point #27 (ppt)	Tide
27	03/17/2004	1Q	3/17/2004	9	H - O
27	06/29/2004	2Q	6/29/2004	21	H - O
27	08/26/2004	3Q	8/26/2004	17	H - O
27	11/23/2004	4Q	11/23/2004	3	NR
27	03/03/2005	1Q	3/3/2005	1	NR
27	06/15/2005	2Q	6/15/2005	5	NR
27	09/13/2005	3Q	9/13/2005	0	NR
27	12/01/2005	4Q	12/1/2005	5	NR
27	02/22/2006	1Q	2/22/2006	0	NR
27	05/31/2006	2Q	5/31/2006	0	NR
27	09/20/2006	3Q	9/20/2006	0	NR
27	12/11/2006	4Q	12/11/2006	3	NR
27	03/13/2007	1Q	3/13/2007	2	NR
27	06/28/2007	2Q	6/28/2007	0	NR
27	09/13/2007	3Q	9/13/2007	0	NR
27	12/19/2007	4Q	12/19/2007	0	NR
27	03/26/2008	1Q	3/25/2008	0	NR
27	06/26/2008	2Q	6/26/2008	0	NR
27	09/30/2008	3Q	9/30/2008	0	NR
27	03/24/2009	1Q	3/24/2009	0	NR
27	09/25/2009	3Q	9/25/2009	0	NR

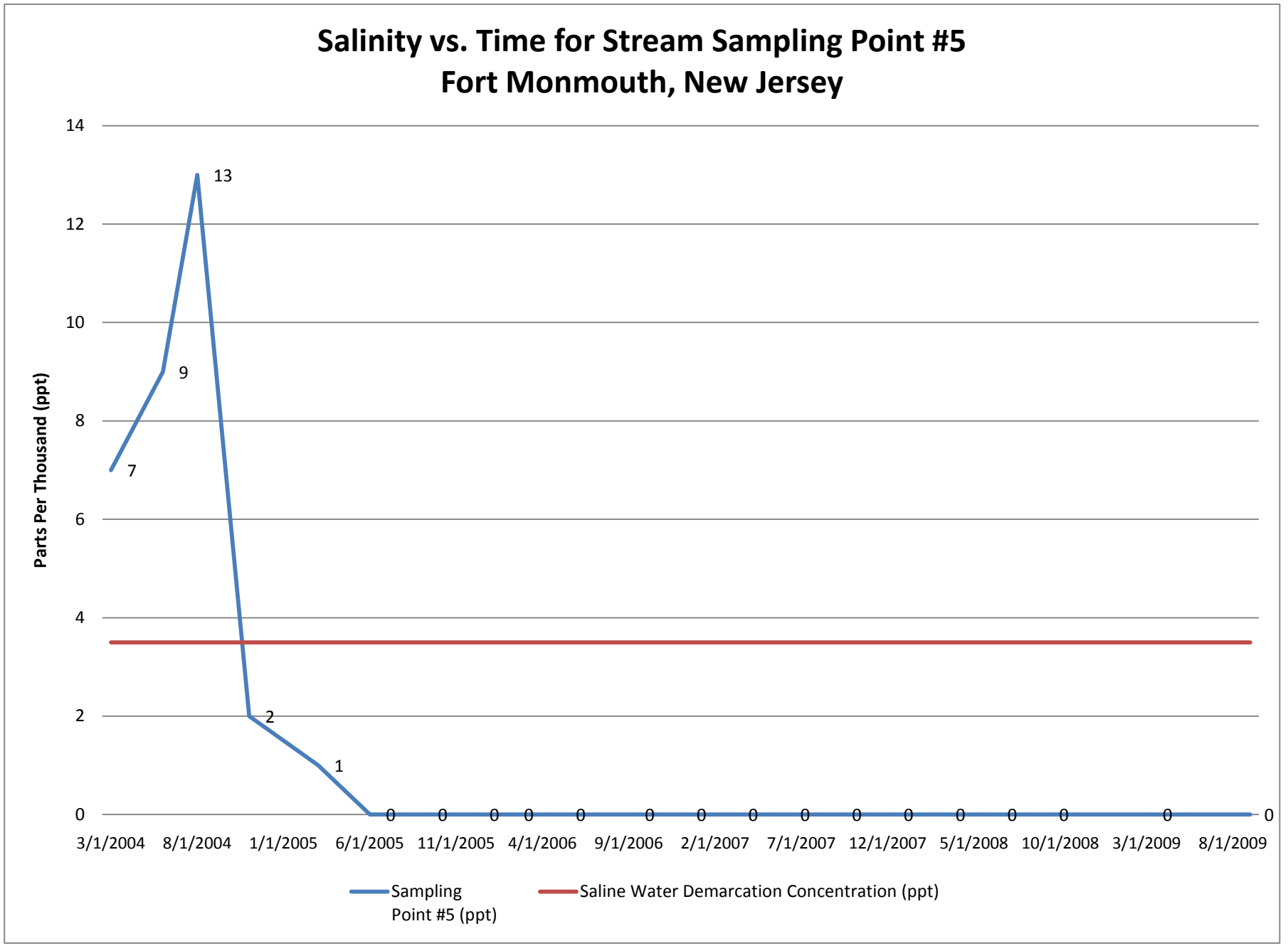
Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

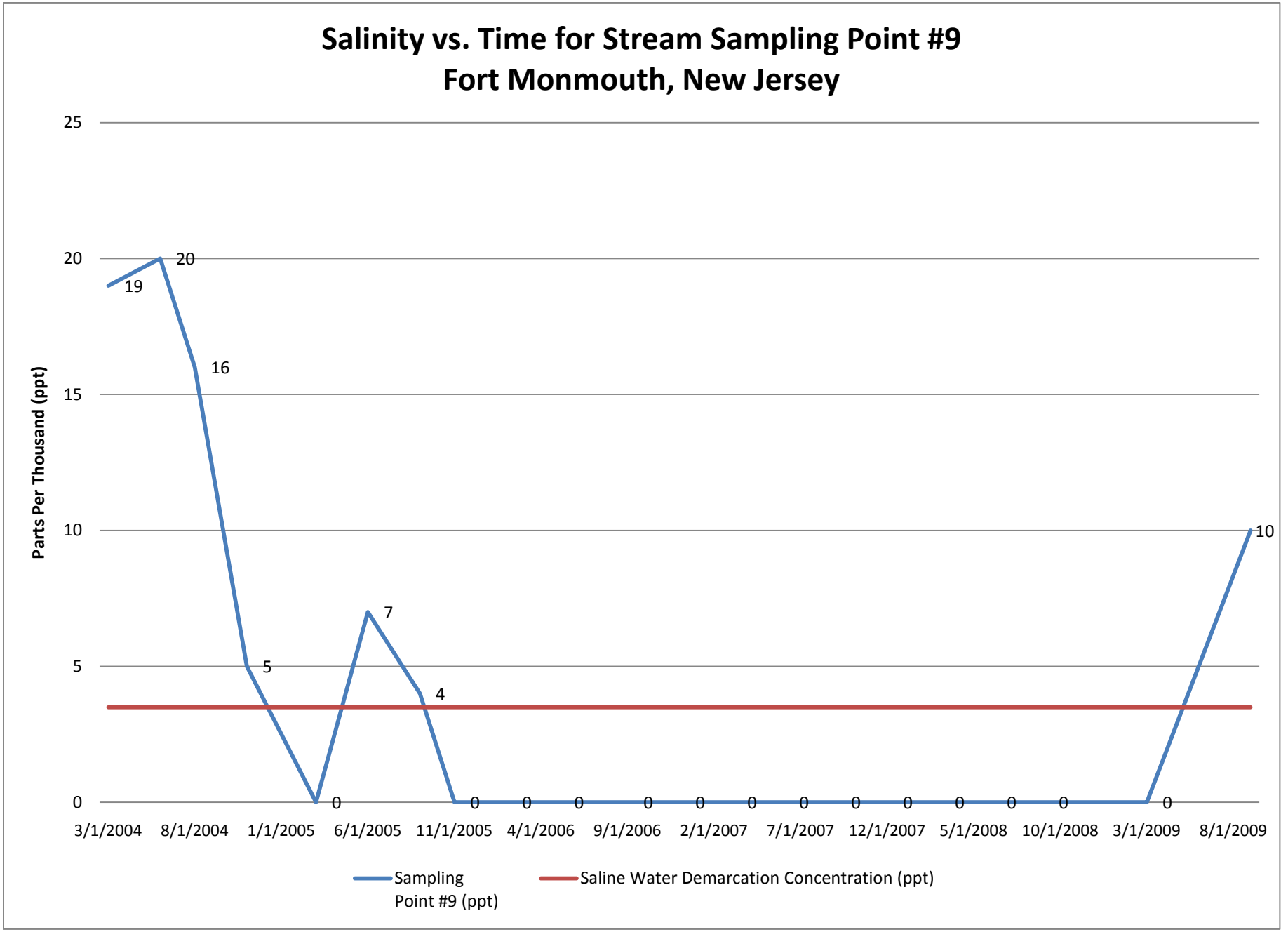
Fort Monmouth Salinty Table
3/31/2011

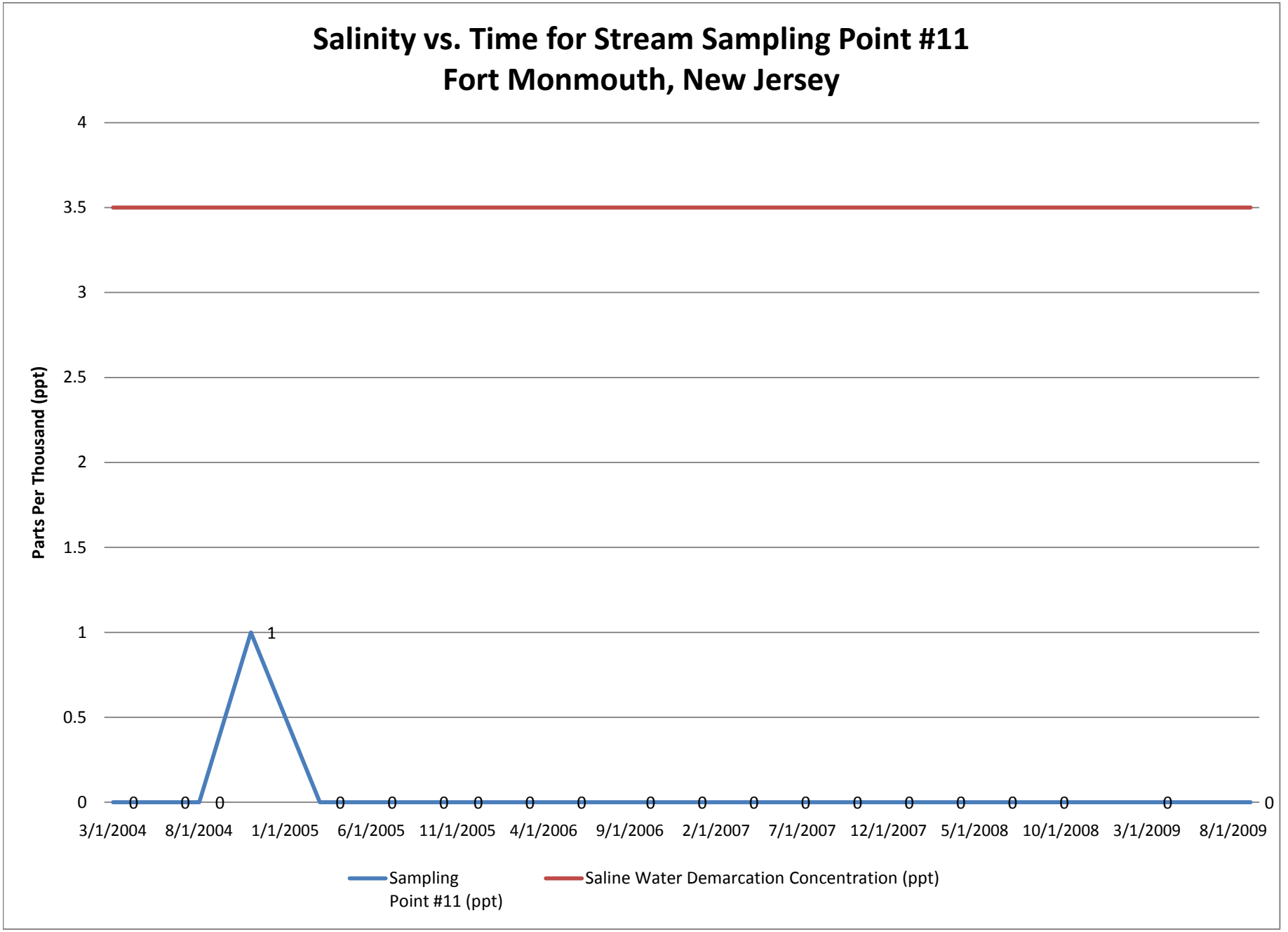
Stream Sampling Point	Date and Quarter		Date	Sampling Point #28 (ppt)	Tide
28	03/17/2004	1Q	3/17/2004	8	H - O
28	06/29/2004	2Q	6/29/2004	19	H - O
28	08/26/2004	3Q	8/26/2004	16	H - O
28	11/23/2004	4Q	11/23/2004	1	NR
28	03/03/2005	1Q	3/3/2005	1	NR
28	06/15/2005	2Q	6/15/2005	0	NR
28	09/13/2005	3Q	9/13/2005	0	NR
28	12/01/2005	4Q	12/1/2005	2	NR
28	02/22/2006	1Q	2/22/2006	0	NR
28	05/31/2006	2Q	5/31/2006	0	NR
28	09/20/2006	3Q	9/20/2006	0	NR
28	12/11/2006	4Q	12/11/2006	1	NR
28	03/13/2007	1Q	3/13/2007	0	NR
28	06/28/2007	2Q	6/28/2007	0	NR
28	09/13/2007	3Q	9/13/2007	0	NR
28	12/19/2007	4Q	12/19/2007	0	NR
28	03/26/2008	1Q	3/26/2008	0	NR
28	06/26/2008	2Q	6/26/2008	0	NR
28	09/30/2008	3Q	9/30/2008	0	NR
28	03/24/2009	1Q	3/24/2009	0	NR
28	09/25/2009	3Q	9/25/2009	0	NR

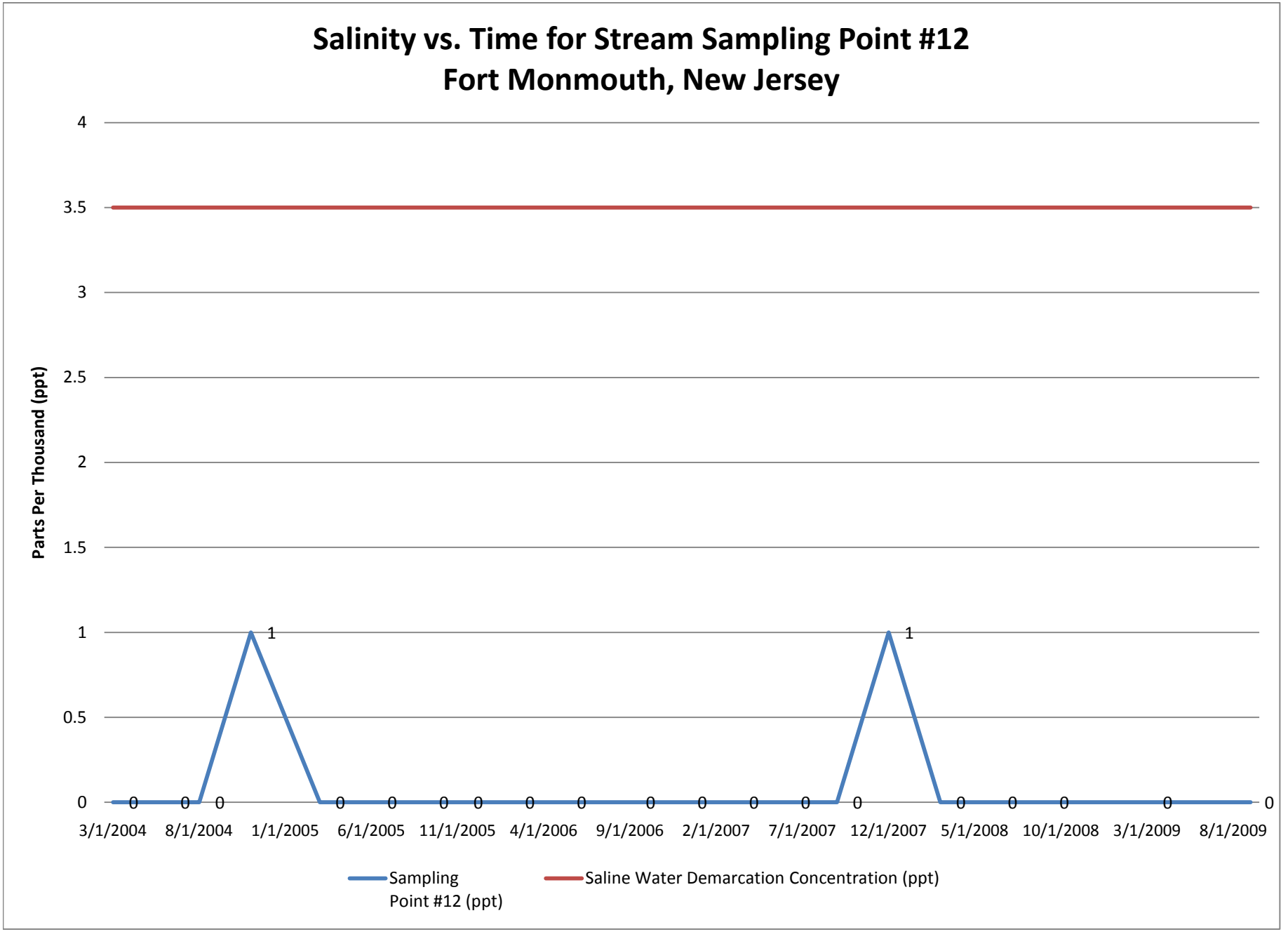
Note:
H - O - High - outgoing
ppt - Parts per thousand
NR - Not recorded

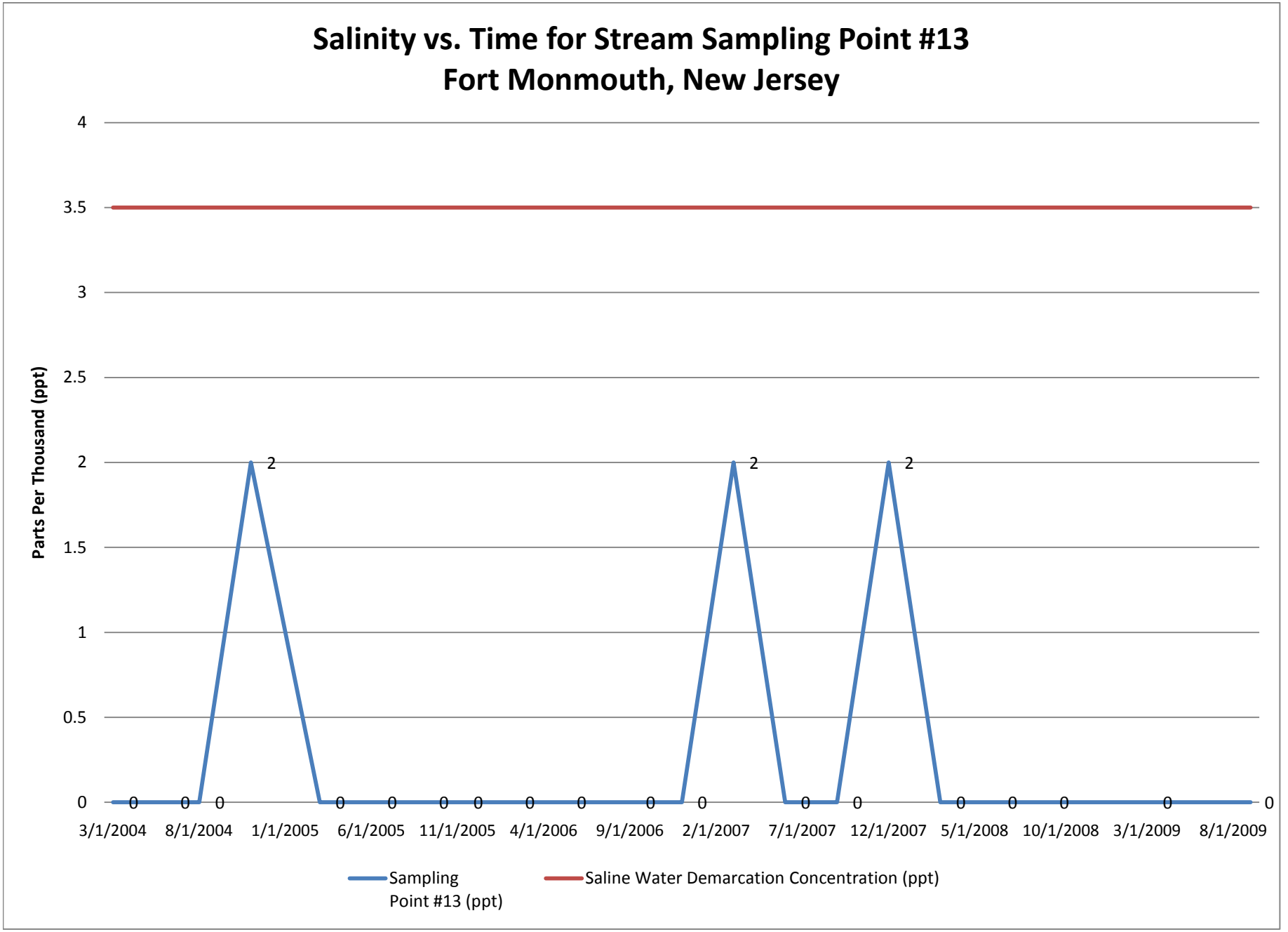

Salinity vs. Time for Stream Sampling Point #3
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
30
25
20
15
10
5
0
4
2
6
1
1
0
0
0
0
0
0
0
0
0
0
0
0
0
24
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #3 (ppt)
Saline Water Demarcation Concentration (ppt)

