Lower Duwamish Waterway
RM 2.3-2.8 East
Seattle Boiler Works to Slip 4

Summary of Existing Information and Identification of Data Gaps

Prepared for

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May 2008

Table of Contents

Figures

Tables

Acronyms and Abbreviations

ASR	auto shredder residue
AST	above ground storage tank
BEHP	bis(2-ethylhexyl)phthalate
bgs	below ground surface
BMP	best management practice
BTEX	benzene, toluene, ethylbenzene, and xylenes
CDL	construction, demolition, and land-clearing debris
COC	chemical of concern
cPAH	carcinogenic polynuclear aromatic hydrocarbon
CSCSL	Confirmed and Suspected Contaminated Sites List
CSL	Cleanup Screening Level
CSO	combined sewer overflow
DCA	dichloroethane
DCE	dichloroethene
DMR	discharge monitoring report
DW	dry weight
ECHO	Enforcement and Compliance History Online
Ecology	Washington State Department of Ecology
EOF	Emergency Overflow
EP	extraction procedure
EPA	U.S. Environmental Protection Agency
E&E	Ecology & Environment, Inc.
FSD	Ecology Facility/Site Database
GIS	Geographic Information Systems
GWC	Great Western Chemical
GWCC	Great Western Chemical Company
GWI	Great Western International
HPAH	high molecular weight polynuclear aromatic hydrocarbon
ISIS	Integrated Site Information System
ISO	International Standards Organization
LAET	Lowest Apparent Effects Threshold
LDW	Lower Duwamish Waterway
LDWG	Lower Duwamish Waterway Group
LPAH	low molecular weight polynuclear aromatic hydrocarbon
LPG	Liquefied Petroleum Gas
LUST	leaking underground storage tank
MCL	Maximum Contaminant Level
METRO	King County Department of Metropolitan Services
MDI	dimethyldiisocyanate
µg/L	micrograms per Liter
mg/kg	milligrams per kilogram
mg/L	milligrams per Liter
mgy	million gallons per year
MTCA	Model Toxics Control Act

Acronyms and Abbreviations (Continued)

NAICS	North American Industry Classification System
NAPL	non aqueous phase liquid
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge and Elimination System
NWRO	Northwest Regional Office
OC	organic carbon
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PCS	petroleum contaminated soil
PCT	polychlorinated terphenyl
ppm	parts per million
PSAPCA	Puget Sound Air Pollution Control Agency
PSTL	Puget Sound Truck Lines
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RM	river mile
SAIC	Science Applications International Corporation
SCAP	Source Control Action Plan
SHA	Site Hazard Assessment
SIC	Standard Industrial Classification
SL	screening level
SKCDPH	Seattle-King County Department of Public Health
SMS	Sediment Management Standards
SPU	Seattle Public Utilities
sq. ft.	square foot
SQS	Sediment Quality Standard
SVOC	semivolatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
TCA	trichloroethane
TCE	trichloroethylene
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
UST	underground storage tank
VC	vinyl chloride
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WBZ	water-bearing zone
WQS	water quality standard
WWTP	wastewater treatment plant

1.0 Introduction

1.1 Background and Purpose

This *Summary of Existing Information and Identification of Data Gaps* report (Data Gaps report) pertains to River Mile (RM) 2.3-2.8 East[1] (Seattle Boiler Works to Slip 4), one of several source control areas identified as part of the overall cleanup process for the Lower Duwamish Waterway (LDW) Superfund Site (Figure 1). It summarizes readily available information regarding properties in the RM 2.3-2.8 East drainage basin. The purpose of the Data Gaps report is to:

- Identify chemicals of potential concern in sediments within the RM 2.3-2.8 East source control area;
- Evaluate potential contaminant migration pathways to RM 2.3-2.8 East sediments;
- Identify and describe potential adjacent or upland sources of contaminants that could be transported to sediments;
- Identify critical data gaps that should be addressed in order to assess the potential for recontamination of sediments and the need for source control; and
- Determine what, if any, effective source control is already in place.

The LDW was added to the U.S. Environmental Protection Agency (EPA) National Priorities List in September 2001 due to chemical contaminants in sediment. The key parties involved in the LDW Superfund site are the Lower Duwamish Waterway Group (LDWG; comprised of the city of Seattle, King County, the Port of Seattle, and The Boeing Company), EPA, and the Washington State Department of Ecology (Ecology). LDWG is conducting a Remedial Investigation/Feasibility Study (RI/FS) for the LDW Superfund site.

Data collected during the Phase I Remedial Investigation (RI) were used to identify locations that could be candidates for early cleanup action. Seven candidate early action sites (or Tier 1 sites) were identified. Ecology's *Lower Duwamish Waterway Source Control Status Report, 2003 to June 2007* (Ecology 2007e) identified another eight areas where source control actions may be necessary. RM 2.3-2.8 East (Seattle Boiler Works to Slip 4) was identified as one of these Tier 2 sites.[2] Subsequently, Ecology and EPA redefined the boundaries of these and eight additional source control areas, generally defined by stormwater drainage basins, as shown in Figure 1.

Ecology is the lead agency for source control for the LDW Superfund site. Source control is the process of finding and eliminating or reducing releases of contaminants to LDW sediments, to the extent practicable. The goal of source control is to prevent sediments from being recontaminated after cleanup has been undertaken.

The LDW Source Control Strategy (Ecology 2004) describes the process for identifying source control issues and implementing effective controls for the LDW. The basic plan is to identify and manage potential sources of sediment recontamination in coordination with sediment cleanups.

[1] River miles as defined in this report are measured from the southern tip of Harbor Island.
[2] Note: The RM 2.3-2.8 East Source Control Area was identified in previous documents as Tier 2 Area 10 (T2A-10).

Source control will be achieved by using existing administrative and legal authorities to perform inspections and require necessary source control actions.

The strategy is based primarily on the principles of source control for sediment sites described in EPA's *Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites* (EPA 2002), and the Washington State Sediment Management Standards (SMS; WAC 173-340-370[7] and WAC 173-204-400). The Source Control Strategy involves developing and implementing a series of detailed, area-specific Source Control Action Plans (SCAPs).

Before developing a SCAP, Ecology prepares a Data Gaps Report for the source control area. Findings from the Data Gaps report are reviewed by LDW stakeholders and are incorporated into the SCAP. This process helps to ensure that the action items identified in the SCAP will be effective, implementable, and enforceable. As part of the source control efforts for RM 2.3-2.8 East, Ecology requested Science Applications International Corporation (SAIC) to prepare this Data Gaps report.

1.2 Report Organization

Section 2 provides background information on the RM 2.3-2.8 East source control area, including location, physical characteristics, chemicals of concern, and pathways by which contaminants may reach sediments. Sections 3 through 5 describe potential sources of contaminants and data gaps that must be addressed in order to develop a SCAP for the site. Section 6 provides a summary of data gaps, and Section 7 lists the documents reviewed during preparation of this report.

Information presented in this report was obtained from the following sources:

- Ecology Northwest Regional Office (NWRO) Central Records
- Washington State Archives
- EPA files
- Seattle Public Utilities (SPU) Business Inspection reports
- Ecology Underground Storage Tank (UST) and Leaking Underground Storage Tank (LUST) lists
- Ecology Facility/Site Database (FSD)
- Ecology Integrated Site Information System (ISIS) Database
- Washington Confirmed and Suspected Contaminated Sites List (CSCSL)
- EPA Enforcement and Compliance History Online (ECHO)
- EPA Envirofacts Warehouse
- King County Geographic Information Systems (GIS) Center Parcel Viewer and Property Tax Records
- GIS shape files produced by SPU

1.3 Scope of Report

This report documents readily available information relevant to potential sources of sediment recontamination at RM 2.3-2.8 East, including outfalls, adjacent properties, and upland properties. This report does not identify or assess the possibility of migration from sources outside of the RM 2.3-2.8 East drainage basin.[3]

Air pollution is a potential source of contaminants to sediments with origins outside of the RM 2.3-2.8 East drainage basin. Although limited discussion of atmospheric deposition is provided in Section 2, the scope of this report does not include an assessment of data gaps pertaining to the effects of air pollution on RM 2.3-2.8 East sediments. Because air pollution is a concern for the wider LDW region, Ecology will review work being conducted by the Washington State Department of Health and planned by the Puget Sound Partnership regarding atmospheric deposition. Ecology is planning to hire a contractor to develop options and recommendations for addressing data gaps related to air pollution.

Data presented in this report are limited to RM 2.3-2.8 East, adjacent and upland properties, and direct discharges. This report focuses only on upland sources that have the potential to recontaminate RM 2.3-2.8 East area sediments in the event that sediment remediation is required. This does not preclude the potential for recontamination from capped sediments if this remedial option is selected. Source control with regard to any contaminated sediments left in place will be important to address as part of the remedial action selection process for RM 2.3-2.8 East.

Chemical data have been compared to relevant regulatory criteria and guidelines, as appropriate. The level of assessment conducted for the data reviewed in this report is determined by the source control objectives. The scope of this Data Gaps report does not include data validation or analysis that exceeds what is required to reasonably achieve source control.

[3] The area referred to herein as the ‘RM 2.3-2.8 East drainage basin’ is actually a sub-drainage of the LDW drainage basin, and is defined by stormwater collection systems and outfalls. In other words, the area from which stormwater drains to RM 2.3-2.8 East is defined as the RM 2.3-2.8 East drainage basin, as shown in Figure 5.

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2.0 RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

The RM 2.3-2.8 East Source Control Area is located along the eastern side of the LDW Superfund Site between 2.3 and 2.8 miles from the southern end of Harbor Island (Figure 1). Properties located directly adjacent to the LDW that could affect sediments at RM 2.3-2.8 East, from north to south, are shown in Figure 2. These are:

- Guimont parcel,
- Seattle Boiler Works,
- Seattle Iron & Metals,
- Puget Sound Truck Lines/Phil's Finishing Touch,
- Seattle City Light, and
- Crowley Marine Services.

Upland properties that could potentially affect RM 2.3-2.8 East sediments include:

- Fox Avenue Building/Fox Avenue Building #2,
- Whitehead Company/Former Tyee Industries,
- Whitehead Company/Former Perkins Lot,
- Trim Systems,
- Nitze-Stagen/Frye Parcels,
- Nelson Trucking,
- Former Sternoff Parcel,
- Markey Machinery Company, and
- El Gallo D'Oro/James Dore

To the east of these properties is East Marginal Way S.; across this roadway to the north are residential areas, and to the northeast is North Boeing Field. To the northwest of the RM 2.3-2.8 East source control area are Slip 3, Northland Services/Glacier Marine Services, and Shultz Distributing, while Slip 4 is located to the south.

2.1 Site Description

General background information on the LDW is provided in the Phase I RI Report (Windward 2003), which describes the history of dredging/filling and industrialization of the Duwamish River and its environs, as well as the physiography, physical characteristics, hydrogeology, and hydrology of the area.