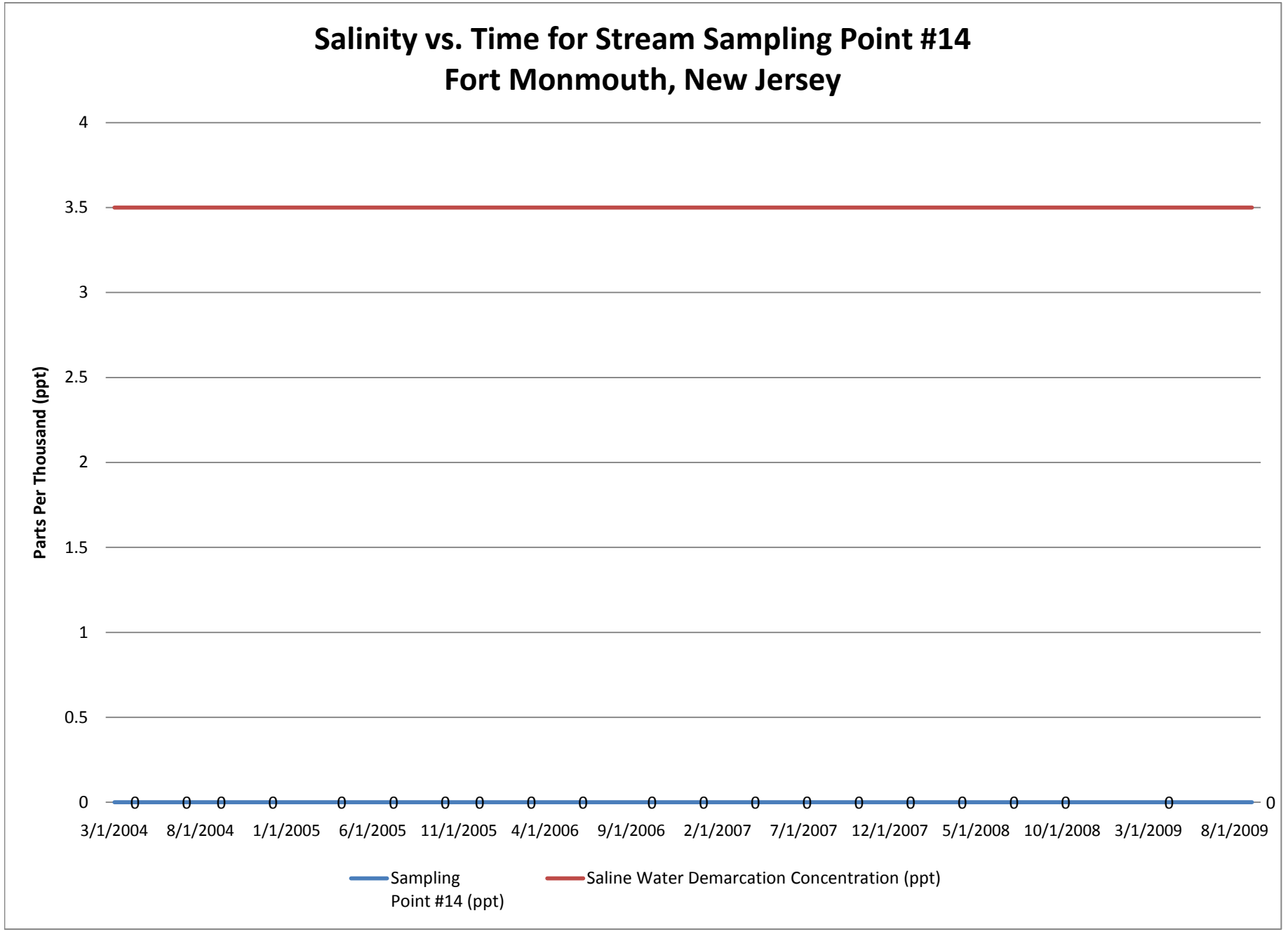

Salinity vs. Time for Stream Sampling Point #5
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
14
12
10
8
6
4
2
0
13
9
7
2
1
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #5 (ppt)
Saline Water Demarcation Concentration (ppt)

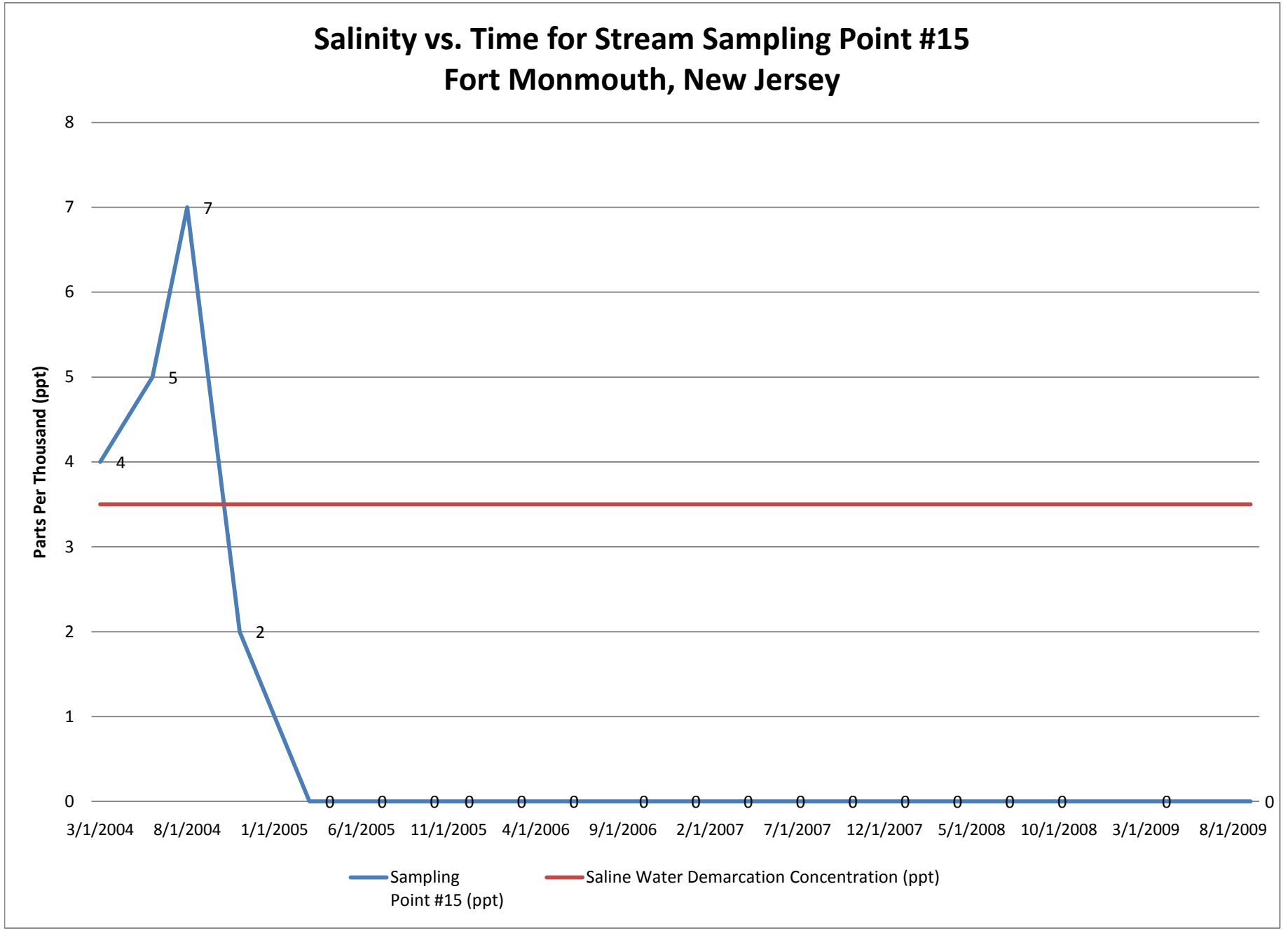

Salinity vs. Time for Stream Sampling Point #9
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
25
20
15
10
5
0
19
20
16
5
0
7
4
0
0
0
0
0
0
0
0
0
0
0
0
10
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #9 (ppt)
Saline Water Demarcation Concentration (ppt)

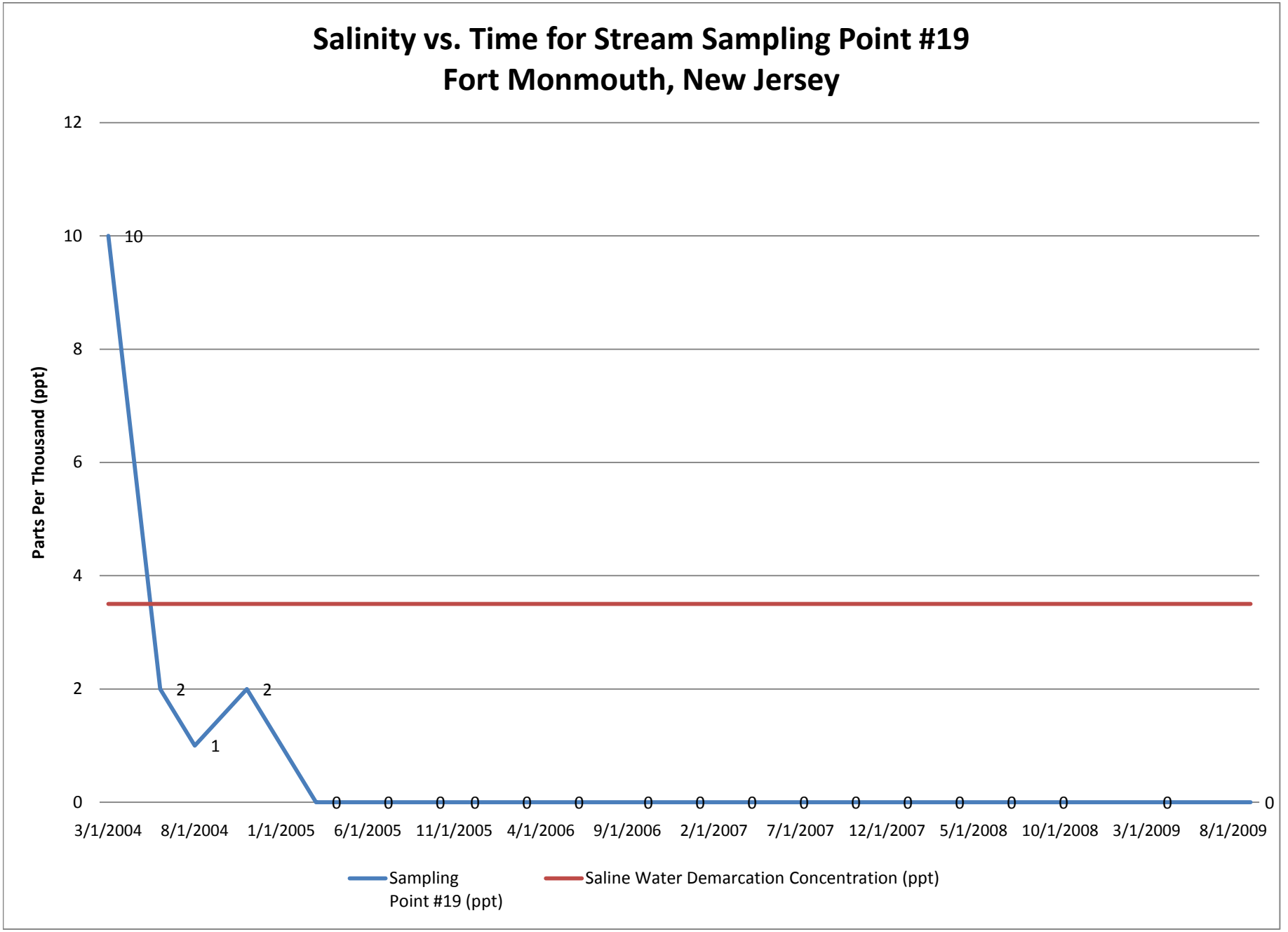

Salinity vs. Time for Stream Sampling Point #11
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
4
3.5
3
2.5
2
1.5
1
0.5
0
0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #11 (ppt)
Saline Water Demarcation Concentration (ppt)

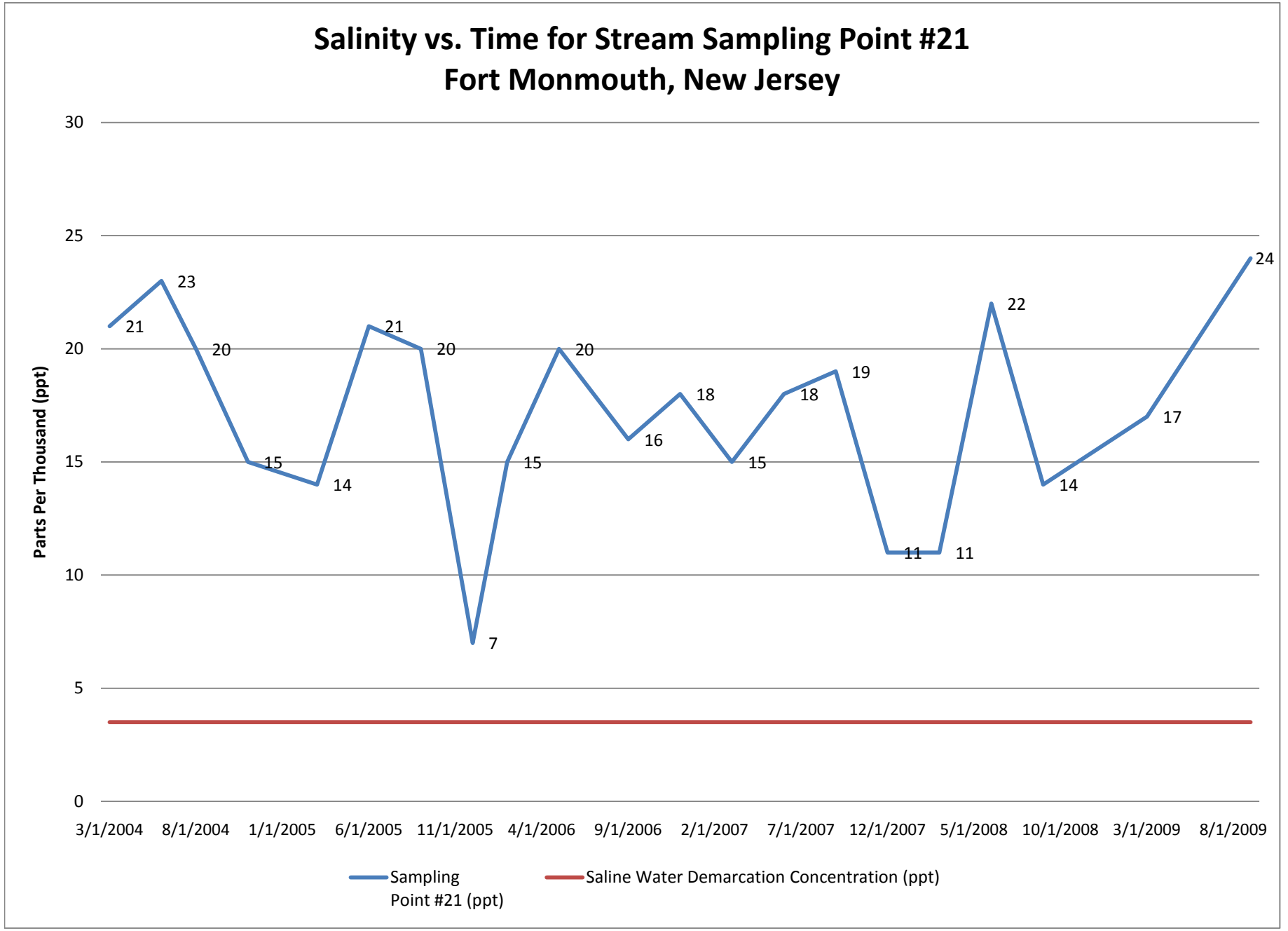

Salinity vs. Time for Stream Sampling Point #12
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
4
3.5
3
2.5
2
1.5
1
0.5
0
0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
3/1/2004 8/1/2004 1/1/2005 6/1/2005 11/1/2005 4/1/2006 9/1/2006 2/1/2007 7/1/2007 12/1/2007 5/1/2008 10/1/2008 3/1/2009 8/1/2009
Sampling Point #12 (ppt)
Saline Water Demarcation Concentration (ppt)

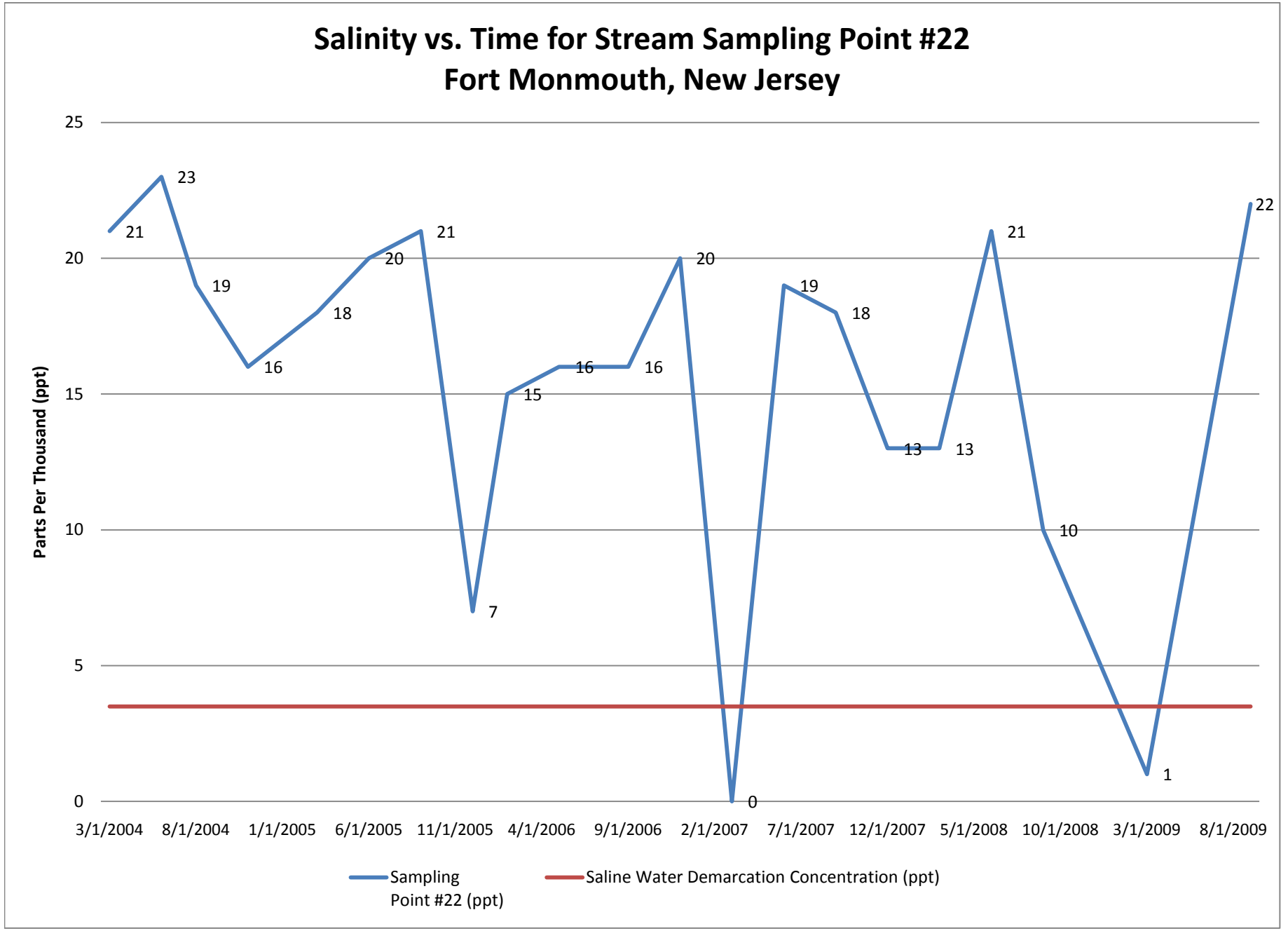

Salinity vs. Time for Stream Sampling Point #13
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
4
3.5
3
2.5
2
1.5
1
0.5
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #13 (ppt)
Saline Water Demarcation Concentration (ppt)