The upland areas adjacent to the LDW have been industrialized for many decades; historical and current commercial and industrial operations in the vicinity of RM 2.3-2.8 East include food products manufacturing and distribution, metal products fabrication and recycling, cargo handling and storage, chemical repackaging and distribution, coffee roasting, heavy equipment storage, and truck interior manufacturing.

In the late 1800s and early 1900s, extensive topographic modifications were made to the Duwamish River to create a straightened channel; many of the current side slips are remnants of old river meanders.

Groundwater in the Duwamish Valley alluvium is typically encountered within about 3 meters (10 feet) of the ground surface and under unconfined conditions (Windward 2003). The general direction of groundwater flow is toward the LDW, although the direction may vary locally depending on the nature of the subsurface material, and temporally, based on proximity to the LDW and the influence of tidal action. High tides can cause temporary groundwater flow reversals, generally within 100 to 150 meters (300 to 500 feet) of the LDW (Booth and Herman 1998).

Bottom sediment composition is variable throughout the LDW, ranging from sands to mud. Typically, the sediment consists of slightly sandy silt with varying amounts of organic detritus. Coarser sediments are present in nearshore areas adjacent to storm drain discharges (Weston 1999); finer grained sediments are typically located in remnant mudflats and along channel side slopes. Sediments within RM 2.3-2.8 East consist of 4 to 92 percent fines (dry weight [DW]) and in the range of <1 to 2.8 percent total organic carbon (TOC) (Windward 2003, 2005a, 2005b, 2007a, 2007b).

Numerous private outfalls are present along the shoreline in this area. City of Seattle municipal outfalls are located near the west ends of S. Myrtle Street and S. Garden Street (Figure 5). The extent of the areas drained by these outfalls appears to be limited to the parcels on the west side of East Marginal Way S. between RM 2.3 and 2.8 East.

Groundwater flow in the vicinity of RM 2.3-2.8 East is generally toward the LDW and the S. Myrtle Street Embayment.

2.2 Chemicals of Concern in Sediment

Results of sediment sampling near RM 2.3-2.8 East are provided in Appendix A; chemical results exceeding the Sediment Management Standards (SMS) are summarized in Tables 1 and 2. Sediment sampling locations are shown in Figure 3.

2.2.1 Sediment Investigations

Sediment samples have been collected from the area near RM 2.3-2.8 East as part of the following investigations:

- **Duwamish Waterway Sediment Characterization Study (NOAA 1998)**

  Seventeen samples were collected in the vicinity of RM 2.3-2.8 East. Results from these sample locations are included in Appendix A. Samples were analyzed for polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs).

- **EPA Site Inspection, Lower Duwamish River (Weston 1999)**

  Seventeen surface sediment samples were collected in the vicinity of RM 2.3-2.8 East. Results from these sample locations are included in Appendix A. Samples were analyzed for volatile organic compounds (VOCs) semivolatile organic compounds (SVOCs), metals, PCBs as Aroclors and congeners, dioxins/furans, and TOC.

- **LDW Phase II Remedial Investigation, Round 1 and 2 Surface Sediment Sampling (Windward 2005a, 2005b)**

  Seven surface sediment samples were collected during two rounds of sampling for the Phase II RI in 2005. Results from these sampling locations are included in Appendix A. All samples were analyzed for the SMS list of chemicals and SVOCs. A subset of samples was also analyzed for organochlorine pesticides (one sample), dioxins/furans (one sample), and PCB congeners (two samples).

- **LDW Phase II RI Subsurface Sediment Sampling (Windward 2007a)**

  Twenty-four sediment samples were collected from five coring locations in 2006. Results from these sample locations are included in Appendix A. Samples were analyzed for metals, SVOCs, and PCBs. In addition, the samples from location SC41 were analyzed for dioxins/furans.

- **LDW Phase II Remedial Investigation, Round 3 Surface Sediment Sampling (Windward 2007b)**

  Two surface sediment samples were collected in 2006. Results from these sample locations are included in Appendix A. The samples were analyzed for metals, SVOCs, and PCBs.

2.2.2 Identification of Chemicals of Concern

A chemical of concern (COC) is defined in this report as a chemical that is present at concentrations above regulatory criteria in RM 2.3-2.8 East sediments, and is therefore of particular interest with respect to source control. These COCs are the initial focus of the evaluation of potential contaminant sources.

The Washington SMS (Chapter 173-204 WAC) establish marine Sediment Quality Standard (SQS) and Cleanup Screening Level (CSL) values for some chemicals that may be present in sediments. The SQS values correspond to a sediment quality level that will result in no adverse effects on biological resources and no significant human health risk. CSLs represent minor adverse effects levels used as an upper regulatory threshold for making decisions about source control and cleanup.

A chemical was identified as a COC for RM 2.3-2.8 East if it was detected in surface or subsurface sediment at concentrations above the SQS and/or CSL. A comparison of sample results to the SQS and CSL values is provided in Appendix A, and those chemicals that were detected at concentrations above their respective SQS/CSL values are listed in Tables 1 and 2 for surface and subsurface sediments, respectively. For non-polar organics, the measured dry weight concentrations were organic carbon (OC) normalized to allow comparison to the SQS/CSL. Chemicals detected in sediment for which no SQS/CSL values are available may be identified as COCs on a case-by-case basis.

Contaminants may be present in soil, groundwater, stormwater, or stormwater solids at concentrations above regulatory criteria and/or soil-to-sediment or groundwater-to-sediment screening levels. While not currently considered COCs in sediment, these chemicals may warrant further investigation, depending on site-specific conditions, to evaluate the likelihood that they will lead to exceedance of marine sediment CSLs. These additional contaminants are discussed as appropriate in Sections 3 through 5.

Mercury, polynuclear aromatic hydrocarbons (PAHs), and PCBs exceeded the SQS values in surface sediments; PCBs exceeded the SQS value in subsurface sediments.

Metals

The mercury concentration in sample SS88 is 0.62 milligrams per kilogram (mg/kg), which exceeds the SQS and CSL values by factors of 1.5 and 1.1, respectively. This surface sediment sample was collected south of the S. Garden Street municipal outfall, adjacent to Puget Sound Truck Lines (Figure 3).

Polynuclear Aromatic Hydrocarbons (PAHs)

SQS exceedances for PAHs were detected in two surface sediment samples collected adjacent to Puget Sound Truck Lines (sample 740) and Crowley Marine Services (Crowley; sample 741). These exceedances are described in detail in Table 1 and are summarized below:

Sample Location	Chemical	SQS Exceedance Factor	CSL Exceedance Factor	Adjacent Property
DR175 (741)	Benzo(a)anthracene	1.6	NA	Crowley
DR175 (741)	Chrysene	2.0	NA	Crowley
DR174 (740)	Chrysene	1.0	NA	PSTL
DR175 (741)	Dibenzofuran	2.9	NA	Crowley
DR175 (741)	Fluoranthene	6.5	NA	Crowley
DR174 (740)	Fluoranthene	1.1	NA	PSTL
DR175 (741)	Fluorene	4.2	1.2	Crowley
DR175 (741)	Indeno(1,2,3-cd)pyrene	1.1	NA	Crowley
DR175 (741)	Phenanthrene	9.2	1.9	Crowley
DR175 (741)	Total HPAH (calc'd)	2.5	NA	Crowley
DR175 (741)	Total LPAH (calc'd)	3.1	1.5	Crowley

PSTL = Puget Sound Truck Lines

Polychlorinated Biphenyls (PCBs)

PCBs exceeded the SQS in nine surface sediment samples. Concentrations were highest in samples adjacent to Puget Sound Truck Lines, with a maximum concentration of 1.8 mg/kg DW (176 mg/kg OC), which exceeded the SQS value by a factor of 15. In subsurface sediments, an SQS exceedance for PCBs was observed in one sample, SC45, collected adjacent to Crowley. The total PCB concentration in the sample was 0.57 mg/kg DW (8.28 mg/kg OC), which exceeded the screening value by a factor of 4.4. Due to the high TOC in this sample, the result was compared to the Lowest Apparent Effects Threshold (LAET) value rather than the SQS (Ecology 1996d).

2.2.3 Chemicals of Concern at RM 2.3-2.8 East

COCs were identified based on the results of sediment sampling conducted between 1991 and 2007. Chemicals that exceeded the SQS in at least one surface or subsurface sediment sample offshore of RM 2.3-2.8 East are considered COCs.

Although no sediment quality standards have been promulgated, dioxins and furans are also considered to be COCs at RM 2.3-2.8 East due to their presence in high concentrations, particularly within the S. Myrtle Street Embayment.

In addition, the presence of organo-tin compounds at various locations, particularly offshore of Seattle Boiler Works, Seattle Iron & Metals, and Puget Sound Truck Lines, warrant their inclusion as COCs.

The following chemicals are considered to be COCs at RM 2.3-2.8 East with regard to potential sediment recontamination:

- Mercury
- PCBs
- PAHs
- Dioxins/furans
- Organo-tin compounds

2.3 Potential Pathways to Sediment

Transport pathways that could contribute to the recontamination of EAA-6 sediments following remedial activities include direct discharges via outfalls, surface runoff (sheet flow) from adjacent properties, bank erosion, groundwater discharges, air deposition, and spills directly to the LDW. These pathways are described below, and are discussed in more specific detail in Sections 3 through 5.

2.3.1 Direct Discharges via Outfalls

Direct discharges may occur from public or private storm drain systems, combined sewer overflows (CSOs), and emergency overflows (EOFs).

Some areas of the LDW are served by combined sewer systems, which carry both stormwater and municipal/industrial wastewater in a single pipe. These systems were generally constructed before about 1970 because it was less expensive to install a single pipe rather than separate storm and sanitary systems. Under normal rainfall conditions, wastewater and stormwater are conveyed through this combined sewer pipe to a wastewater treatment facility. During large storm events, however, the total volume of wastewater and stormwater can sometimes exceed the conveyance and treatment capacity of the combined sewer system. When this occurs, the combined sewer system is designed to overflow through relief points, called CSOs. The CSOs prevent the combined sewer system from backing up and creating flooding problems.

Untreated municipal/industrial wastewater and stormwater can potentially be discharged through CSOs to the LDW during these storm events. The city of Seattle owns and operates the local sanitary sewer collectors and trunk lines, while King County owns and operates the larger interceptor lines that transport flow from the local systems to the West Point Wastewater Treatment Plant (WWTP). The City's CSO network has its own National Pollutant Discharge Elimination System (NPDES) permit; the County's CSOs are administered under the NPDES permit established for the West Point WWTP.

An EOF is a discharge that can occur from either the combined or sanitary sewer systems that is not necessarily related to storm conditions and/or system capacity limitations. EOF discharges typically occur as a result of mechanical issues (e.g., pump station failures) or when transport lines are blocked; pump stations are operated by both the City and County. Pressure relief points are provided in the drainage network to discharge flow to an existing storm drain or CSO pipe under emergency conditions to prevent sewer backups. EOF events are not covered under the City's or County's existing CSO wastewater permits.