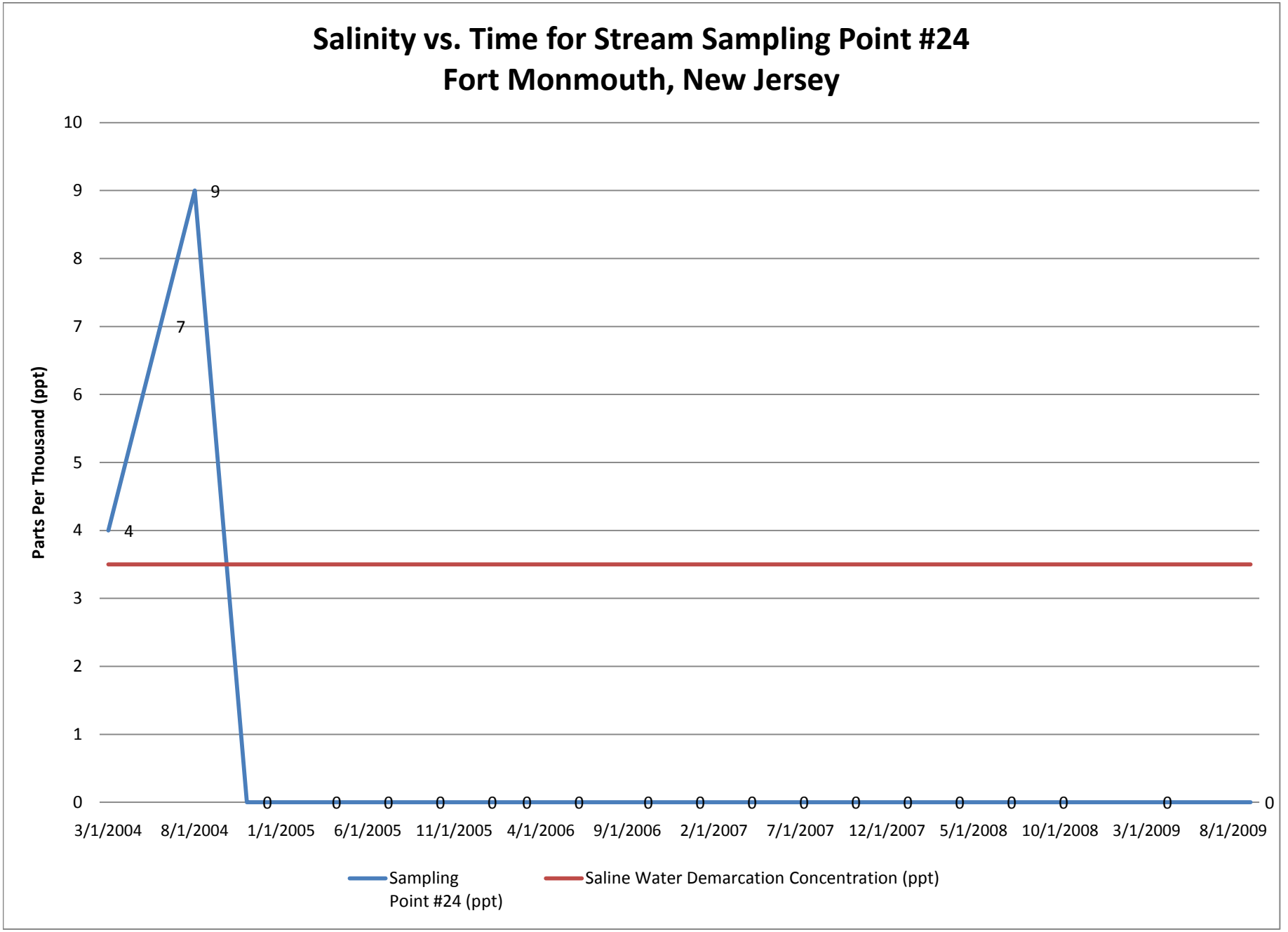

Salinity vs. Time for Stream Sampling Point #14
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
4
3.5
3
2.5
2
1.5
1
0.5
0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #14 (ppt)
Saline Water Demarcation Concentration (ppt)

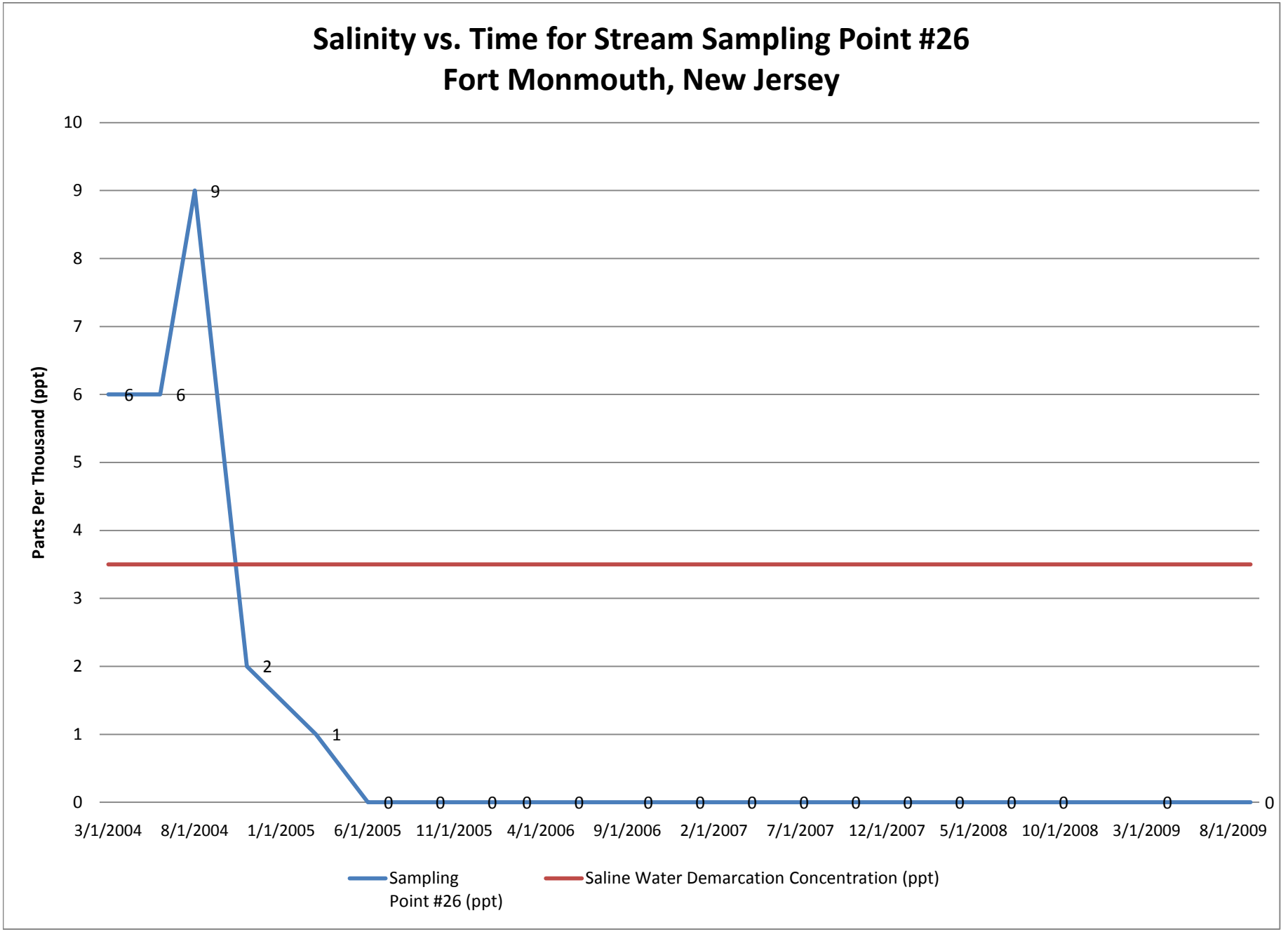

Salinity vs. Time for Stream Sampling Point #15
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
8
7
6
5
4
3
2
1
0
4
5
7
2
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #15 (ppt)
Saline Water Demarcation Concentration (ppt)

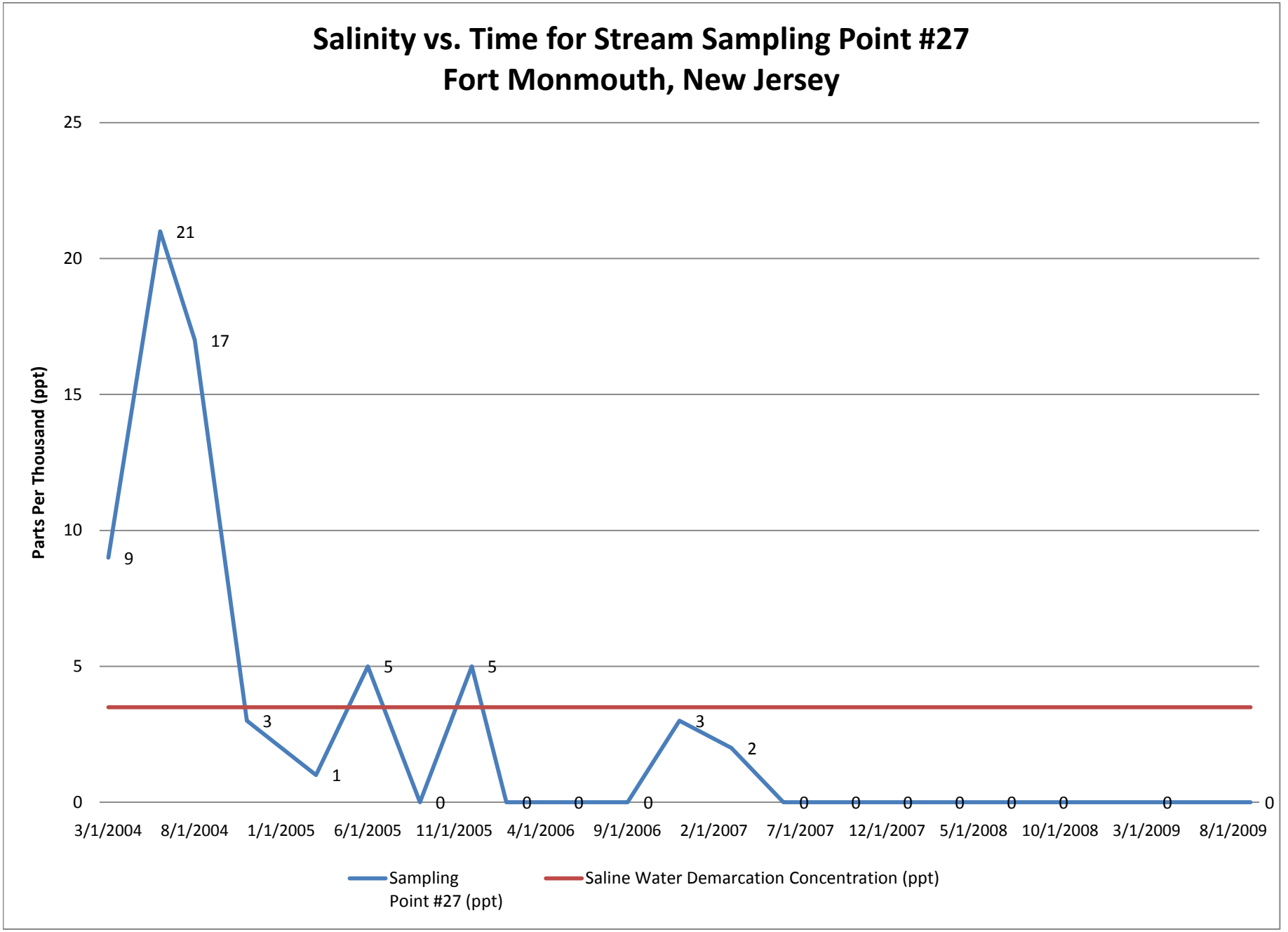

Salinity vs. Time for Stream Sampling Point #19
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
12
10
8
6
4
2
0
10
2
1
2
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #19 (ppt)
Saline Water Demarcation Concentration (ppt)

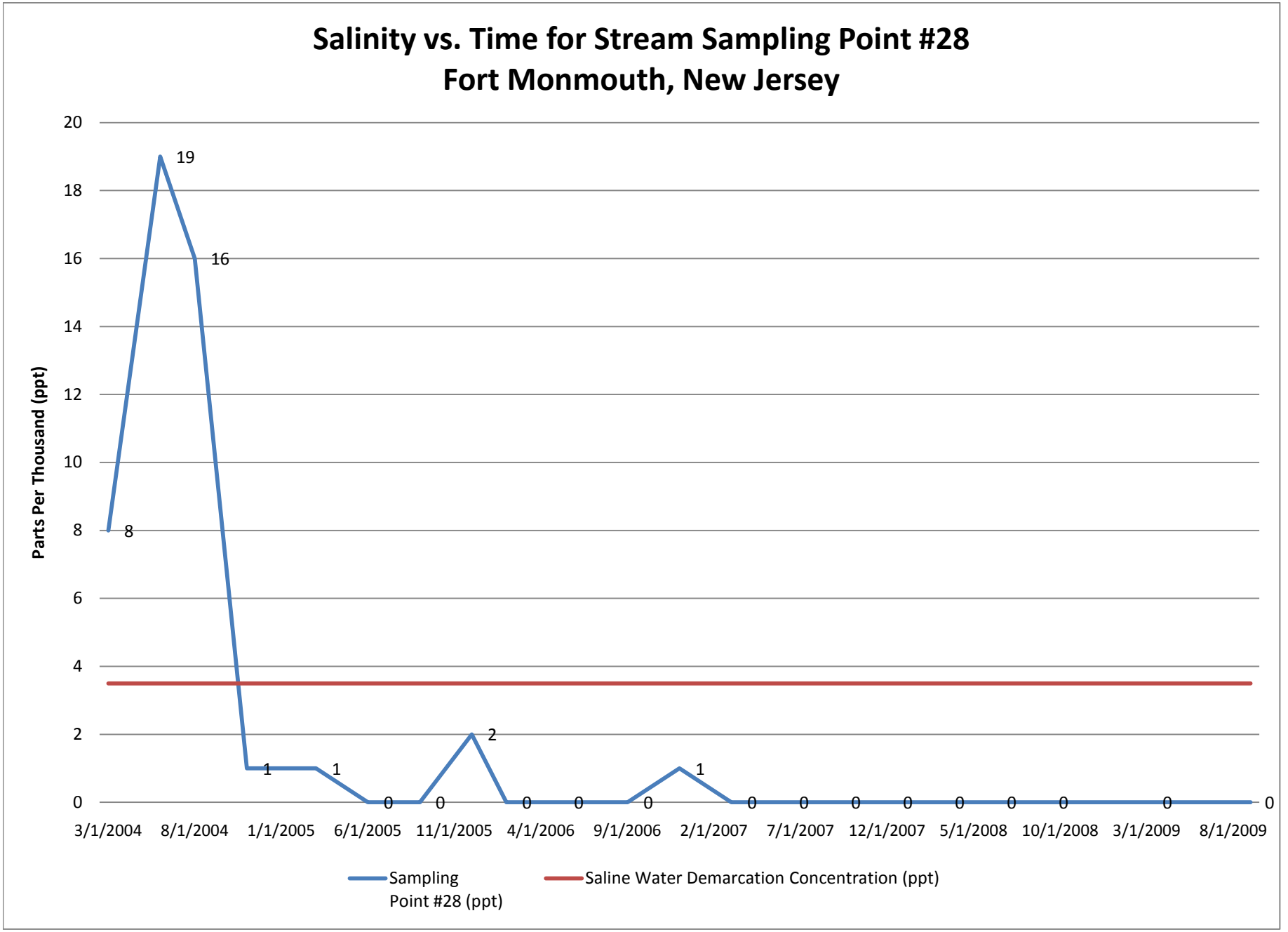

Salinity vs. Time for Stream Sampling Point #21
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
30
25
20
15
10
5
0
21
23
20
15
14
21
20
7
15
20
16
18
15
18
19
11
11
22
14
17
24
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #21 (ppt)
Saline Water Demarcation Concentration (ppt)

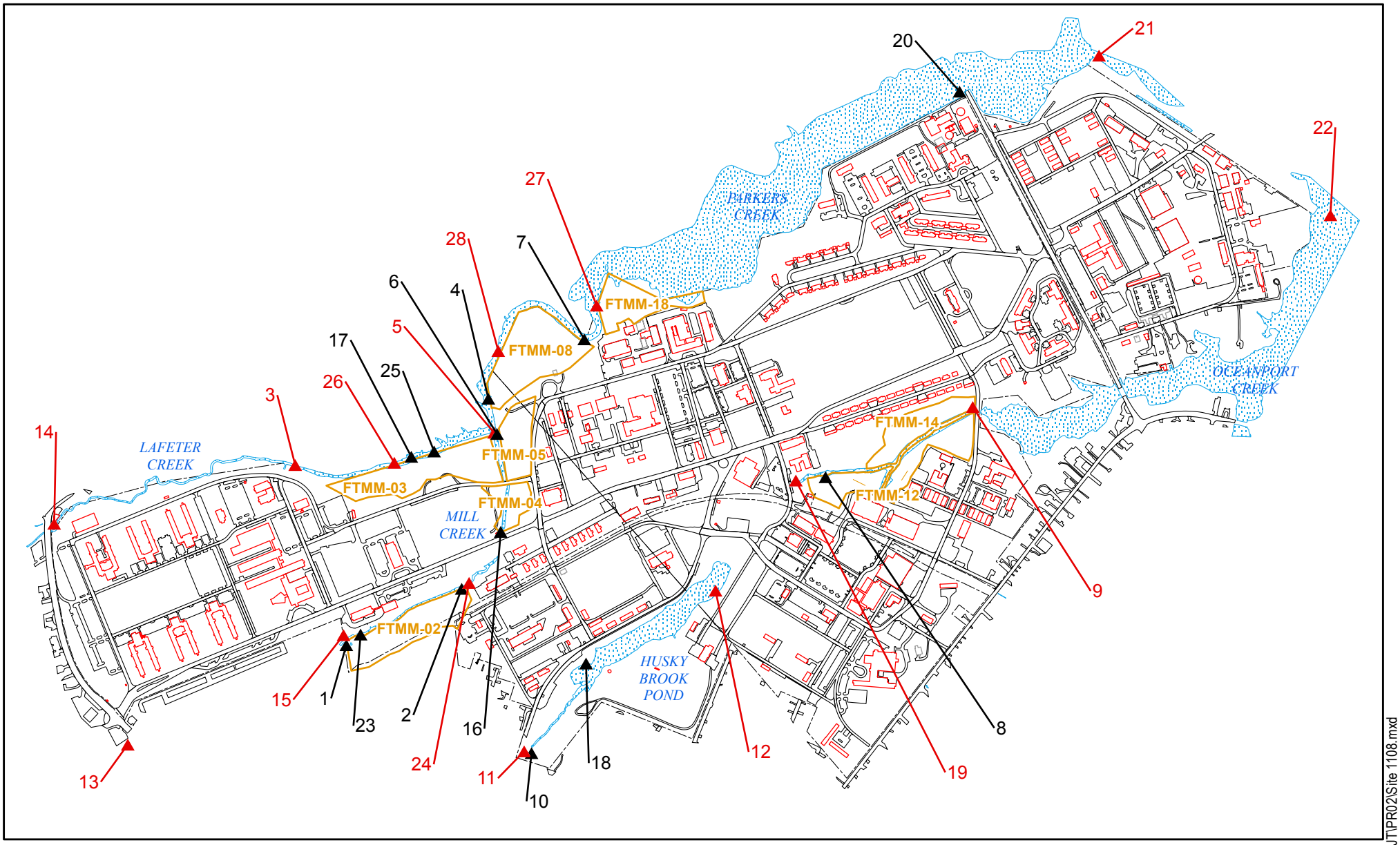

Salinity vs. Time for Stream Sampling Point #22
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
25
20
15
10
5
0
21
23
19
16
18
20
21
7
15
16
16
20
0
19
18
13
13
21
10
1
22
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #22 (ppt)
Saline Water Demarcation Concentration (ppt)