Of the County CSO outfalls along the LDW, the Michigan CSO, S. Brandon Street CSO, and Hanford No. 1 (discharging via the City's Diagonal Avenue S. CSO/SD) outfalls had the highest average combined sewer overflow volumes between 1999 and 2005. Annual stormwater discharge volumes are usually substantially higher than annual CSO discharge volumes because storm drains discharge whenever it rains, and CSOs only discharge during storm events that exceed the system capacity. Annual stormwater discharges to the LDW have been estimated at approximately 4,000 million gallons per year (mgy) compared to less than 65 mgy from the county CSOs and less than 10 mgy from the city CSOs (Windward 2007c)[4].

To minimize the frequency and volume of CSO events, the County utilizes different CSO control strategies to maximize system capacity. An automated control system manages flows through the King County interceptor system so that the maximum amount of flow is contained in pipelines and storage facilities until it can be conveyed to a regional wastewater treatment plant for secondary treatment. In some areas of the system, where flows cannot be conveyed to the plant, the flows are sent to CSO treatment facilities for primary treatment and disinfection prior to discharge. County CSOs discharge untreated wastewater only when flows exceed the capacity of these systems (King County 2007).[5]

As a result, some areas of the CSO drainage basins may discharge to different outfalls at different times, depending on the route that the combined stormwater/wastewater has taken through the County conveyance system. Furthermore, some industrial facilities in the LDW basin may discharge stormwater to a separated system and industrial wastewater to a combined system, or a conveyance that begins as a separated system may discharge to a combined system further downstream along the flow path.

[4] It should be noted that stormwater discharges are regulated under a separate NPDES permit.
[5] City CSOs are generally smaller and flows are not treated prior to discharge.

When preparing a Data Gaps report for a source control area, all properties that potentially discharge to that source control area (whether through a CSO/EOF or a separated storm drain) are identified to the extent that the boundaries of the drainage basin are known. However, for areas where drainage basins overlap, a property review is performed only if the property has not already been included in a previously published Data Gaps report. Exceptions include situations where contaminants may be transported to the current source control area via a transport pathway that was not applicable for the earlier evaluation.

Numerous outfalls are present in the RM 2.3-2.8 East area, including two public storm drain outfalls and several private outfalls. Contaminants discharged via these outfalls could directly affect waterway sediments. There are no CSO or EOF outfalls within the RM 2.3-2.8 East source control area.[6]

2.3.2 Surface Runoff (Sheet Flow)

In areas lacking collection systems, spills or leaks on properties adjacent to the LDW could flow directly over impervious surfaces or through creeks and ditches to the waterway. Current operational practices at adjacent properties may contribute to the movement of contaminants to the LDW via runoff.

2.3.3 Groundwater Discharges

Contaminants in soil resulting from spills and releases to adjacent and upland properties may be transported to groundwater and subsequently be released to the LDW. Contaminated groundwater has been documented at upland properties with groundwater flow directions toward the S. Myrtle Street Embayment.

Many seeps have been identified along RM 2.3-2.8 East and the S. Myrtle Street Embayment (Terra Vac and Floyd & Snider, Inc. 2000b and Windward 2004). Copper has been detected at concentrations above the marine chronic and acute water quality standard (WQS) in one seep sampled along the bank adjacent to Crowley Marine Services (Table 3; Windward 2004) and VOCs have been detected in seep samples collected in the S. Myrtle Street Embayment (Terra Vac and Floyd & Snider, Inc. 2000b).

2.3.4 Bank Erosion

The banks of the LDW shoreline are susceptible to erosion by wind and surface water, particularly in areas where banks are steep. Shoreline armoring and the presence of vegetation reduce the potential for bank erosion. Contaminants in soils along the banks of the LDW could be released directly to sediments via erosion. Little information was available on the construction of the banks and the potential for sediment recontamination via this pathway. Ecology is planning to conduct a bank investigation in this area, to be completed in 2008.

[6] King County Airport SD#3/PS44 EOF (a King County storm drain and SPU EOF outfall) and the E. Marginal Way S. pump station (a King County EOF) are located in Slip 4, just to the south of RM 2.3-2.8 East.

2.3.5 Atmospheric Deposition

Atmospheric deposition occurs when air pollutants enter the LDW directly or through stormwater. Air pollutants may be generated from point or non-point sources. Point sources include industrial facilities, and air pollutants may be generated from painting, sandblasting, loading/unloading of raw materials, and other activities, or through industrial smokestacks. Non-point sources include dispersed sources such as vehicle emissions, aircraft exhaust, and off-gassing from common materials such as plastics. Air pollutants may be transported over long distances by wind, and can be deposited to land and water surfaces by precipitation or particle deposition. None of the properties within the RM 2.3-2.8 East source control area are currently regulated as point sources of air emissions.

Contaminants originating from nearby properties and streets may be transported through the air and deposited at RM 2.3-2.8 East or in areas that drain to the LDW. Although chemical deposition from air directly to the LDW probably occurs, this transport mechanism is not likely to result in sediment concentrations above local background levels. This potential pathway is discussed further in this report only for facilities that may represent a point source of air pollutants.

Additional information on recent and ongoing atmospheric deposition studies in the LDW area is summarized in the LDW Source Control Status Report (Ecology 2007e and subsequent updates); Ecology will continue to monitor these efforts.

2.3.6 Spills to the LDW

Near-water and over-water activities have the potential to impact adjacent sediments from spills of material containing contaminants of concern. Several facilities within the RM 2.3-2.8 East source control area conduct loading and unloading of materials from barges. Accidental spills during loading/unloading operations may result in transport of contaminants to sediment.