Salinity vs. Time for Stream Sampling Point #24
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
10
9
8
7
6
5
4
3
2
1
0
4
9
7
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #24 (ppt)
Saline Water Demarcation Concentration (ppt)


Salinity vs. Time for Stream Sampling Point #26
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
10
9
8
7
6
5
4
3
2
1
0
6
6
9
2
1
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #26 (ppt)
Saline Water Demarcation Concentration (ppt)


Salinity vs. Time for Stream Sampling Point #27
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
25
20
15
10
5
0
9
21
17
3
1
5
0
5
0
0
0
3
2
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #27 (ppt)
Saline Water Demarcation Concentration (ppt)


Salinity vs. Time for Stream Sampling Point #28
Fort Monmouth, New Jersey
Parts Per Thousand (ppt)
20
18
16
14
12
10
8
6
4
2
0
19
16
8
1
1
0
0
2
0
0
0
1
0
0
0
0
0
0
0
0
3/1/2004
8/1/2004
1/1/2005
6/1/2005
11/1/2005
4/1/2006
9/1/2006
2/1/2007
7/1/2007
12/1/2007
5/1/2008
10/1/2008
3/1/2009
8/1/2009
Sampling Point #28 (ppt)
Saline Water Demarcation Concentration (ppt)



Stream Sample Points
Main Post
Fort Monmouth, New Jersey

0 500 1,000 2,000 Feet

NAD 83, NJ State Plane Feet

Map Created by:
Fort Monmouth Installation GIO, Environmental Division
Fort Monmouth, New Jersey
Date: March 9, 2011

Legend

Sample Points
- Active
- Inactive
- Existing Structure
- Demolished Structure
- Roadway & Parking
- Landfill Area
- Water Body
- Post Boundary

All features in the legend may not appear in the map.

March 9, 2011 X:\GIS\GIS Maps\JT\PR02\Site 1108.mxd

APPENDIX K
Fort Monmouth Utility Maps



Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Boundary Not Fully Defined
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

Figure K-1
Utility Map
Site M-2 (FTMM-02) - Main Post
Fort Monmouth, New Jersey
FOUO

30 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2013
New Jersey State Plane Feet, NAD83

G:\Envir_Div\11GIS\Arc10\Maps\FtMonmouth_Conformed\Maps\m2-k-1-Utility-Map.mxd

Parkers Creek

FTMM-08

FTMM-05

Lafetra Creek

Mill Creek

THERE ARE MANHOLES ALONG THIS LINE

M3MW07

M3MW07A

M5MW12

M3MW08

M3MW06

M3MW09

M3MW14

M3MW10

M3MW11

M3MW05

M3MW13

FTMM-03

M3MW04

M4MW05

M4MW06

FTMM-04

North Drive

DRY WELL
4' X 4'

1 / 2"
COPPER

3 / 4" COPPER

2"-POLY

2"-POLY DRY WELL IN 4' X 4'

1 / 2"
COPPER

WATER VALVE
HAND HOLE

2"-POLY

4" CI

2"-POLY

ABANDONED 1993-94
4" STEEL LINE

ABANDONED 1993-94
4" STEEL LINE

200

M3MW02

CB TOP EL 17.65'
INV EL 14.15'

12"VTP @ 1.0%

INV. EL. 6.2

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N
W E
S

Figure K-2
Utility Map
Site M-3 (FTMM-03) - Main Post
Fort Monmouth, New Jersey
FOUO

30 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIO,
Directorate of Public Works
Fort Monmouth, New Jersey
Date: February 26, 2011
New Jersey State Plane Feet, NAD83

Document Path: I:\FTMM\GIS\Maps\Fthmmwater - Conference Map\mxds\A-1 Utility Map.mxd

FTMM-03

FTMM-05

FTMM-04

Mill Creek

M3MW04

M5MW14

M4MW05

M4MW06

M4MW09

M4MW08

M4MW10

M4MW07

North Drive

Telegraph Avenue

Messenger Avenue

Wilson Avenue

Saltzman Avenue

Avenue of Memories

682

689

1221

1123

12" FORCE MAIN

20" V.C.P.

2" POLY

8" D.I.

6" C.I.

8" V.C.P.

10.00

3' 0"

24' - 9"

9-17

6" C.I.

P.I.V.

1% ABANDONED

4' X 4'

ABANDONED 1993-94
4" STEEL LINE

18" C.M
@ 1.25%

12" CONC.

INV EL 5.80

18" C.M.

10" C.I.

6" TRANSITE

12" C.I. FORCE MAIN

10" STEEL

ABANDONED 4" STEEL 1993 / 94

TOP EL 15.31
INV EL 12.31

10" V.C.P.

2 - 8" V.C.P.

TOP EL 15.31
INV EL 12.23

INV. EL. 14.20

INV EL 7.80

15" RCP

INV. EL. 6.20

MH TOP EL 15.68'

INV EL 2.25'

CON. APRON
INV EL 2.00

42" R.C.P. 0.5%

INV EL 4.24

15'-9"

32'-0"

INV EL 4.30
15" RCP

TOP EL 15.00

INV EL 3.00

18" VTP@0.2%

42" R.C.P. 0.5%

6" VTP C.S.

INV. EL. 12.00

6" STUB

DMH EL 14.00
INV EL 3.55

INV EL 1.00'

10" PVC

TOP EL 14.77
INV EL 12.57'

INV EL 10.85

TOP EL 15.00

INV. EL. 4.54

2"-POLY

153'

4" C.I.

INV. EL. 9.50

INV. EL. 9.10

18" VTP@0.2%

BLOW OFF VALVE

10" STEEL

TOP EL. 16.70

INV. EL. 4.10

0.5%

54'

HYD 14-1

74'

TOP EL. 16.70

INV. EL. 4.95

ABANDONED 6" TRANSITE

12" PVC

BRICK ARCH

V21

12" PVC

6" TRANSITE

8" V.C.P.

TOP EL 15.68
INV EL 12.60

2" V.C.P.

V116

8" V.C.P.

2"

6"

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N
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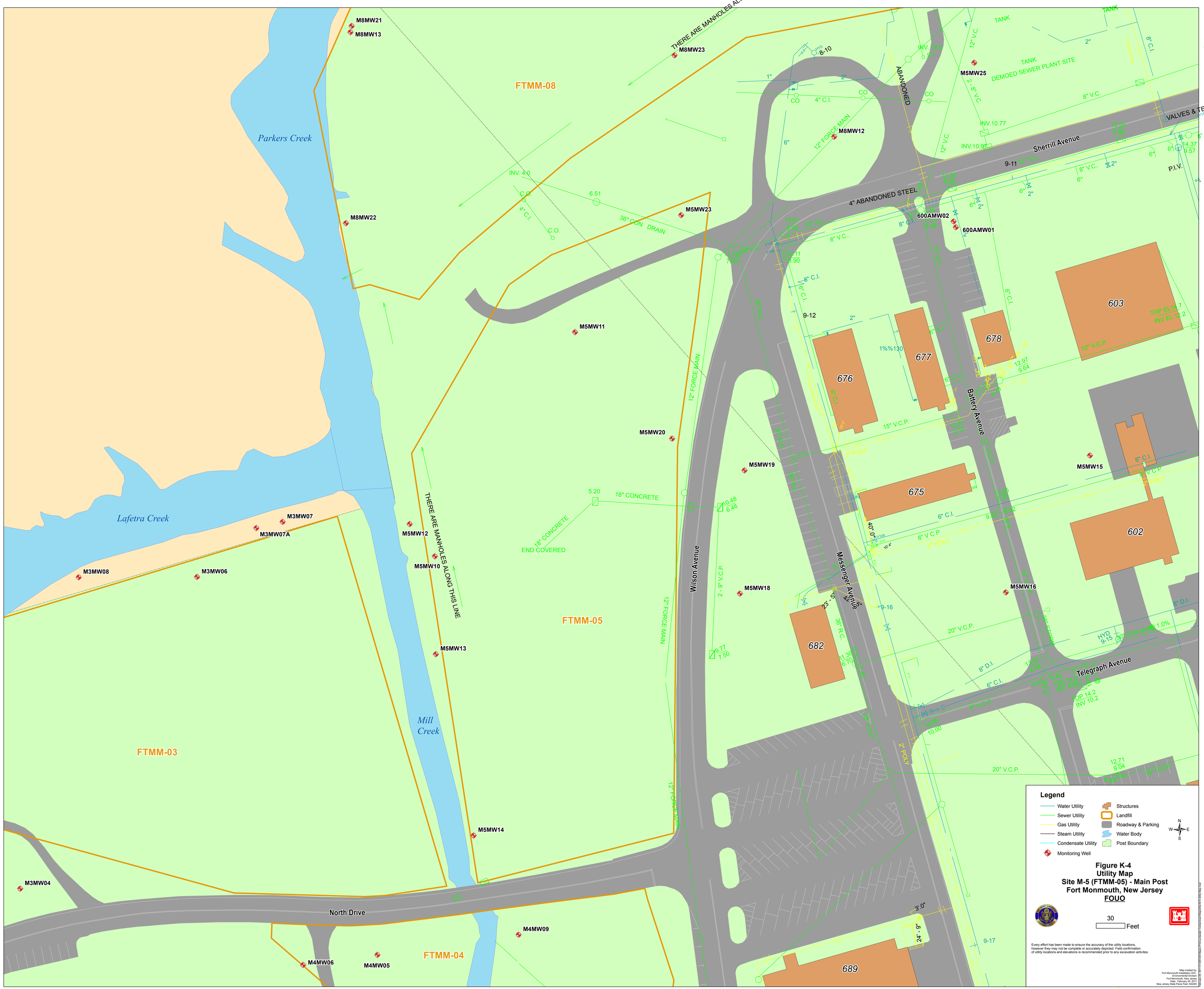
Figure K-3
Utility Map
Site M-4 (FTMM-04) - Main Post
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIC,
Environmental Division
Fort Monmouth, New Jersey
Date - February 25, 2021
New Jersey State Plane Feet, NAD83

G:\Projects\FTMM\2020\GIS Maps\Fort Monmouth Conformance Maps\Site M-4 (FTMM-04)\Site M-4 Utility Map.mxd


M8MW21
M8MW13
M8MW23
THERE ARE MANHOLES ALONG THIS LINE
FTMM-08
Parkers Creek
8-10
INV. 14.0
9.7
TANK
TANK
TANK
DEMOED SEWER PLANT SITE
M5MW25
1NV.12.20
INV.12.40
VALVES & TEE REMOVED
ABANDONED
CO
4" C.I.
2"
1"
12" V.C.
8" C.I.
8" V.C.
2 - 8" V.C.
INV.10.77
INV.10.97
12" FORCE MAIN
M8MW12
6"
Sherrill Avenue
9-11
13.34
9.30
14.37
9.57
P.I.V.
8" V.C..
6"
2"
INV. 4-0
C.O.
4" C.I.
6.51
36" CON DRAIN
M8MW22
M5MW23
4" ABANDONED STEEL
12.35
8.59
600AMW02
600AMW01
5.42
5.46
11.61
8.02
13" V.C.
8" V.C..
11.72
7.84
12.11
8.90
9-12
8" C.I.
6" C.I.
12" V.C.
M5MW11
36" R.C.
12" FORCE MAIN
603
TOP EL 14.7
INV EL 12.2
12" V.C.P.
678
677
676
6" C.I.
1%%130
12.97
9.64
Battery Avenue
15" V.C.P.
13.47
9.10
M5MW20
M5MW19
2" POLY
675
M5MW15
8" V.C.P
6" C.I.
602
6.55
6.29
6.42
5.9
40' 0"
10" V.C.P.
M5MW16
M5MW18
2 - 9" V.C.P.
Wilson Avenue
Messenger Avenue
23' - 5"
9-16
682
36" R.C.
11.38
6.70
9.77
7.50
20" V.C.P.
8" D.I.
36" STORM
HYD
9-15
30" STM SWR @ 1.0%
13.53
6.62
Telegraph Avenue
TOP 14.2
INV 9.08
TOP 14.2
INV 10.2
12.99
10.00
2" POLY
9-17
3'0"
24' - 9"
689
12.71
9.04
18" V.C.P.
5.20
18" CONCRETE
END COVERED
18" CONCRETE
10.48
6.48
THERE ARE MANHOLES ALONG THIS LINE
M5MW12
M5MW10
M5MW13
M5MW14
12" FORCE MAIN
FTMM-05
FTMM-03
Mill Creek
Lafetra Creek
M3MW07
M3MW07A
M3MW08
M3MW06
M3MW04
North Drive
M4MW09
M4MW06
M4MW05
FTMM-04
Legend
Water Utility
Sewer Utility
Gas Utility
Steam Utility
Condensate Utility
Monitoring Well
Structures
Landfill
Roadway & Parking
Water Body
Post Boundary
N
W
E
S
Figure K-4
Utility Map
Site M-5 (FTMM-05) - Main Post
Fort Monmouth, New Jersey
FOUO
30
Feet
Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.
Map created by:
Fort Monmouth Department of Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

FTMM-18
296MW03
M8MW18
M8MW17
M8MW14
M8MW19
M8MW15
M8MW11
Parkers Creek
INV 4.71
296MW07
M8MW16
20" V.C.
6" NON ORGANIC
10.45
8.38
INV 1.52
INV 1.67
INV 3.99
DEEP CONC. CHAMBER
TANKS
8" C.I.
12" V.C.
RM8MW24
M8MW24
M8MW20
FTMM-08
8-7
292
TANKS
DEMOED SEWER PLANT SITE
8-8
11.11
4.20
12" V.C.
CONTROL BLDG.
THREE LEVELS PLUS BELOW SURFACE
2"
11.12
5.72
8" V.C.
NON ORGANIC SEWER
HEADWALL
INV. 4.0
INV. 9.20
2 - 8" V.C.
INV 5.49
12" V.C.
INV.9.24
5.39
10" V.C.
INV.11.54
7.27
6" V.C.
10.40
7.30
697MW01
6.47
4.94
6.90
4.90
16.75
4.57
4.54
TANKS
8-6
DEMOED SEWER PLANT SITE
12" V.C.
TANK
TANK
TANK
8-9
ABANDONED 1997
8" C.I.
ABANDONED 1997
DEMOED SEWER PLANT SITE
M5MW25
M8MW21
M8MW13
M8MW23
THERE ARE MANHOLES ALONG THIS LINE
8-10
1"
2"
CO
CO
4" C.I.
CO
ABANDONED
INV. 14.0
9.7
10" V.C.
2 - 8" V.C.
12" V.C.
1INV.12.20
8" V.C.
8" V.C.
INV.12.50
14.00
10" V.C.
Sherrill Avenue
VALVES & TEE REMOVED 1997
8" V.C..
6"
6" C.I.
2"
INV.10.77
INV.10.97
13.34
9.30
12" FORCE MAIN
6"
M8MW12
INV. 4.0
C.O.
4" C.I.
6.51
C.O.
36" CON DRAIN
M5MW23
9-11
12" V.C.
8" V.C..
2"
6"
12.35
8.59
4" ABANDONED STEEL
6"
2"
6"
2"
8.42
5.46
600AMW02
600AMW01
8" C.I.
11.61
8.02
15" V.C.
8" V.C..
M8MW22
FTMM-05
12.72
7.84
8" V.C.
12.11
8.90
Battery Avenue
15" V.C.
8" C.I.
6" C.I.
6" C.I.
9-12
2"
603
M5MW11
Messenger Avenue
676
677
678
1%%130
12" V.C.P.
18" R.C.P.

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well - Active
- Monitoring Well - Abandoned
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N W E S

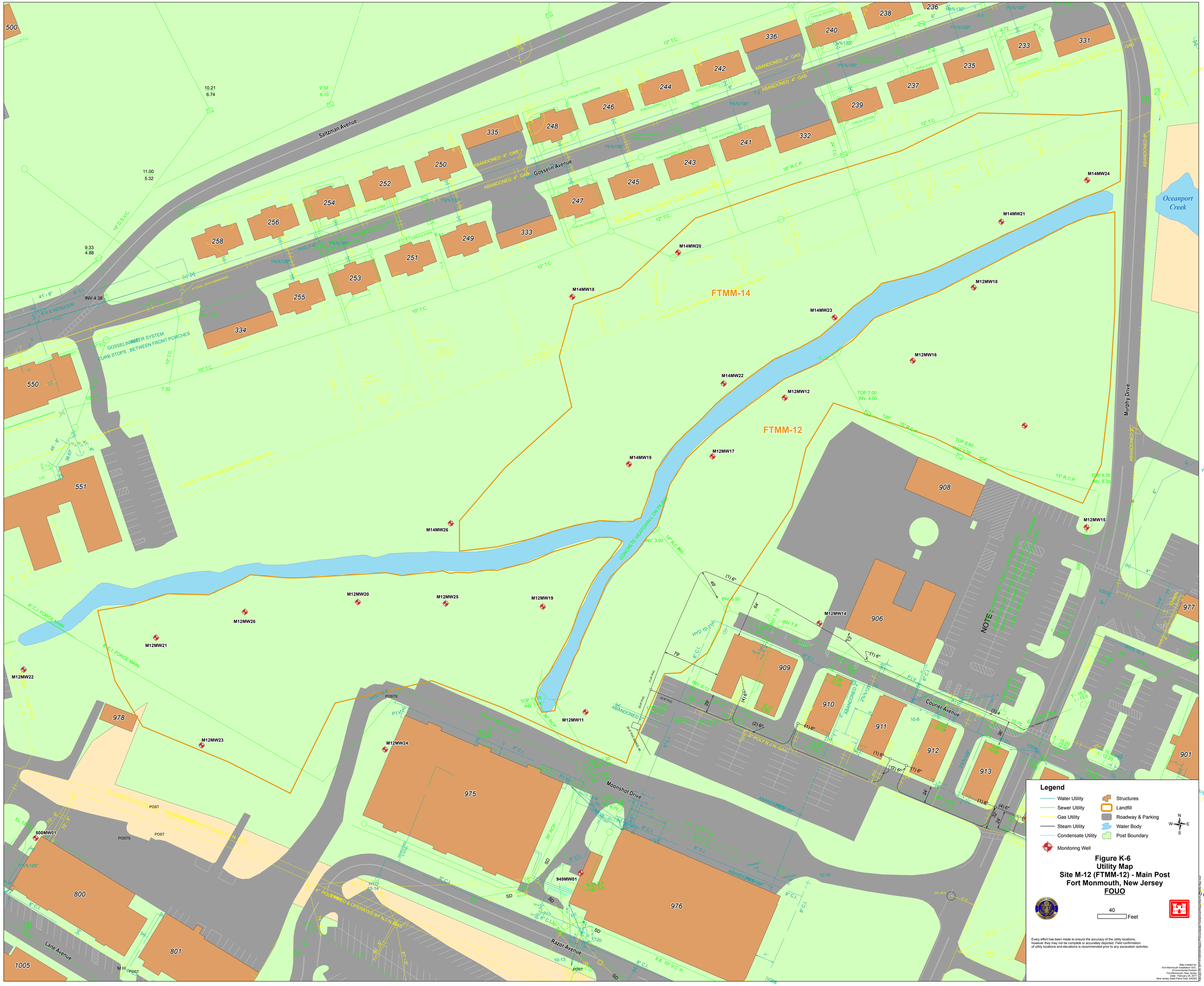
Figure K-5
Utility Map
Site M-8 (FTMM-08) - Main Post
Fort Monmouth, New Jersey
FOUO