3.0 Potential for Sediment Recontamination from Outfalls

3.1 Public Outfalls

City of Seattle storm drain outfalls are located at the ends of S. Myrtle Street and S. Garden Street (Figure 5):

Outfall No.	Secondary ID	Location	Pipe Diameter/Material
2026	141E	S. Myrtle Street	30-inch ductile
2035	153E	S. Garden Street	30-inch; material not listed

Source: LDW Draft Phase 2 RI (Windward 2007c).

Lateral storm drain lines connect several of the surrounding facilities to these main lines. The extent of the area draining to these outfalls is not known, but appears to be limited to the properties located on the west side of East Marginal Way S. between S. Myrtle Street and Slip 4. The southern portion of the Seattle Boiler Works parcel (north of S. Myrtle Street) also appears to drain to the S. Myrtle Street outfall.

3.2 Private Stormwater Outfalls

Private outfalls exist at Seattle Boiler Works, Seattle Iron & Metals, Puget Sound Truck Lines, and Crowley/Alaska Logistics. These are summarized below and described in more detail in Sections 4 and 5.

Outfall No.	Secondary ID	Facility	Pipe Diameter/Material
2027	150E	Seattle Boiler Works	6-inch clay
2028	149E	Seattle Boiler Works	18-inch concrete
2029	147E	Seattle Boiler Works	3-inch aluminum
2030	148E	Seattle Boiler Works	3-inch aluminum
2032	146E	Seattle Boiler Works	3-inch aluminum
2033	145E	Seattle Boiler Works	3-inch PVC
2034	152E	Seattle Iron & Metals	6-inch steel
2036	154E	Puget Sound Truck Lines	8-inch steel
2037	155E	Puget Sound Truck Lines	10-inch steel
2038	162E	Puget Sound Truck Lines	6-inch concrete
2039	161E	Puget Sound Truck Lines	6-inch concrete
2040	164E	Puget Sound Truck Lines	12-inch concrete
2042	174E	Crowley/Alaska Logistics	8-inch PVC
5006	175E	Crowley/Alaska Logistics	8-inch PVC

Source: LDW Draft Phase 2 RI (Windward 2007c).

3.3 Data Gaps

Information needed to assess the potential for sediment recontamination associated with the city of Seattle public storm drain outfalls is listed below:

- Data on contaminant concentrations in storm drain solids and stormwater near the S. Myrtle Street and S. Garden Street outfalls are needed to evaluate whether contaminants are being transported to RM 2.3-2.8 East sediments.
- If contaminants are present at concentrations of potential concern near these outfalls, then source tracing samples are needed to identify potential source(s) of contaminants.

Data gaps related to the private outfalls identified in Section 3.2 are listed with data gaps for the associated facilities in Section 4.

4.0 Potential for Sediment Recontamination from Adjacent Properties

Parcel ownership in the vicinity of RM 2.3-2.8 East is shown in Figure 4. Aerial photographs of the RM 2.3-2.8 East source control area for the years 1936, 1946, 1956, 1960, 1969, 1974, 1977, 1980, 1985, 1990, 1992, and 1995 are provided in Appendix B.

Six properties located adjacent to the LDW were identified as potential sources of contaminants to RM 2.3-2.3 East:

- Guimont parcel (Section 4.1)
- Seattle Boiler Works (Section 4.2)
- Seattle Iron & Metals (Section 4.3)
- Puget Sound Truck Lines/Phil's Finishing Touch (Section 4.4)
- Seattle City Light (Section 4.5)
- Crowley Marine Services (Section 4.6)

The potential for sediment recontamination associated with each of these parcels is discussed in the following sections. Additional information needed to assess the sediment recontamination potential is also identified.

4.1 Guimont Parcel

Facility Summary: Guimont Parcel	
Address	6901 Fox Avenue S.
Tax Parcel No.	0001800113
Property Owner	William P. Guimont
Parcel Size	5.42 acres (236,095 sq. ft.)
Facility/Site ID	57331171 (Bunge Foods Corp.)
SIC Code	2045: Prepared Flour Mixes/Doughs
EPA ID No.	None
NPDES Permit No.	SO3000098
UST/LUST ID No.	None

The Guimont Parcel, which is the northwestern-most parcel near RM 2.3-2.8 East, is owned by William P. Guimont (Figure 4). The property is located at 6901 Fox Avenue S., is 5.42 acres in size, and was purchased by Mr. Guimont from the Fox Avenue Warehouse Corporation in November 1996.[7]

The property is located near the LDW in an industrial area of Seattle (Figure 2). It is bordered on the north by SEATAC Marine Properties/Glacier Marine Services, on the west by the LDW, on the south by Seattle Boiler Works, and on the east by Fox Avenue S.

[7] King County GIS Center Parcel Viewer: http://www.metrokc.gov/gis/mapportal/PViewer_main.htm

According to King County tax records, the parcel contains one structure: a 128,800-square foot (sq. ft.) warehouse. The site is paved.

4.1.1 Current Operations

Dawn Food Products, Inc. (Dawn) currently operates a distribution warehouse at this parcel. Dawn carried King County Discharge Permit No. 7043 from July 28, 2002 to July 28, 2007; it is not known whether this permit has been renewed. Discharge from the facility is conveyed to the West Point WWTP. No additional information regarding Dawn was available in the files reviewed by SAIC.

According to Dawn's website, the company has been operating since 1920. Dawn was the first supplier of dry mixes (e.g. waffle and pancake mixes) in the United States and currently produces over 4,000 custom, proprietary and branded products. Dawn is headquartered in Jackson, Michigan. Dawn's facility in Seattle is one of 20 distribution centers.[8]

4.1.2 Historical Operations

Historical operations at this property included the Bunge Foods Corporation (1991 to approximately 2003), Pacific Huts, Inc. (during the 1940s), and reportedly a shipyard and gasoline station. No other information on historical operations at this location was identified.

Bunge Foods Corporation (Bunge) began operations in 1991 in the state of Washington. Their business license expired in March 2005. Dawn apparently purchased the Bunge facility before or during 2003 (King County 2003). Bunge continues to serve food processor and food service customers in the United States and Canada with a line of bulk and packaged premium shortenings, oils and related products, and products designed to reduce trans-fatty acids.[9]

Bunge operated under Standard Industrial Classification (SIC) code 2045: Prepared Flour Mixes and Doughs. Stormwater was discharged to the LDW under an Industrial Stormwater General Permit (No. SO3000098; Ecology 1992b). Bunge re-applied for coverage under this permit in July 1995 (Bunge 1995). The permit is not currently active. No additional information regarding Bunge was available in the files reviewed by SAIC.

Pacific Huts, Inc. (Pacific Huts) manufactured prefabricated wooden igloos for use by U.S. troops in Alaska during the 1940s. The huts weighed 4.5 tons each and were rainproof, stormproof, termite-proof, and fungus-proof. The huts were made of plywood, spruce, and Masonite. Pacific Huts reportedly built the 100,000-sq. ft. factory on an abandoned shipyard and adjoining gas station (Time Magazine 1943).

According to the 1945 *Sources of Pollution in the Duwamish-Green River Drainage Area*, Pacific Huts generated "considerable" amounts of sawdust during production. The sawdust was hauled to the city dump for disposal (Foster 1945).

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[8] Dawn Food Products website:
http://www.dawnfoods.com/public/managed/about_us/capabilities/manufacturing/index.asp
[9] Bunge Foods Corporation website: http://www.bunge.com/products-services/food-products.html

4.1.3 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups for the Guimont parcel were found in the files reviewed by SAIC.

No sediment samples have been collected from the LDW directly adjacent to the Guimont parcel. Three sediment samples collected immediately downstream from the Guimont parcel contained PCBs (sample 178) and PCBs, PAHs, and metals (samples SS81 and 679); however, none of the chemical concentrations exceeded the SQS.

4.1.4 Potential for Sediment Recontamination

Little information about past activities at this property was available. Manufacturing activities by Pacific Huts, Inc. during the 1940s and earlier shipyard and fueling operations could have resulted in the release of contaminants. No potential contaminant sources associated with current operations at this property were identified.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Bunge operated under an Industrial Stormwater General Permit during its operations at the site; however, this permit is no longer active. The current operator discharges to the sanitary sewer system. No information on current stormwater discharges was available.

<u>Soil and Groundwater</u>

Past operations at this property could have resulted in soil and/or groundwater contamination; no soil or groundwater sampling has been conducted. Sediment samples collected near this property did not exceed SQS values, however. The potential for sediment recontamination via this pathway is believed to be low.

<u>Bank Erosion/Leaching</u>

No information was available on the construction of the banks in this area, and the potential for bank erosion is unknown. However, sediment samples collected in the LDW near and downstream of this property did not indicate the presence of contaminants at concentrations above the SQS. The potential for sediment recontamination via this pathway is believed to be low.

<u>Surface Runoff/Spills</u>

Surface runoff from this property may reach the Duwamish Waterway via sheet flow. No inspections have been conducted at Dawn Foods, and therefore the potential for spills or contaminant transport via surface runoff is unknown.

4.1.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Guimont parcel is listed below. Data gaps were identified for the stormwater and surface runoff pathways to RM 2.3-2.8 sediments.

Stormwater Discharge

- A business inspection is needed at this property to ensure that operations at the Dawn facility are in compliance with applicable regulations and best management practices (BMPs) to prevent the release of contaminants to the LDW.
- If stormwater flows to the LDW, a facility plan showing the locations of catch basins and storm drains should be generated.

Surface Runoff

- A business inspection is needed to evaluate whether surface runoff from current operations at this property could transport contaminants to RM 2.3-2.8 East.

4.2 Seattle Boiler Works, Inc.

Facility Summary: Seattle Boiler Works, Inc.	
Address	500 S. Myrtle Street
Tax Parcel No.	001800091
Property Owner	Frederick J. Hopkins Family Trust
Parcel Size	4.40 acres (191,664 sq. ft.)
Facility/Site ID	17577864
SIC Code	3499: Fabrication of metal products
EPA ID No.	NA
NPDES Permit No.	SO3002208
UST/LUST ID No.	8147

Seattle Boiler Works is located at 500 S. Myrtle Street near the LDW in an industrial area of Seattle (Figure 2). It is bordered on the north by Dawn, on the west by the LDW, on the south by S. Myrtle Street and Seattle Iron & Metals, and on the east by Fox Avenue S.

The property is owned by the Frederick J. Hopkins Family Trust (Figure 4). The parcel is 4.40 acres in size and is zoned for industrial use. According to tax records, there are four buildings on the site:

- The Machine Shop is 15,400 sq. ft. and was built in 1969.
- The Boiler Shop is 23,000 sq. ft. and was built in 1921.
- The Office is 3,480 sq. ft. and was built in 1940.
- The Industrial Heavy Manufacturing Building Shop is 24,000 sq. ft. and was built in 1942.

According to the Ecology's UST list, there is one exempt UST on the property; the UST site ID is 8147. No other information about this tank was available.