30 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIS
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

Source: J:\ArcGIS\MXD\Maps\Fortmonmouth_Environmental\Maps\Site M-8 (FTMM)\Map.mxd


Saltzman Avenue
Gosselin Avenue
Murphy Drive
Courer Avenue
Moonshot Drive
Razor Avenue
Lane Avenue
Oceanport Creek
FTMM-14
FTMM-12
M14MW18
M14MW20
M14MW21
M14MW24
M14MW23
M12MW18
M12MW16
M14MW22
M12MW12
M14MW19
M12MW17
M14MW26
M12MW20
M12MW25
M12MW19
M12MW26
M12MW21
M12MW22
M12MW23
M12MW24
M12MW11
M12MW14
M12MW15
800MW01
949MW01
ABANDONED 4" GAS
ABANDONED HIGH PRESS MAIN OWNED BY N.J.N. GAS
6" STEEL OWNED & OPERATED BY N.J.N. GAS
6" C.I. FORCE MAIN
8" C.I. FORCE MAIN
10" HIGH PRESSURE "FRANKLIN" OPERATED BY N.J.N. GAS
6" POLY OWNED & OPERATED BY N.J.N. GAS
GOSSELIN WEEP SYSTEM
CURB STOPS , BETWEEN FRONT PORCHES
CONCRETE HEADWALL ON PILINGS
NOTE: ALL BUILDINGS ARE TO BE CONNECTED TO NEW SANITARY SEWER AS THEY ARE RENOVATED. ALL EXISTING SEPTIC TANKS ARE TO BE REMOVED AFTER BUILDINGS ARE CONNECTED TO NEW SANITARY SEWER. ALL EXISTING CESS POOLS WERE CONCRETE IN PLACE
Legend
Water Utility
Sewer Utility
Gas Utility
Steam Utility
Condensate Utility
Monitoring Well
Structures
Landfill
Roadway & Parking
Water Body
Post Boundary
N
W
E
S
Figure K-6
Utility Map
Site M-12 (FTMM-12) - Main Post
Fort Monmouth, New Jersey
FOUO
40
Feet
Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.
Map created by:
Fort Monmouth Installation GIS
Environmental Division
Fort Monmouth, New Jersey
Date: February 26, 2011
New Jersey State Plane Feet, NAD83

Saltzman Avenue
Gosselin Avenue
Courier Avenue
Murphy Drive
Oceanport Creek
FTMM-14
FTMM-12
M14MW18
M14MW20
M14MW21
M14MW24
M14MW23
M12MW18
M12MW16
M14MW22
M12MW12
M14MW19
M12MW17
M14MW26
M12MW20
M12MW25
M12MW19
M12MW14
M12MW15
ABANDONED 4" GAS
ABANDONED HIGH PRESS MAIN OWNED BY N.J.N. GAS
6" HIGH PRESS. OWNED & OPERATED BY N.J.N. GAS
CONCRETE HEADWALL ON PILING
NOTE :

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

Figure K-7
Utility Map
Site M-14 (FTMM-14) - Main Post
Fort Monmouth, New Jersey
FOUO

30 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIS
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

Parkers
Creek

FTMM-18

FTMM-08

MP18MW24
MP18MW25
296MW04
296MW03
296MW06
296MW07
296MW08
296MW02
290MW02
290MW01
M8MW16
M18MW22
M18MW23
B4MW04B
283MW01
283MW03
283MW04
283MW05
283MW02
283MW06

293
295
292
291
296
288
283
145

INV 4.71
INV 1.92
INV 3.93
INV 1.61
DEEP CONC. CHAMBER
TANKS
TANKS
DEMOED SEWER PLANT SITE
8" C.I.
6" NON ORGANIC
ABANDONED
P.I.V.C.
C.O.
HYD 8-7
HYD 8-8
HYD 8-4
HYD8-5
PLUGGED AT MAIN
2 POLY M.I.N. GAS
OLD 2" WATER
OLD 6" C.I.
fence
209.4'
18" V C.
Sherrill Avenue
CURB FACE

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N W E S

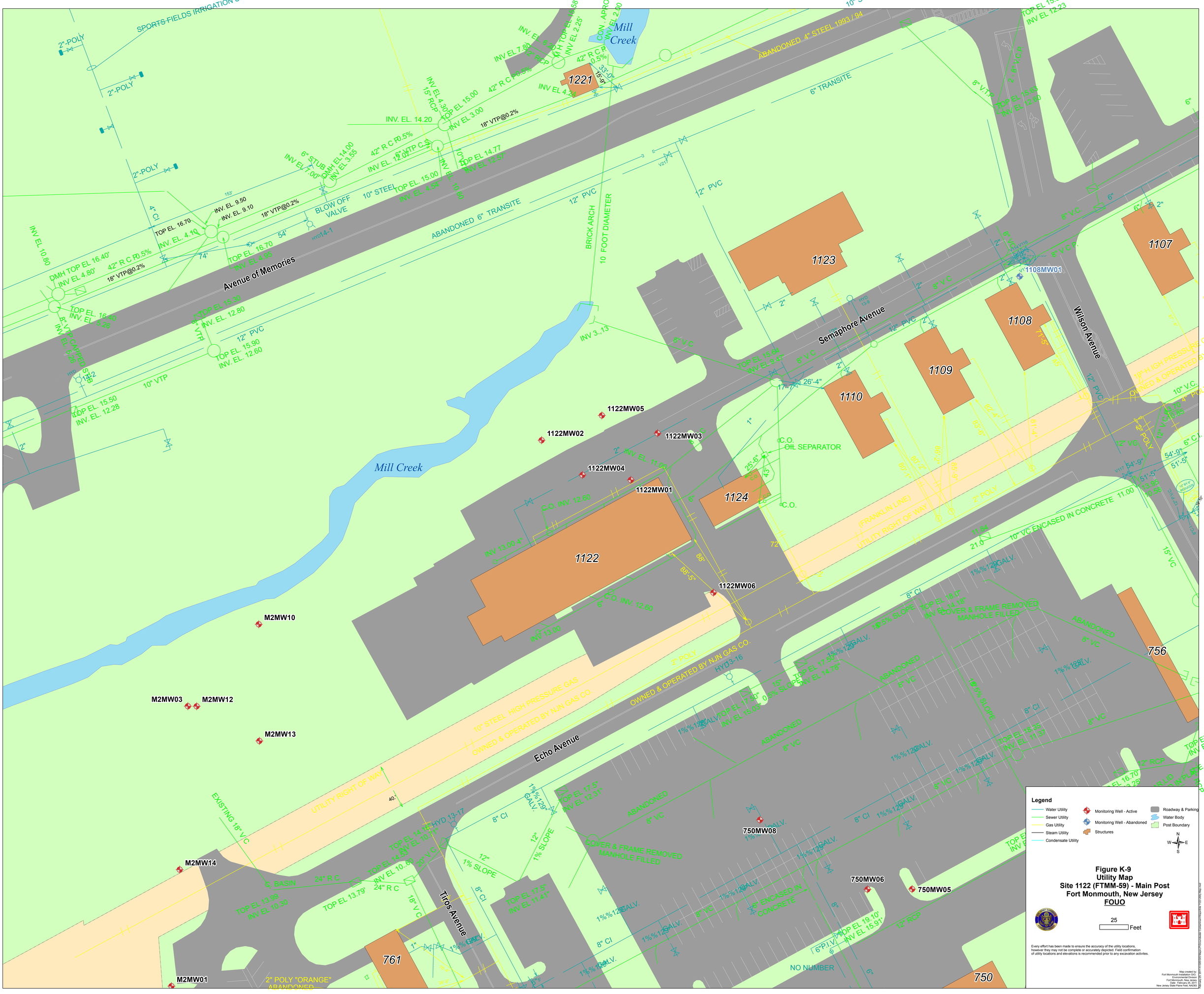
Figure K-8
Utility Map
Site M-18 (FTMM-18) - Main Post
Fort Monmouth, New Jersey
FOUO

30 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIS
Building 205 (CERCOM Bldg.)
Fort Monmouth, New Jersey
Date: February 28, 2011
New Jersey State Plane Feet, NAD83

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Mill Creek
Avenue of Memories
Semaphore Avenue
Wilson Avenue
Echo Avenue
Tiros Avenue
ABANDONED 4" STEEL 1993 / 94
ABANDONED 6" TRANSITE
6" TRANSITE
10" STEEL
12" PVC
10' FOOT DIAMETER BRICK ARCH
SPORTS FIELDS IRRIGATION SOURCE
2"-POLY
BLOW OFF VALVE
DMH TOP EL 16.40' INV EL 4.80'
DMH EL14.00 INV EL 3.55
INV. EL. 14.20
INV EL 4.24
TOP EL 15.00 INV EL 3.00
TOP EL 14.77 INV EL 12.57'
TOP EL 15.00 INV. EL. 4.54'
INV EL 10.80
TOP EL. 16.70 INV. EL. 4.10
INV. EL. 9.50
INV. EL. 9.10
TOP EL. 16.70 INV. EL. 4.95
TOP EL. 16.40 INV. EL. 5.26
TOP EL 15.30 INV. EL. 12.80
TOP EL. 15.90 INV. EL. 12.60
TOP EL. 15.50 INV. EL. 12.28
INV 3..13
TOP EL 15.64 INV EL 9.47
TOP EL 15.31 INV EL 12.23
TOP EL 15.68 INV EL 12.60
1221
1123
1107
1108
1109
1110
1124
1122
756
761
750
1122MW01
1122MW02
1122MW03
1122MW04
1122MW05
1122MW06
1108MW01
750MW08
750MW06
750MW05
M2MW01
M2MW03
M2MW10
M2MW12
M2MW13
M2MW14
C.O. OIL SEPARATOR
(FRANKLIN LINE) UTILITY RIGHT OF WAY
10" STEEL HIGH PRESSURE GAS OWNED & OPERATED BY NJN GAS CO.
10" HIGH PRESSURE GAS OWNED & OPERATED BY N.J.N. GAS
UTILITY RIGHT OF WAY
EXISTING 18" V.C.
2" POLY "ORANGE" ABANDONED
10" VC ENCASED IN CONCRETE 11.00
COVER & FRAME REMOVED MANHOLE FILLED
NO NUMBER
Legend
Water Utility
Sewer Utility
Gas Utility
Steam Utility
Condensate Utility
Monitoring Well - Active
Monitoring Well - Abandoned
Structures
Roadway & Parking
Water Body
Post Boundary
N
W
E
S
Figure K-9
Utility Map
Site 1122 (FTMM-59) - Main Post
Fort Monmouth, New Jersey
FOUO
25
Feet
Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.
Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: May 2011
New Jersey State Plane Feet, NAD83

Mill Creek

1122MW05
1122MW03
1122MW02
1122MW01
1122MW04
1122MW06
750MW08
750MW06
750MW05
750MW01
750MW02
750MW04
750MW03
750MW07

1122
1124
1110
1109
756
754
753
750
770
760
761

Echo Avenue
Wilson Avenue
Vanguard Road
Tiros Avenue

(FRANKLIN LINE) UTILITY RIGHT-OF-WAY
10" STEEL HIGH PRESSURE GAS OWNED & OPERATED BY NJN GAS CO.
OWNED & OPERATED BY NJN GAS CO.
10" H.IGH PRESSURE GAS OWNED & OPERATED BY
10" V.C. ENCASED IN CONCRETE 11.00
ST. NO LONGER EXISTS PAVEMENT REMOVED
2" POLY OWNED & OPERATED BY NJN GAS CO.
4" STEEL ABANDONED
ABANDONED 4" STEEL
ABANDONED 2" POLY
2" POLY OWNED BY NJN GAS CO.
ENCASED IN CONCRETE

OIL SEPARATOR
C.O.
INV. EL. 12.60
INV 13.00 4"
INV 13.00
6" C.O. INV. 12.60
HYD 13-16
HYD 13-17
HYD 13-14
HYD 13-19
HYD 13-15
HYD 13-20
HYD 13-212
TOP EL 17.5" INV EL 12.31'
TOP EL 17.5" INV EL 11.41'
TOP EL 17.50" INV EL 15.03" 0.6% SLOPE
TOP EL 17.33" INV EL 14.78"
TOP EL 18.0" INV EL 14.18"
TOP EL 15.00 INV. 10.13
TOP EL 15.40' INV EL 12.98'
TOP EL 15.30' INV EL 12.83'
TOP EL 16.70' INV EL 13.28'
TOP EL 16.90' INV EL 12.98'
TOP EL 16.90' INV EL 12.85'
TOP EL 17.20' INV EL 12.30'
TOP EL 19.10' INV EL 15.91'
TOP EL 19.25' INV EL 15.45'
TOP EL 17.43' INV EL 11.53'
TOP EL 16.75' INV EL 10.45'
MH TOP EL 17.45 INV. EL 13.72
SAN. M.H. COLLAR LID REMOVED & ABANDONED IN PLACE
DR. M.H. COLLAR & LID REMOVED, ABANDONED IN PLACE
ELEVENTH FENCE POST FROM RT. CORNER
NO NUMBER

8" C.I.
6" C.I.
8" CI
8" VC
8" V.C.
6" V.C.
10" V.C.
12" V.C.
12" VCP
10" VCP
12" RCP
15" RCP
24" RCP
30" RCP
12" V C P
8" V.C.P.
2" POLY
6" P.I.V.
1% SLOPE
1%%129" GALV.
1%%130"
1%%128" GALV.
1%%126" GALV.
10.5% SLOPE
ABANDONED 8" VC
COVER & FRAME REMOVED MANHOLE FILLED
6" ENCASED IN CONCRETE
4" STEEL
1 1/2"

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well - Active
- Structures
- Roadway & Parking
- Water Body
- Post Boundary

N
W E
S

Figure K-10
Utility Map
Site 750 - Main Post
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activities.

Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: February 24, 2011
New Jersey State Plane Feet, NAD83

I:\Projects\171100\GIS\Maps\Miscellaneous Maps\Site 750 - Main Post\Site 750 - Main Post.mxd

Parkers Creek

FTMM-18

MP18MW24
MP18MW25
M18MW22
M18MW23
B4MW04B
283MW01
283MW03
283MW04
283MW05
283MW02
283MW06
290MW02
290MW01
296MW08
296MW02
296MW01

145
283
288
293
295
292
291
296
555

SIGNAL M.H.
SIGNAL M.H.

Russel Avenue
Malterer Avenue
Brewer Avenue
Irwin Avenue
Harmon Avenue
Sherrill Avenue

OLD 2" WATER
OLD 6" C.I.
ABANDONED STEEL
ABANDONED 4" STEEL
2" POLY N.J.N. GAS
2" POLY OWNED & OPER. BY N.J.N. GAS
10" POROUS PIPE
12" V.C. DRAIN
CURB FACE
PLUGGED AT MAIN
P.I.V.

HYD8-5
HYD 8-4
HYD 8-3
HYD 8-2
HYD 8-1

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N W E S

Figure K-11
Utility Map
Site 283 (FTMM-61) - Main Post
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date - February 25, 2013
New Jersey State Plane Feet, NAD83

K-11_FTMM-61_283_Map.mxd

Parkers Creek

FTMM-18

FTMM-08

MP18MW24

MP18MW25

296MW04

296MW03

296MW06

296MW07

296MW08

296MW02

296MW01

290MW02

290MW01

M18MW22

M18MW23

283MW01

283MW03

283MW04

283MW05

283MW02

283MW06

293

295

292

291

296

145

288

283

INV 4.71

ABANDONED

PLUGGED AT MAIN

ABANDONED STEEL

ABANDONED 4" STEEL

ABANDONED 1997

2" POLY NJN GAS

2" POLY OWNED & OPER. BY N.J.N. GAS

6" NON ORGANIC

8" V.C. NON ORGANIC SEWER

TANKS

CURB FACE

OLD 6" C.I.

Sherrill Avenue

Brewer Avenue

Irwin Avenue

Harmon Avenue

fence

209.4'

18" V.C.

20" V.C. 197.0'

12" V.C.

2" C.I.

6" C.I.

24" R.C.

15" R.C.

10" V.C.

20" V.C.

8" V.C.

6" V.C.

HYD 8-1

HYD 8-2

HYD 8-3

HYD 8-4

HYD 8-5

HYD 8-6

HYD 8-7

HYD 8-8

P.I.V.

C.O.

TOP 12.00

INV. 11.0'

INV. 11.41'

INV. 9.96

INV. 9.86

INV. 9.76

INV. 9.66

INV. 9.56

INV. 9.46

INV. 9.36

INV. 9.26

INV. 9.16

INV. 9.06

INV. 8.96

INV. 8.86

INV. 8.76

INV. 8.66

INV. 8.56

INV. 8.46

INV. 8.36

INV. 8.26

INV. 8.16

INV. 8.06

INV. 7.96

INV. 7.86

INV. 7.76

INV. 7.66

INV. 7.56

INV. 7.46

INV. 7.36

INV. 7.26

INV. 7.16

INV. 7.06

INV. 6.96

INV. 6.86

INV. 6.76

INV. 6.66

INV. 6.56

INV. 6.46

INV. 6.36

INV. 6.26

INV. 6.16

INV. 6.06

INV. 5.96

INV. 5.86

INV. 5.76

INV. 5.66

INV. 5.56

INV. 5.46

INV. 5.36

INV. 5.26

INV. 5.16

INV. 5.06

INV. 4.96

INV. 4.86

INV. 4.76

INV. 4.66

INV. 4.56

INV. 4.46

INV. 4.36

INV. 4.26

INV. 4.16

INV. 4.06

INV. 3.96

INV. 3.86

INV. 3.76

INV. 3.66

INV. 3.56

INV. 3.46

INV. 3.36

INV. 3.26

INV. 3.16

INV. 3.06

INV. 2.96

INV. 2.86

INV. 2.76

INV. 2.66

INV. 2.56

INV. 2.46

INV. 2.36

INV. 2.26

INV. 2.16

INV. 2.06

INV. 1.96

INV. 1.86

INV. 1.76

INV. 1.66

INV. 1.56

INV. 1.46

INV. 1.36

INV. 1.26

INV. 1.16

INV. 1.06

INV. 0.96

INV. 0.86

INV. 0.76

INV. 0.66

INV. 0.56

INV. 0.46

INV. 0.36

INV. 0.26

INV. 0.16

INV. 0.06

INV. -0.04

INV. -0.14

INV. -0.24

INV. -0.34

INV. -0.44

INV. -0.54

INV. -0.64

INV. -0.74

INV. -0.84

INV. -0.94

INV. -1.04

INV. -1.14

INV. -1.24

INV. -1.34

INV. -1.44

INV. -1.54

INV. -1.64

INV. -1.74

INV. -1.84

INV. -1.94

INV.

Parkers Creek

MP18MW24

MP18MW25

FTMM-18

296MW04

296MW03

296MW06

M18MW22

145

283MW01

283MW03

293

295

283MW04

283MW05

283

INV 4.71

296MW07

290MW02

296MW08

M8MW16

283MW02

283MW06

292

290MW01

FTMM-08

291

296MW02

296

296MW01

CONTROL BLDG.
THREE LEVELS PLUS BELOW SURFACE

DEMOED SEWER PLANT SITE

TANKS

TANK

ABANDONED 1997

Sherrill Avenue

Irwin Avenue

Harmon Avenue

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N W E S

Figure K-13
Utility Map
Site 296 (FTMM-54) - Main Post
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activities.

Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: February 24, 2011
New Jersey State Plane Feet, NAD83

Lane Avenue
Razor Avenue
Murphy Drive
Stephenson Avenue
Alexander Avenue
Heliograph Avenue
Tindall Avenue
Guardrail Avenue
S DISH
1000
1001
1002
1003
1006
1007
1075
810
812
886
812MW01
812MW02
812MW03
812MW04
812MW05
812MW06
812MW07
812MW08
812MW09
812MW10
812MW11
812MW12
812MW13
812MW14
886MW01
886MW02
886MW03
886MW04
886MW05
886RW01
886RW02
886RW03
886RW04
886RW05
886RW06
886RW07
886RW08
1076MW01
POST
POLE
FLUSHING VALVE
DEMOED
ABANDONED
ABANDONED STEEL
ABANDONED GAS
SWALE
UTILITY RIGHT OF WAY
WINDOW LEDGE
2" POLY N.J.N. GAS
4" POLY N.J.N. GAS
3" W.I.GAS ABANDONED
12" V.C.
10" V.C.
8" V.C.
6" V.C.P.
8" V.C.P.
10" V.C.P.
12" V.C.P
36" R.C.P.
15" V.C.
14" C.I.
12" C.I.
8" C.I.
6" C.I.
2" W.I.G.
48" 8" C.I.P.
10" STEEL OWNED
Legend
Water Utility
Sewer Utility
Gas Utility
Steam Utility
Condensate Utility
Monitoring Well - Active
Recovery Well
Monitoring Well - Abandoned
Structures
Roadway & Parking
Post Boundary
N
W
E
S
Figure K-14
Utility Map
Site 812 (FTMM-64) - Main Post
Fort Monmouth, New Jersey
FOUO
25
Feet
Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.
Map created by:
Fort Monmouth Department of Environmental Division
Fort Monmouth, New Jersey
Date: February 24, 2011
New Jersey State Plane Feet, NAD83

976
918
1007
1003
1000
812
810
886
Murphy Drive
Razor Avenue
Stephenson Avenue
Guardrail Avenue
Main Street
886MW01
886MW02
886MW03
886MW04
886MW05
886RW01
886RW02
886RW03
886RW04
886RW05
886RW06
886RW07
886RW08
812MW01
812MW02
812MW03
812MW04
812MW06
812MW08
812MW09
812MW10
812MW11
812MW14
8" C.I.
8 & 10" V.C. P.
10" STEEL H.P.G. OWNED & OPERATED BY N.J.N. GAS
UTILITY RIGHT OF WAY
OPEN SWALE
SWALE
4" POLY N.J.N. GAS
2" POLY N.J.N. GAS
GARDEN PLOT IRRIGATION NOT ACCURATE
DEMOED
ABANDONED
PLUGGED
DOCK EDGE
POST
C.O.
12" V.C.
10" V.C.
14" C.I.
6" C.I.
12" C.I.
36" R.C.P.
12" V.C.P.
8" V.C.P.
10" STEEL N.J.N. GAS H.P. MAIN 40" +/- COVER
5" W.I.GAS LINE
NEW CURB LINE

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well
- Recovery Well
- Structures
- Roadway & Parking
- Post Boundary

N W E S

Figure K-15
Utility Map
Site 886 (FTMM-66) - Main Post
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIS
Tetra Tech, Inc.
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

Drawing Path: I:\GIS\2010\Maps\FtMonmouth_Environmental\Reports\886 (Main)\Map.mxd

6" A.C.

6'

V112

14'.8"

6"

COMM. M.H.

B7MW07B

8" TRANSITE

CW3AMW03

CW3AMW04

FTMM-25

CW3AMW02

Pearl Harbor Avenue

Academy Avenue

2628

2629

STORM DRAIN (OVERFLOW FROM POND)

DETENTION POND

HYD. 386

STORM DRAIN (WATER FROM FIRE DRILLS)

IE 57.63'

18"

TE 63.50'
12" IE 58.36'
18"IE 57.86'

INV EL 59.'
C.O.

8"
TE 65.41'
I E 59.75'

4" FORCE MAIN

8"
INV EL 66.'
C.O.

18'

CW3AMW01

12"

TE 63.18'
12" IE 58.55'

TE 66.13
12" IE 58.68'
12" IE 58.18'

TE 67.67'
12" IE 58.94'
12" IE 58.44'

TE 67.00'
12" IE 59.01'
15" IE 58.76'
18" IE 58.51'

TE 69.44'
12" IE 65.77'

TE 63.00'
12" IE 59.35'

AREA INSIDE FENCE. EXCAVATORS BEWARE

HYD 51B

HYD. 51A

TE 67.65'
12" IE 60.40'

TE 67.65'
12" IE 60.62'

TE 67.65'
12" IE 512" 59.01'

TE 67.65'
12" IE 60.85'

INV EL 62.54'

INV EL 62.21

TE 67.44'
12" IE 61.05'

TE 66.52'
12" IE 61.27'

2713

2707

TE 68.46'
15" IE 59.01'

6" FIRE

SPILL RET TK

TK

TK. #2

TK. #1

TK. #3

4" FORCE MAIN

INV EL 59.86'

4" DCW

V116

V117

NOTE VALVE BOX
CONNECTS 8" & 4" LINES

CAPPED

HYD 51

TE 68.00'
12" IE 61.63'

TE 68.00'
12" IE 61.99'

SCOPE FOR UTILITIES

UNDERGROUND UTILITIES IN THIS AREA NO LINES

C.O.

8" A.C

Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well - Active
- Structures
- Landfill
- Roadway & Parking
- Water Body
- Post Boundary

N W E S

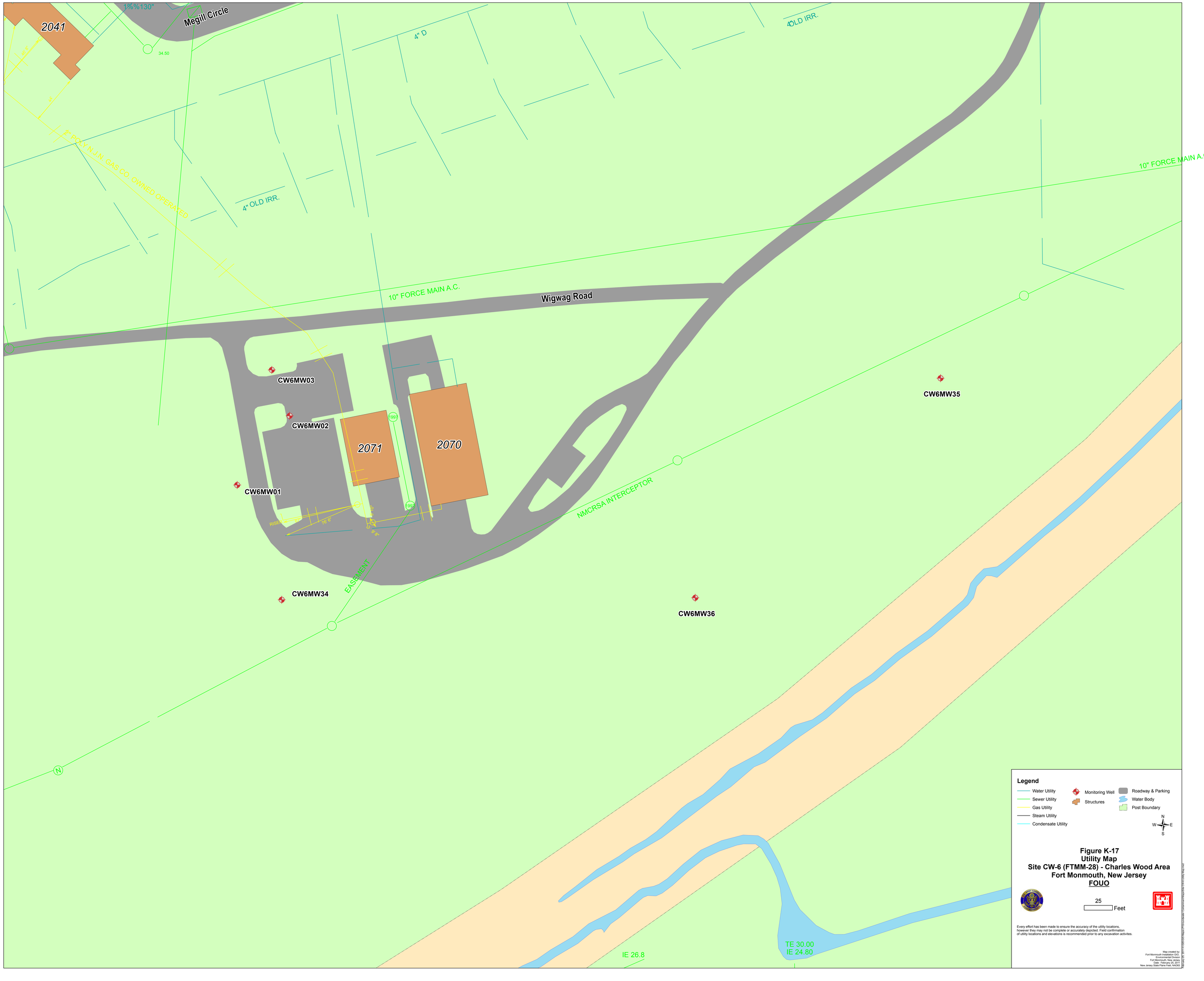
Figure K-16
Utility Map
Site CW-3A (FTMM-25) - Charles Wood Area
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

Source: P:\GIS\FTMONMOUTH\Maps\Active\Utilities_Fieldmap\Utilities_Fieldmap.mxd


Megill Circle
2041
1%%130"
34.50
4" D
4"OLD IRR.
4" OLD IRR.
2" POLY NJNG GAS CO. OWNED OPERATED
10" FORCE MAIN A.C.
10" FORCE MAIN A.C.
Wigwag Road
CW6MW03
CW6MW02
CW6MW01
CW6MW34
CW6MW35
CW6MW36
2071
2070
1997
1997
RISER
76' 0"
EASEMENT
NMCRSA INTERCEPTOR
IE 26.8
TE 30.00
IE 24.80
N
Legend
Water Utility
Sewer Utility
Gas Utility
Steam Utility
Condensate Utility
Monitoring Well
Structures
Roadway & Parking
Water Body
Post Boundary
N
W
E
S
Figure K-17
Utility Map
Site CW-6 (FTMM-28) - Charles Wood Area
Fort Monmouth, New Jersey
FOUO
25
Feet
Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.
Map created by:
Fort Monmouth Installation GIO,
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

NOTE
PERIMETER OF MEYER CTR
AND COURT YARD
Ⓐ= ACID SEWER
Ⓢ= SANITARY SEWER
◯= STORM SEWER

Corput Plaza Drive

Laboratory Road

Watson Avenue

2700

2706

2700MW04

2337MW01

2700MW01

2700MW06

CW1MW281
CW1SPG02
CW1SVE2
CW1MW39
CW1MW30
CW1MW282
CW1SP04
CW1MW25
CW1MW291
CW1MW34
CW1MW36
CW1MW28
CW1RW02
CW1SPG01
CW1SVE1
CW1MW40
CW1MW35
CW1MW37
CW1MW27
CW1MW31
CW1MW32
CW1MW38
CW1MW26
CW1MW33
CW1RW01
CW1MW29
CW1SP03

CW2MW31
CW2MW32
CW2MW30
CW2MW33

CAUTION
NEW HEAT SUPPLY AND RETURN LINES BURIED IN THIS GENERAL AREA

ABANDONED 2" G.I.

ABANDONED 2" G.I. 3"

ENCASED IN CONCRETE

6" C.I. ABANDINED

PLUGGED TEE

VALVES UNDER "BREEZEWAY " FLOOR

10" FROM REAR

8" FROM FRT.

10" UP IN BLR. RM.

NEW 1994

NOT FOUND 3 / 98

NEW SUB

CUT AND CAPPED 1982

BLOW DOWN BLR PLT.

TOP EL 48.95
12"IE 44.49

TOP EL 48.72
12" IE 44.49

TOP EL 48.72
12" IE 44.72

TOP EL 47.60
12" IE 43.75

TOP EL 47.60
12" IE 43.60

TOP EL 47.60
12" IE 43.72

TOP EL 47.60
12" IE 43.72

TOP EL 47.60
12" IE 43.72

NOTE
PERIMETER OF MEYER CTR
AND COURT YARD
Ⓐ= ACID SEWER
Ⓢ= SANITARY SEWER
◯= STORM SEWER

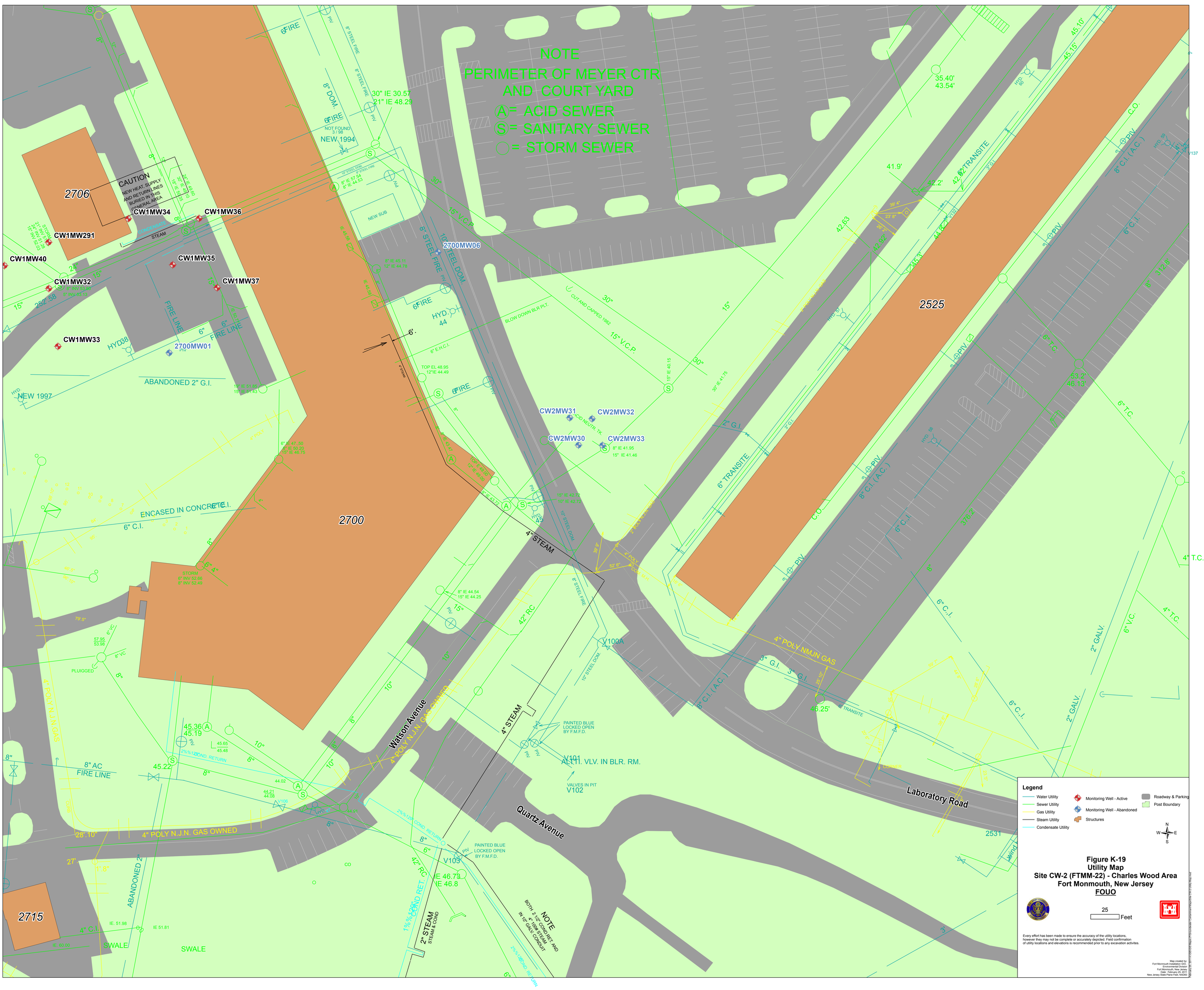
2706
2700
2715
2525
2531

CAUTION
NEW HEAT SUPPLY AND RETURN LINES BURIED IN THIS GENERAL AREA

CW1MW34
CW1MW36
CW1MW291
CW1MW40
CW1MW35
CW1MW32
CW1MW37
CW1MW33
2700MW01
2700MW06
CW2MW31
CW2MW32
CW2MW30
CW2MW33

Watson Avenue
Quartz Avenue
Laboratory Road

30" IE 30.57
21" IE 48.29
NOT FOUND 3/98
NEW 1994
8" DOM.
6" FIRE
8" STEEL FIRE
10" STEEL DOM.
15" V.C.P.
30"
CUT AND CAPPED 1982
BLOW DOWN BLR PLT.
6" E.H.C.I.
TOP EL 48.95
12" IE 44.49
HYD. 44
HYD 38
NEW 1997
ABANDONED 2" G.I.
FIRE LINE
6" C.I.
ENCASED IN CONCRETE
4" STEAM
2" STEAM & COND
42" RC
42" TRANSITE
6" TRANSITE
8" C.I. (A.C.)
6" C.I.
6" T.C.
4" T.C.
2" GALV.
6" V.C.
3" G.I.
4" POLY N.J.N. GAS
4" POLY N.J.N. GAS OWNED
4" POLY NMJN GAS
8" AC FIRE LINE
ABANDONED 2"
4" C.I.
STORM
6" INV 52.06
6" INV 52.49
PLUGGED
PAINTED BLUE LOCKED OPEN BY F.M.F.D.
V100A
V101
ALT'I. VLV. IN BLR. RM.
VALVES IN PIT
V102
V103
V106
2% %12% COND. RETURN
16% %20% COND RET.
NOTE
BOTH 2 1/2" COND RET. AND 4" STEAM IN 10" GALV CONDUIT
ACID NEUTR. TK.
SWALE
CO
PIV
HYD
CURB
CORNER
STEAM
NEW SUB



Legend

- Water Utility
- Sewer Utility
- Gas Utility
- Steam Utility
- Condensate Utility
- Monitoring Well - Active
- Monitoring Well - Abandoned
- Structures
- Roadway & Parking
- Post Boundary

N
W E
S

Figure K-19
Utility Map
Site CW-2 (FTMM-22) - Charles Wood Area
Fort Monmouth, New Jersey
FOUO

25 Feet

Every effort has been made to ensure the accuracy of the utility locations, however they may not be complete or accurately depicted. Field confirmation of utility locations and elevations is recommended prior to any excavation activites.

Map created by:
Fort Monmouth Installation GIS
Environmental Division
Fort Monmouth, New Jersey
Date: February 25, 2011
New Jersey State Plane Feet, NAD83

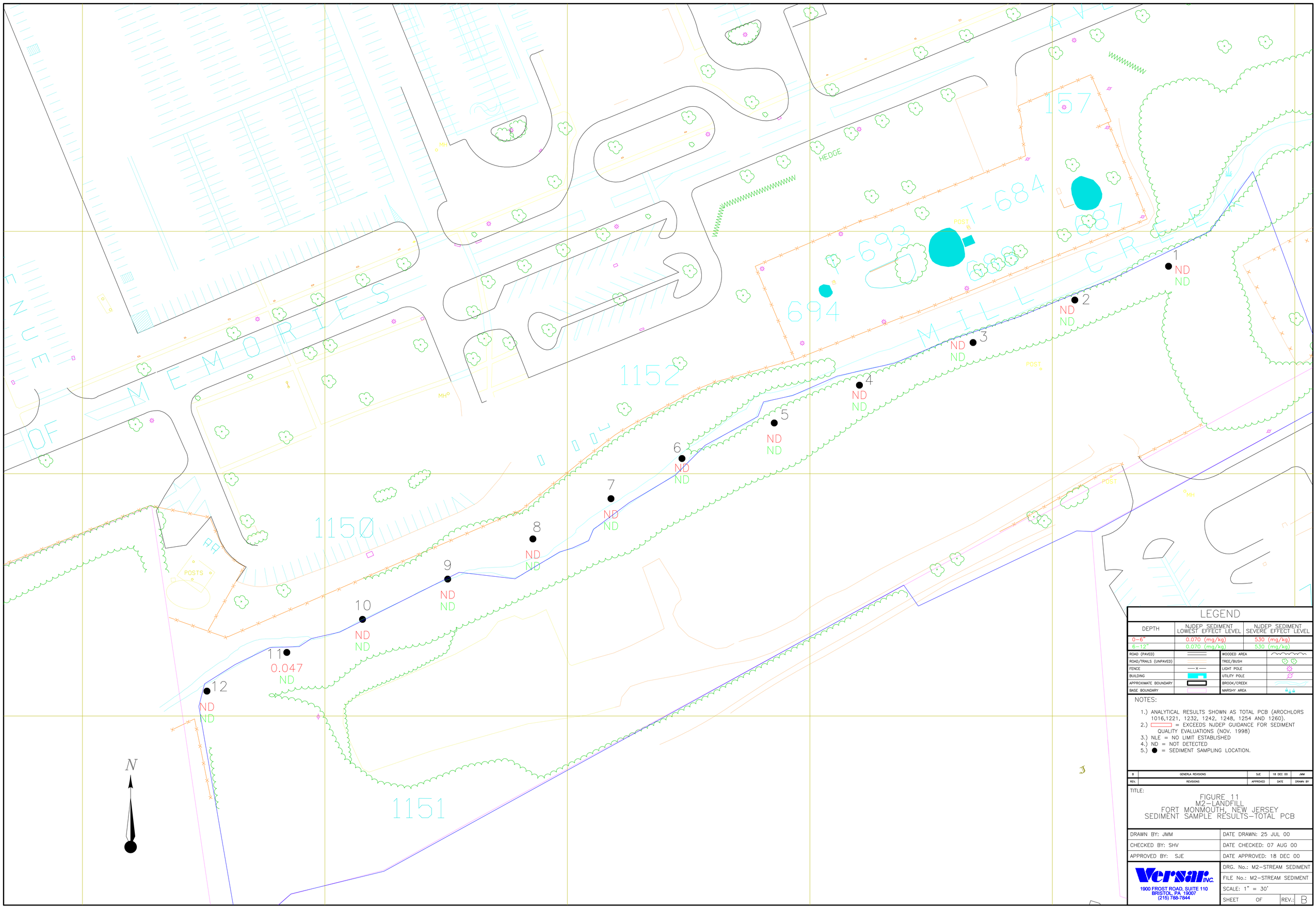
Drawing No. 2011100525\05\Maps\Docs\Master Installation Maps\Site CW-2 (FTMM-22) Map.mxd

APPENDIX L
Sediment Quality Investigation Data

Table 7
Sediment Sampling Results
PCB Analysis - April 2000
Main Post - M2 Landfill
Fort Monmouth, New Jersey

Field ID Sample Location	Depth	Lab I.D.	Sample Time	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Total PCB
Lowest Effect Level (LEL)*	-	-	-	0.007	NA	NA	NA	0.030	0.060	0.005	0.070
Severe Effects Level (SEL)*	-	-	-	53.000	NA	NA	NA	150.000	34.000	24.000	530.000
1	0-6"	5346.01	13:33	ND	ND	ND	ND	ND	ND	ND	ND
1	6-12"	5346.02	13:35	ND	ND	ND	ND	ND	ND	ND	ND
2	0-6"	5346.03	13:37	ND	ND	ND	ND	ND	ND	ND	ND
2	6-12"	5346.04	13:39	ND	ND	ND	ND	ND	ND	ND	ND
3	0-6"	5346.05	13:41	ND	ND	ND	ND	ND	ND	ND	ND
3	6-12"	5346.06	13:43	ND	ND	ND	ND	ND	ND	ND	ND
4	0-6"	5346.07	13:48	ND	ND	ND	ND	ND	ND	ND	ND
4	6-12"	5346.08	13:50	ND	ND	ND	ND	ND	ND	ND	ND
5	0-6"	5346.09	13:53	ND	ND	ND	ND	ND	ND	ND	ND
5	6-12"	5346.10	13:55	ND	ND	ND	ND	ND	ND	ND	ND
6	0-6"	5346.11	13:58	ND	ND	ND	ND	ND	ND	ND	ND
6	6-12"	5346.12	14:00	ND	ND	ND	ND	ND	ND	ND	ND
7	0-6"	5346.13	14:05	ND	ND	ND	ND	ND	ND	ND	ND
7	6-12"	5346.14	14:07	ND	ND	ND	ND	ND	ND	ND	ND
8	0-6"	5346.15	14:10	ND	ND	ND	ND	ND	ND	ND	ND
8	6-12"	5346.16	14:12	ND	ND	ND	ND	ND	ND	ND	ND
9	0-6"	5346.17	14:14	ND	ND	ND	ND	ND	ND	ND	ND
9	6-12"	5346.18	14:16	ND	ND	ND	ND	ND	ND	ND	ND
10	0-6"	5346.19	14:22	ND	ND	ND	ND	ND	ND	ND	ND
10	6-12"	5346.20	14:24	ND	ND	ND	ND	ND	ND	ND	ND
11	0-6"	5346.21	14:30	ND	ND	ND	ND	ND	0.047	ND	0.047
11	6-12"	5346.22	14:33	ND	ND	ND	ND	ND	ND	ND	ND
12	0-6"	5346.23	14:35	ND	ND	ND	ND	ND	ND	ND	ND
12	6-12"	5346.24	14:38	ND	ND	ND	ND	ND	ND	ND	ND
DUP	0-6"	5346.25	-	ND	ND	ND	ND	ND	0.055	ND	0.055
DUP	6-12"	5346.26	-	ND	ND	ND	ND	ND	ND	ND	ND

* NJDEP Guidance For Sediment Quality Evaluations, November 1998
Exceedances of the NJDEP Guidances are highlighted and printed in **bold-faced** type.
All concentrations are given in milligrams per kilogram (mg/Kg), equivalent to parts per million (ppm).
NA = Not Applicable
ND = Analyte Not Detected in Sample.



LEGEND

DEPTH	NJDEP SEDIMENT LOWEST EFFECT LEVEL	NJDEP SEDIMENT SEVERE EFFECT LEVEL
0–6"	0.070 (mg/kg)	530 (mg/kg)
6–12"	0.070 (mg/kg)	530 (mg/kg)

ROAD (PAVED)		WOODED AREA	
ROAD/TRAILS (UNPAVED)		TREE/BUSH	
FENCE	—x—	LIGHT POLE	
BUILDING		UTILITY POLE	
APPROXIMATE BOUNDARY		BROOK/CREEK	
BASE BOUNDARY		MARSHY AREA	

NOTES:

1.) ANALYTICAL RESULTS SHOWN AS TOTAL PCB (AROCHLORS 1016,1221, 1232, 1242, 1248, 1254 AND 1260).
2.) ▭ = EXCEEDS NJDEP GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS (NOV. 1998)
3.) NLE = NO LIMIT ESTABLISHED
4.) ND = NOT DETECTED
5.) ● = SEDIMENT SAMPLING LOCATION.

REV.	REVISIONS	APPROVED	DATE	DRAWN BY
B	GENERAL REVISIONS	SJE	18 DEC 00	JMM

TITLE:

FIGURE 11
M2–LANDFILL
FORT MONMOUTH, NEW JERSEY
SEDIMENT SAMPLE RESULTS–TOTAL PCB

DRAWN BY: JMM	DATE DRAWN: 25 JUL 00
CHECKED BY: SHV	DATE CHECKED: 07 AUG 00
APPROVED BY: SJE	DATE APPROVED: 18 DEC 00
	DRG. No.: M2–STREAM SEDIMENT
	FILE No.: M2–STREAM SEDIMENT
	SCALE: 1" = 30'
	SHEET OF REV.: B

Versar INC.
1900 FROST ROAD, SUITE 110
BRISTOL, PA 19007
(215) 788-7844

Table 4-1
PCB Sampling Results Summary
M-3 Landfill Site
Fort Monmouth, New Jersey

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Lab Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B-1	0-6"	M3/ 1 0-6"	5355.01	4/19/2000	ND	0.0143
	6"-12"	M3/ 1 6-12"	5355.02	4/19/2000	ND	0.0130
B-2	0-6"	M3/ 2 0-6"	5355.03	4/19/2000	ND	0.0111
	6"-12"	M3/ 2 6-12"	5355.04	4/19/2000	ND	0.0144
B-3	0-6"	M3/ 3 0-6"	5355.05	4/19/2000	ND	0.0156
	6"-12"	M3/ 3 6-12"	5355.06	4/19/2000	ND	0.0130
B-4	0-6"	M3/ 4 0-6"	5355.07	4/19/2000	ND	0.0118
	6"-12"	M3/ 4 6-12"	5355.08	4/19/2000	ND	0.0136
B-5	0-6"	M3/ 5 0-6"	5355.09	4/19/2000	ND	0.0151
	6"-12"	M3/ 5 6-12"	5355.10	4/19/2000	ND	0.0144
B-6	0-6"	M3/ 6 0-6"	5355.11	4/19/2000	ND	0.0110
	6"-12"	M3/ 6 6-12"	5355.12	4/19/2000	ND	0.0102
B-7	0-6"	M3/ 7 0-6"	5355.13	4/19/2000	ND	0.0101
	6"-12"	M3/ 7 6-12"	5355.14	4/19/2000	ND	0.0106
B-8	0-6"	M3/ 8 0-6"	5355.15	4/19/2000	ND	0.0127
	6"-12"	M3/ 8 6-12"	5355.16	4/19/2000	ND	0.0101
	18"-24"	M3/ 8 18"-24"	5355.17	4/19/2000	ND	0.0101
B-9	0-6"	M3/ 9 0-6"	5355.18	4/19/2000	ND	0.0111
	6"-12"	M3/ 9 6-12"	5355.19	4/19/2000	ND	0.0103
B-10	0-6"	M3/ 10 0-6"	5355.20	4/19/2000	ND	0.0097
	6"-12"	M3/ 10 6-12"	5355.21	4/19/2000	ND	0.0102
B-11	0-6"	M3/ 11 0-6"	5355.22	4/19/2000	ND	0.0099
	6"-12"	M3/ 11 6-12"	5355.23	4/19/2000	ND	0.0099
Duplicate	0-6"	DUP 0-6"	5355.24	4/19/2000	ND	0.0110
	6-12"	DUP 6-12"	5355.25	4/19/2000	ND	0.0102

Notes:
[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low
[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium
[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level
[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level
[5]All Results in milligrams per kilogram (mg/kg)
[6]Method Detection Limit (mg/kg) representing Total PCBs
ND = Analyte Not Detected in Sample
Exceedances of the NJDEP Guidances are shaded and printed in **bold-faced** type
PCBs = Polychlorinated Biphenyls

BRUSH

BRUSH

1

2

3

4

5

6

7

8

9

10

11

BRUSH

BRUSH

BRUSH

BRUSH

M-3 LANDFILL BOUNDARY

LAFFERTY CREEK

LAFFERTY CREEK

LAFFERTY CREEK

Table 4-1
PCB Sampling Results Summary
M-4 Landfill Site
Fort Monmouth, New Jersey

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Laboratory Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B-1	0-6"	M4/ 1 0-6"	5343.01	4/13/2000	ND	0.0124
	6"-12"	M4/ 1 6-12"	5343.02	4/13/2000	ND	0.0127
B-2	0-6"	M4/ 2 0-6"	5343.03	4/13/2000	ND	0.0128
	6"-12"	M4/ 2 6-12"	5343.04	4/13/2000	ND	0.0128
B-3	0-6"	M4/ 3 0-6"	5343.05	4/13/2000	ND	0.0128
	6"-12"	M4/ 3 6-12"	5343.06	4/13/2000	ND	0.0124
B-4	0-6"	M4/ 4 0-6"	5343.07	4/13/2000	ND	0.0109
	6"-12"	M4/ 4 6-12"	5343.08	4/13/2000	ND	0.0114
B-5	0-6"	M4/ 5 0-6"	5343.09	4/13/2000	ND	0.0139
	6"-12"	M4/ 5 6-12"	5343.10	4/13/2000	**0.051**	0.0128
	18"-24"	M4/ 5 18-24"	5343.11	4/13/2000	ND	0.0134
B-6	0-6"	M4/ 6 0-6"	5343.12	4/13/2000	ND	0.0123
	6"-12"	M4/ 6 6-12"	5343.13	4/13/2000	ND	0.0125

Notes:

[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low

[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium

[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level

[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level

[5]All Results in milligrams per kilogram (mg/kg)

[6]Method Detection Limit (mg/kg) representing Total PCBs

ND = Analyte Not Detected in Sample

Exceedances of the NJDEP Guidances are shaded and printed in **bold-faced** type

PCBs = Polychlorinated Biphenyls

N

M-4 LANDFILL

1
2
3
4
5
6

POST
POSTS
CB.
MH
HYD
TL
689
NEVILLE AVENUE
GENESEE AVENUE
1221 MEMORIES

ROAD (PAVED)		WOODED AREA	
ROAD/TRAILS (UNPAVED)		TREE/BUSH	
FENCE	— x —	LIGHT POLE	
BUILDING		UTILITY POLE	
APPROXIMATE BOUNDARY		BROOK/CREEK	
BASE BOUNDARY		MARSHY AREA	

REV.	REVISIONS	APPROVED	DATE	DRAWN BY

● 4 = BORING LOCATION

TITLE:

FIGURE 3-1
BORING LOCATION MAP
M-4 LANDFILL SITE
FORT MONMOUTH, NEW JERSEY

DRAWN BY: JM	DATE DRAWN: 02 JUL 01
CHECKED BY:	DATE CHECKED: 02 JUL 01
APPROVED BY:	DATE APPROVED:
	DRAWING No.: M4
	FILE No.: M4
	SCALE: 1" = 60'
	SHEET OF REV.: A

Versar INC.
201 GIBRALTAR ROAD, SUITE 100
HORSHAM, PA 19044
(215) 957-0955

Table 4-1
PCB Sampling Results
M-5 Landfill Site
Fort Monmouth, New Jersey

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Lab Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B-1	0-6"	M5/ 1 0-6"	5344.01	4/13/2000	ND	0.0130
	6"-12"	M5/ 1 6-12"	5344.02	4/13/2000	ND	0.0130
B-2	0-6"	M5/ 2 0-6"	5344.03	4/13/2000	**0.054**	0.0123
	6"-12"	M5/ 2 6-12"	5344.04	4/13/2000	ND	0.0122
B-3	0-6"	M5/ 3 0-6"	5344.05	4/13/2000	ND	0.0123
	6"-12"	M5/ 3 6-12"	5344.06	4/13/2000	ND	0.0128
B-4	0-6"	M5/ 4 0-6"	5344.07	4/13/2000	ND	0.0122
	6"-12"	M5/ 4 6-12"	5344.08	4/13/2000	ND	0.0126
B-5	0-6"	M5/ 5 0-6"	5344.09	4/13/2000	ND	0.0114
	6"-12"	M5/ 5 6-12"	5344.10	4/13/2000	ND	0.0123
B-6	0-6"	M5/ 6 0-6"	5344.11	4/13/2000	ND	0.0121
	6"-12"	M5/ 6 6-12"	5344.12	4/13/2000	ND	0.0127
	18"-24"	M5/ 6 18"-24"	5344.13	4/13/2000	ND	0.0120
Duplicate	0-6"	DUP 0-6"	5344.14	4/13/2000	ND	0.0128
	6-12"	DUP 6-12"	5344.15	4/13/2000	ND	0.0124
	18-24"	DUP 18-24"	5344.16	4/13/2000	ND	0.0129

Notes:

[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low

[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium

[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level

[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level

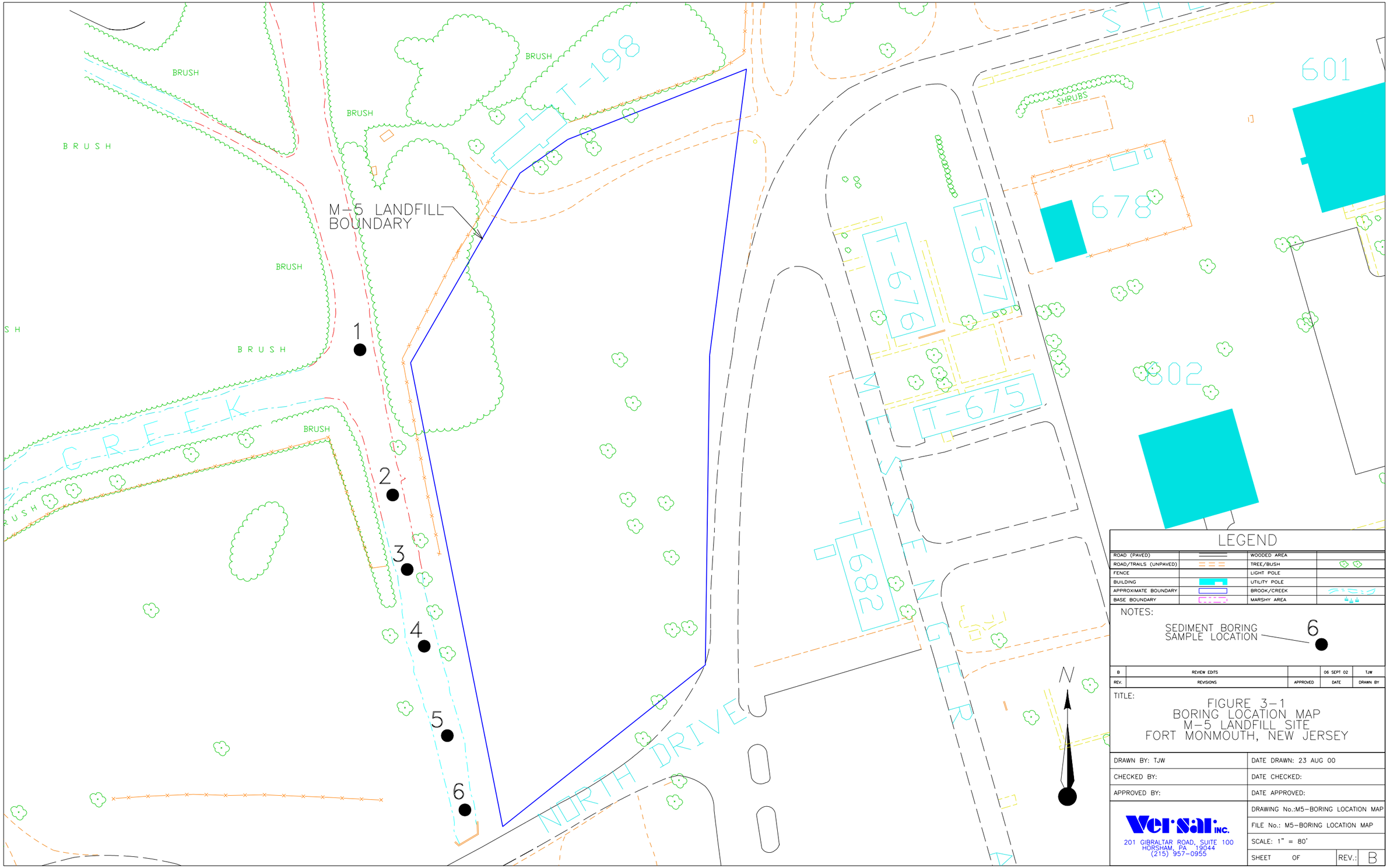
[5]All Results in milligrams per kilogram (mg/kg)

[6]Method Detection Limit (mg/kg) representing Total PCBs

ND = Analyte Not Detected in Sample

Exceedances of the NJDEP Guidances are shaded and printed in**bold-faced** type

PCBs = Polychlorinated Biphenyls



LEGEND

ROAD (PAVED)		WOODED AREA	
ROAD/TRAILS (UNPAVED)		TREE/BUSH	
FENCE		LIGHT POLE	
BUILDING		UTILITY POLE	
APPROXIMATE BOUNDARY		BROOK/CREEK	
BASE BOUNDARY		MARSHY AREA	

NOTES:

SEDIMENT BORING SAMPLE LOCATION — 6

REV.	REVISIONS	APPROVED	DATE	DRAWN BY
B	REVIEW EDITS		06 SEPT 02	TJW

TITLE:

FIGURE 3-1
BORING LOCATION MAP
M-5 LANDFILL SITE
FORT MONMOUTH, NEW JERSEY

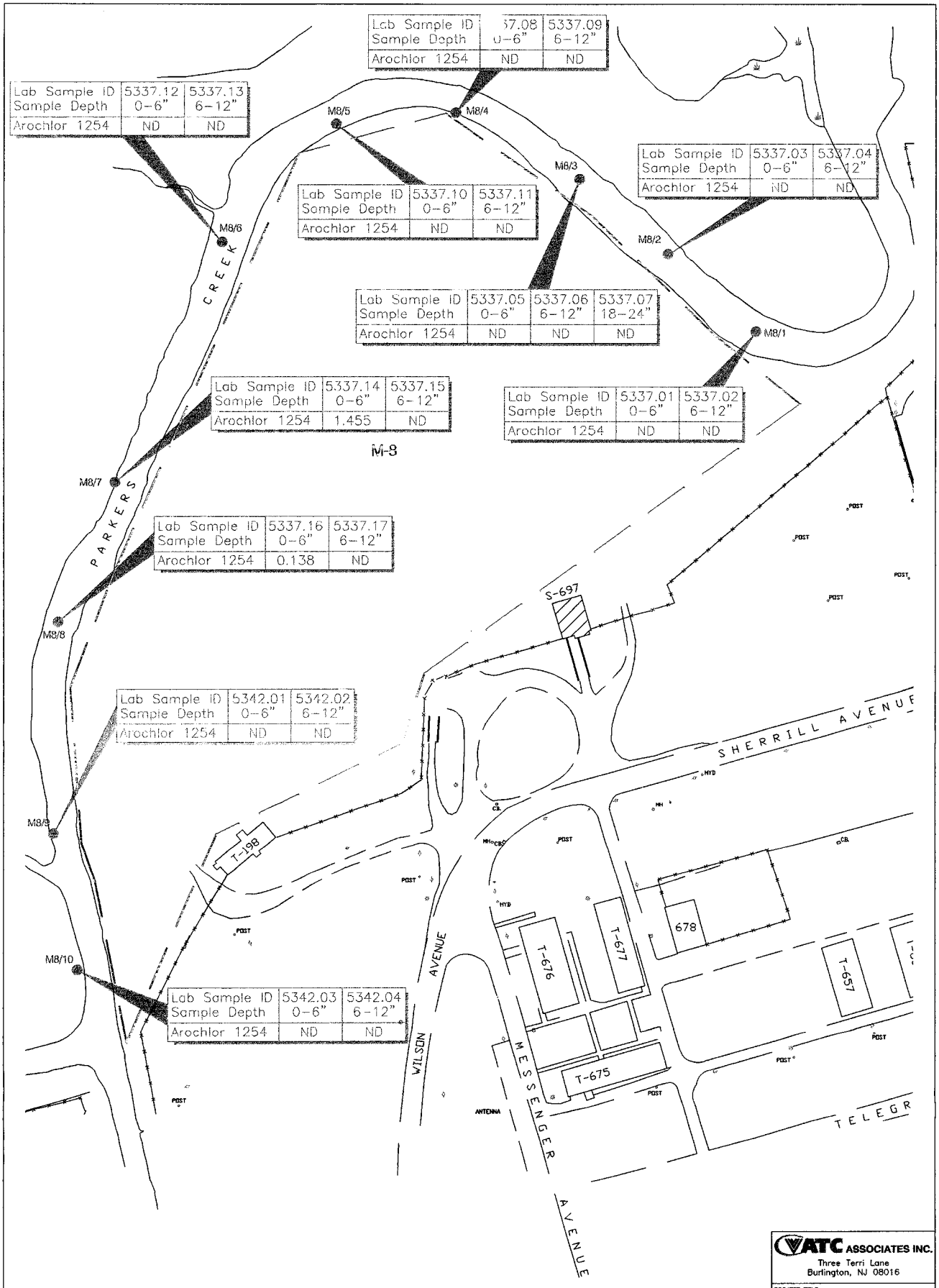
DRAWN BY: TJW	DATE DRAWN: 23 AUG 00
CHECKED BY:	DATE CHECKED:
APPROVED BY:	DATE APPROVED:
	DRAWING No.:M5-BORING LOCATION MAP
	FILE No.: M5-BORING LOCATION MAP
	SCALE: 1" = 80'
	SHEET OF REV.: B

Ver-Sal INC.
201 GIBRALTAR ROAD, SUITE 100
HORSHAM, PA 19044
(215) 957-0955

Table 19
Stream Sediment Sampling Analytical Results
Fort Monmouth Post, Fort Monmouth, New Jersey
April 12, 2000- April 13, 2000

Field Sample Location	Laboratory Sample ID#	Date and Time of Collection	Arochlor 1254	Lowest Effects Level (LEL)*	Severe Effects Level (SEL)*
M8/1 0-6"	5337.01	4/12/00 14:00	ND	0.060	34.000
M8/1 6-12"	5337.02	4/12/00 14:02	ND	0.060	34.000
M8/2 0-6"	5337.03	4/12/00 14:04	ND	0.060	34.000
M8/2 6-12"	5337.04	4/12/00 14:06	ND	0.060	34.000
M8/3 0-6"	5337.05	4/12/00 14:16	ND	0.060	34.000
M8/3 6-12"	5337.06	4/12/00 14:18	ND	0.060	34.000
M8/3 18-24"	5337.07	4/12/00 14:20	ND	0.060	34.000
M8/4 0-6"	5337.08	4/12/00 14:22	ND	0.060	34.000
M8/4 6-12"	5337.09	4/12/00 14:24	ND	0.060	34.000
M8/5 0-6"	5337.10	4/12/00 14:37	ND	0.060	34.000
M8/5 6-12"	5337.11	4/12/00 14:39	ND	0.060	34.000
M8/6 0-6"	5337.12	4/12/00 14:42	ND	0.060	34.000
M8/6 6-12"	5337.13	4/12/00 14:44	ND	0.060	34.000
M8/7 0-6"	5337.14	4/12/00 14:50	**1.455**	0.060	34.000
M8/7 6-12"	5337.15	4/12/00 14:52	ND	0.060	34.000
M8/8 0-6"	5337.16	4/12/00 15:00	**0.138**	0.060	34.000
M8/8 6-12"	5337.17	4/12/00 15:05	ND	0.060	34.000
M8/9 0-6"	5342.01	4/13/00 13:41	ND	0.060	34.000
M8/9 6-12"	5342.02	4/13/00 13:43	ND	0.060	34.000
M8/10 0-6"	5342.03	4/13/00 13:48	ND	0.060	34.000
M8/10 6-12"	5342.04	4/13/00 13:50	ND	0.060	34.000

ND: Not Detected
* NJDEP Guidance For Sediment Quality Evaluations, Nov '98



LEGEND

SEDIMENT SAMPLE LOCATION

APPROXIMATE BOUNDARY OF LANDFILL M-8

NOTE

LOWEST EFFECTS LEVEL FOR AROCHLOR 1254 IS 0.060 mg/kg.

VATC ASSOCIATES INC.
Three Terri Lane
Burlington, NJ 08016

PROJECT TITLE: **Landfill M-8**

DRAWING TITLE: **Stream Sediment Analytical Results Map April 12/13, 2000**

LOCATION: **Fort Monmouth Army Base Monmouth County, NJ**

DRAWN BY:	JES
SURVEYED BY:	
CHECKED BY:	ASL
PROJECT NO.:	02711.00002
DATE:	06/30/00
SCALE:	1" = 100'
APPROVED BY:	PMN

DRAWING NO. **Figure 16**

Table 4-1
PCB Sample Results Summary
M-12/M-14 Landfill Site

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Laboratory Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B-1	0-6"	M12M14/ 1 0-6"	5324.01	4/10/2000	ND	0.0224
	6"-12"	M12M14/ 1 6-12"	5324.02	4/10/2000	ND	0.0268
	18"-24"	M12M14/ 1 18-24"	5324.03	4/10/2000	ND	0.0196
B-2	0-6"	M12M14/ 2 0-6"	5324.04	4/10/2000	ND	0.0236
	6"-12"	M12M14/ 2 6-12"	5324.05	4/10/2000	ND	0.0202
B-3	0-6"	M12M14/ 3 0-6"	5324.06	4/10/2000	ND	0.0199
	6"-12"	M12M14/ 3 6-12"	5324.07	4/10/2000	ND	0.0211
B-4	0-6"	M12M14/ 4 0-6"	5324.08	4/10/2000	ND	0.0173
	6"-12"	M12M14/ 4 6-12"	5324.09	4/10/2000	ND	0.0187
	18"-24"	M12M14/ 4 18-24"	5324.10	4/10/2000	ND	0.0196
B-5	0-6"	M12M14/ 5 0-6"	5324.11	4/10/2000	ND	0.0200
	6"-12"	M12M14/ 5 6-12"	5324.12	4/10/2000	ND	0.0177
B-6	0-6"	M12M14/ 6 0-6"	5324.13	4/10/2000	ND	0.0177
	6"-12"	M12M14/ 6 6-12"	5324.14	4/10/2000	ND	0.0194
	18"-24"	M12M14/ 6 18-24"	5324.15	4/10/2000	ND	0.0177
B-7	0-6"	M12M14/ 7 0-6"	5324.16	4/10/2000	ND	0.0188
	6"-12"	M12M14/ 7 6-12"	5324.17	4/10/2000	ND	0.0129
B-8	0-6"	M12M14/ 8 0-6"	5324.18	4/10/2000	ND	0.0194
	6"-12"	M12M14/ 8 6-12"	5324.19	4/10/2000	ND	0.0209
B-9	0-6"	M12M14/ 9 0-6"	5324.20	4/10/2000	ND	0.0181
	6"-12"	M12M14/ 9 6-12"	5324.21	4/10/2000	ND	0.0198
B-10	0-6"	M12M14/ 10 0-6"	5324.22	4/10/2000	ND	0.0189
	6"-12"	M12M14/ 10 6-12"	5324.23	4/10/2000	ND	0.0209
B-11	0-6"	M12M14/ 11 0-6"	5324.24	4/10/2000	ND	0.0121
	6"-12"	M12M14/ 11 6-12"	5324.25	4/10/2000	ND	0.0696
Duplicate	0-6"	M12M14/ 9 0-6"	5324.26	4/10/2000	0.279	0.0191
	6"-12"	M12M14/ 9 6-12"	5324.27	4/10/2000	ND	0.0189

Notes:
[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low
[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium
[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level
[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level
[5]All Results in milligrams per kilogram (mg/kg)
[6]Method Detection Limit (mg/kg) representing Total PCBs
ND = Analyte Not Detected in Sample
Exceedances of the NJDEP Guidances are shaded and printed in **bold-faced** type
PCBs = Polychlorinated Biphenyls
N/A = Not Applicable

N

SALTZMAN AVENUE

GOSSELIN AVENUE

HUSKY BROOK

M-14

M-12

M-12

PHYLLIS AVENUE

1 2 3 4 5 6 7 8 9 10 11

334 255 253 251 249 247 245 243 241 239 237 235 233 331 336 335 333 332 250 248 246 244 242 258 256 254 252

T-908 S-906 T-921 T-905 S-909 T-919 975

CB HYD POST FLAG MH LAMP

ROAD (PAVED)		WOODED AREA	
ROAD/TRAILS (UNPAVED)		TREE/BUSH	
FENCE	—x—	LIGHT POLE	
BUILDING		UTILITY POLE	
APPROXIMATE BOUNDARY		BROOK/CREEK	
BASE BOUNDARY		MARSHY AREA	

NOTES:

SEDIMENT BORING SAMPLE LOCATION — 3

REV.	REVISIONS	APPROVED	DATE	DRAWN BY

TITLE:

FIGURE 3-1
M-12/M-14 LANDFILL SITE
BORING LOCATION MAP
FORT MONMOUTH, NEW JERSEY

DRAWN BY: JMM	DATE DRAWN: 23 DEC 00
CHECKED BY:	DATE CHECKED:
APPROVED BY:	DATE APPROVED:
	DRAWING No.: M-12/M-14 FIG 3-1
	FILE No.: M-12/M-14 FIG. 3-1
	SCALE: 1" = 40'
	SHEET OF REV.: A

Versar INC.
2558 PEARL BUCK ROAD SUITE 1
BRISTOL, PA 19007
(215) 788-7644

Table 4-1
PCB Sampling Results
M-18 Landfill Site
Fort Monmouth, New Jersey

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Laboratory Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B1	0-6"	M18/ 1 0-6"	5336.01	4/12/2000	**0.22**	0.0183
	6-12"	M18/ 1 6-12"	5336.02	4/12/2000	ND	0.0199
B2	0-6"	M18/ 2 0-6"	5336.03	4/12/2000	**0.055**	0.017
	6-12"	M18/ 2 6-12"	5336.04	4/12/2000	ND	0.0202
B3	0-6"	M18/ 3 0-6"	5336.05	4/12/2000	ND	0.0121
	6-12"	M18/ 3 6-12"	5336.06	4/12/2000	ND	0.012
B4	0-6"	M18/ 4 0-6"	5336.07	4/12/2000	ND	0.022
	6-12"	M18/ 4 6-12"	5336.08	4/12/2000	ND	0.0207

Notes:

[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low

[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium

[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level

[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level

[5]All Results in milligrams per kilogram (mg/kg)

[6]Method Detection Limit (mg/kg) representing Total PCBs

ND = Analyte Not Detected in Sample

Exceedances of the NJDEP Guidances are shaded and printed in **bold-faced** type

PCBs = Polychlorinated Biphenyls

M-18 LANDFILL
BOUNDARY

BRUSH

BRUSH

1

2

3

4

TALL BRUSH

293

285

T-294

N

LEGEND

● 4 = SOIL BORING LOCATION

TITLE:

FIGURE 3-1
BORING LOCATION MAP
M-18 LANDFILL SITE
FORT MONMOUTH, NEW JERSEY

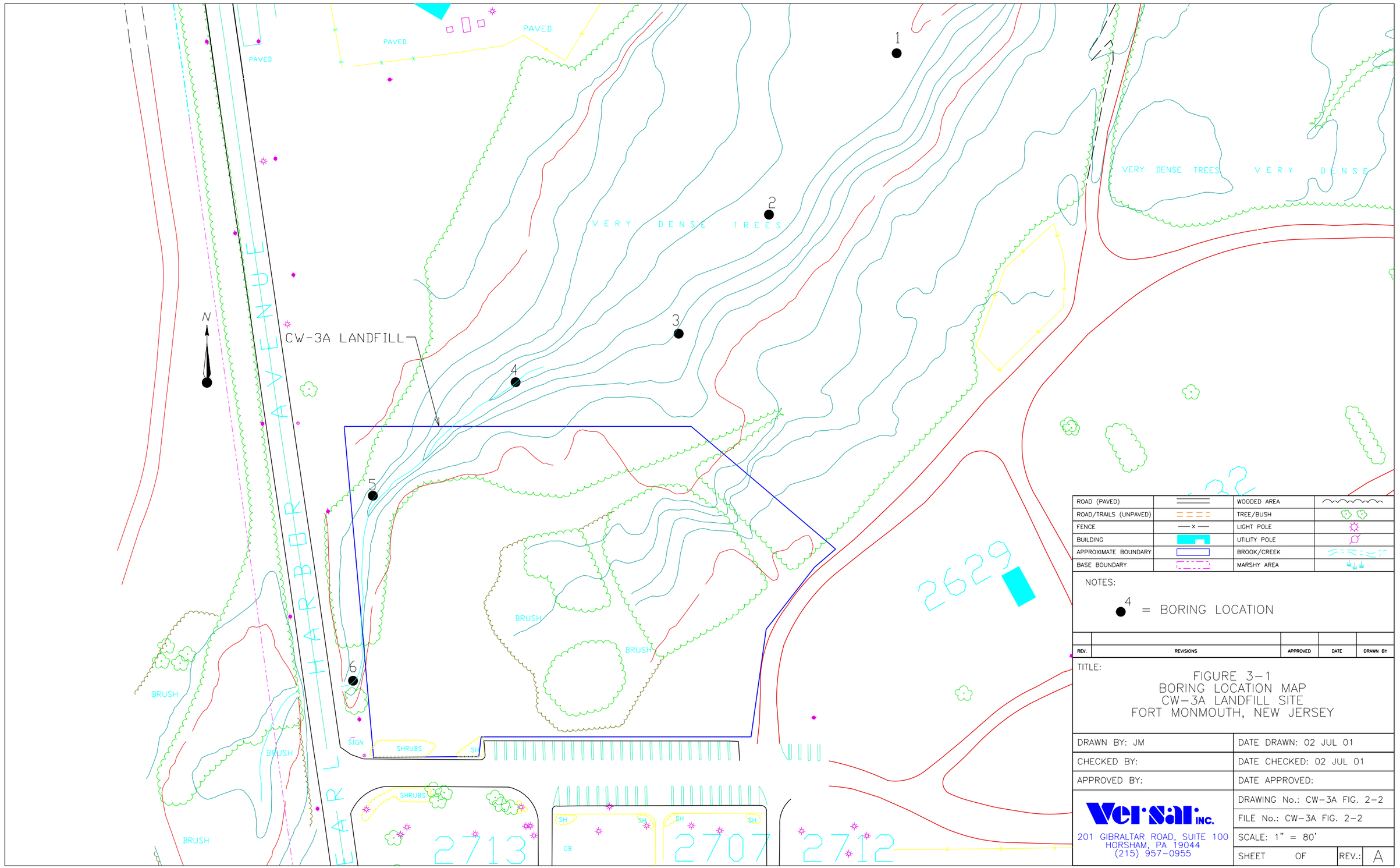
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CHECKED BY: TJK	DATE CHECKED:
APPROVED BY:	DATE APPROVED:
	DRAWING No.: BORING MAP
	FILE No.: M18-BORING MAP
	SCALE: 1" = 40'
	SHEET OF REV.: B

VerSar INC.
201 GIBRALTAR ROAD, SUITE 100
HORSHAM, PA 19044
(215) 957-0955

Table 4-1
PCB Sampling Results
CW-3A Landfill Site
Fort Monmouth, New Jersey

Boring ID	Sample Depth (bgs)	Field Sample Location ID	Laboratory Sample ID	Date Collected	Analytical Results[5]	MDL[6]
Total PCBs ER-L[1]					**0.023**	
Total PCBs ER-M[2]					**0.180**	
Arochlor 1254 LEL[3]					**0.060**	
Arochlor 1254 SEL[4]					**34**	
B-1	0-6"	CW3A/ 1 0-6"	5325.01	4/10/2000	ND	0.0220
	6"-12"	CW3A/ 1 6-12"	5325.02	4/10/2000	ND	0.0200
B-2	0-6"	CW3A/ 2 0-6"	5325.03	4/10/2000	ND	0.0190
	6"-12"	CW3A/ 2 6-12"	5325.04	4/10/2000	ND	0.0180
B-3	0-6"	CW3A/ 3 0-6"	5325.05	4/10/2000	ND	0.0130
	6"-12"	CW3A/ 3 6-12"	5325.06	4/10/2000	ND	0.0130
B-4	0-6"	CW3A/ 4 0-6"	5325.07	4/10/2000	ND	0.0170
	6"-12"	CW3A/ 4 6-12"	5325.08	4/10/2000	ND	0.0120
B-5	0-6"	CW3A/ 5 0-6"	5325.09	4/10/2000	ND	0.0230
	6"-12"	CW3A/ 5 6-12"	5325.10	4/10/2000	ND	0.0140
B-6	0-6"	CW3A/ 6 0-6"	5325.11	4/10/2000	ND	0.0220
	6"-12"	CW3A/ 6 6-12"	5325.12	4/10/2000	ND	0.0200

Notes:
[1]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-L) - Effects Range-Low
[2]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (ER-M) - Effects Range-Medium
[3]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (LEL) - Lowest Effects Level
[4]NJDEP Guidance For Sediment Quality Evaluations, November 1998 (SEL) - Severe Effects Level
[5]All Results in milligrams per kilogram (mg/kg)
[6]Method Detection Limit (mg/kg) representing Total PCBs
ND = Analyte Not Detected in Sample
Exceedances of the NJDEP Guidances are shaded and printed in **bold-faced** type
PCBs = Polychlorinated Biphenyls



ROAD (PAVED)		WOODED AREA	
ROAD/TRAILS (UNPAVED)		TREE/BUSH	
FENCE	—x—	LIGHT POLE	
BUILDING		UTILITY POLE	
APPROXIMATE BOUNDARY		BROOK/CREEK	
BASE BOUNDARY		MARSHY AREA	

NOTES:

● 4 = BORING LOCATION

REV.	REVISIONS	APPROVED	DATE	DRAWN BY

TITLE:

FIGURE 3-1
BORING LOCATION MAP
CW-3A LANDFILL SITE
FORT MONMOUTH, NEW JERSEY

DRAWN BY: JM	DATE DRAWN: 02 JUL 01
CHECKED BY:	DATE CHECKED: 02 JUL 01
APPROVED BY:	DATE APPROVED:
	DRAWING No.: CW-3A FIG. 2-2
	FILE No.: CW-3A FIG. 2-2
	SCALE: 1" = 80'
	SHEET OF REV.: A

VERSAR INC.
201 GIBRALTAR ROAD, SUITE 100
HORSHAM, PA 19044
(215) 957-0955