4.2.1 Current Operations

Seattle Boiler Works, the current tenant of the property, began operating at this location in 1949. Seattle Boiler Works specializes in fabrication of metal products (SIC code 3499) such as storage tanks, pressure vessels, boilers, heat exchangers, columns, stacks, and tank heaters. Seattle Boiler Works, headquartered in Seattle, Washington, was founded in 1889. The company serves the petrochemical, pulp and paper, crude oil drilling, hydroelectric, cogeneration, aerospace, general construction, defense, and manufacturing industries.[10]

The facility operates under Industrial Stormwater General Permit No. SO3-002208D (Ecology 2007b). The Ecology Facility/Site ID is 17577864. The site is partially paved.

<u>Materials Used and Wastes Generated</u>

New steel is stored outdoors. Spills, if any, of hydraulic fluid or other oils are cleaned by using an absorbent such as kitty litter (Ecology 2001).

<u>Regulatory History</u>

In 1995, Ecology identified Seattle Boiler Works as a potentially significant contributor of pollutants to the LDW (Ecology 1995a) and required the company to apply for coverage under the stormwater baseline general permit. Seattle Boiler Works obtained NPDES Industrial Stormwater General Permit No. SO3-002208 on February 10, 1995 (Ecology 1995b).

Ecology performed an NPDES stormwater compliance inspection on June 26, 2007. The Ecology inspector reported that Seattle Boiler Works was not sampling stormwater at the facility, which was in violation of its stormwater permit. The Ecology inspector noted that catch basins needed to be inspected and cleaned; pollutants were entering the catch basin in the forming shop; many accumulations of sediment, waste, waste containers, and empty drums were present throughout the facility, storage containers were improperly stored, and aboveground storage tanks (ASTs) did not have proper containment. Ecology made the following recommendations (Ecology 2007b):

- Inspect and clean all catch basins and properly dispose of sediment;
- Take necessary actions to stop pollutants from entering the catch basin in the forming shop;
- Remove and properly dispose of accumulations of sediment, waste, waste containers, and empty drums;
- Clean areas of the facility where these items were allowed to accumulate;
- Review the BMP for Storage of Liquid, Food Waste, or Dangerous Waste Containers and implement these practices at the site;

[10] Seattle Boiler Works website: http://seattleboiler.com/index.htm

- Provide employee training concerning the facilities SWPPP; and
- Provide secondary containment for existing ASTs or replace with double-walled ASTs.

Water Discharges

Based on Ecology's 2007 site inspection report, there are several catch basins at the facility, including a catch basin in the forming shop which is attached to the stormwater conveyance system. A facility drawing from 2001 shows at least 10 drains (Figure 6); however, a formal facility plan showing the locations of these catch basins was not found in the files reviewed by SAIC.

Seattle Boiler Works is concerned that vehicle shredding operations at Seattle Iron & Metals, resulting in the deposition of a film on vehicles parked at Seattle Boiler Works, may elevate chemical concentrations in stormwater discharges originating from Seattle Boiler Works (Ecology 2007b).

There are six outfalls to the LDW located on the Seattle Boiler Works property, as listed in Section 3.2. Seattle Boiler Works is permitted for only one outfall. According to the draft LDW Phase 2 RI, some of these outfalls may be permitted under Shultz Distributing (four outfalls permitted) and Seattle Iron & Metals (one outfall permitted) (Windward 2007c).

4.2.2 Historical Operations

National Steel Construction Company (National Steel) formerly occupied this parcel. The company's name is still visible on the main building facing Fox Avenue S. Little information regarding National Steel was found in the files reviewed by SAIC.

National Steel used sulfuric acid in a 1,250-gallon tank and hydrofluoric acid in a 250-gallon tank at their facility. Any spills or drainage from these tanks would go directly into the LDW. The 1945 report *Sources of Pollution in the Duwamish-Green River Drainage Area* estimated that approximately 1,200 to 1,500 gallons of acid were dumped into the river each month (Foster 1945).

The 1945 report stated that National Steel discharged acid pickling liquor directly to the LDW. The Pollution Control Commission required that the acid be neutralized prior to discharge. The report stated that the company had 200 employees and their sewage was directly discharged to the Duwamish (Foster 1945).

4.2.3 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups at the Seattle Boiler Works parcel were found in the files reviewed by SAIC.

Seven surface sediment samples and one subsurface sediment sample have been collected in the LDW near Seattle Boiler Works. PAHs, metals, and/or phthalates have been detected in six surface sediment samples and one subsurface sediment sample collected adjacent to Seattle Boiler Works; however, the concentrations did not exceed the SQS. Concentrations of dioxins and furans were detected in surface sediment samples 681 and SS83, collected in 1999 and 2005, respectively, and subsurface sample SC41, collected in 2006. PCB concentrations reported in one surface sediment sample collected in 1998 (sample 172) slightly exceeded the SQS (Section 2.2 and Table 1).

4.2.4 Potential for Sediment Recontamination

Seattle Boiler Works has been operating at this location since 1949; little information about earlier activities at this property was available. Activities at Seattle Boiler Works may have resulted in releases of contaminants to the environment.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

Stormwater

Based on Ecology’s 2007 facility inspection report, Seattle Boiler Works has not regularly cleaned sediments from the catch basins or performed discharge monitoring sampling, in violation of its stormwater permit. Ecology identified housekeeping deficiencies and noted that pollutants were entering the catch basin in the facility’s forming shop. The potentially sediment-filled catch basins and unknown water quality of the facility’s discharge are two sources of potential sediment recontamination. The ASTs at the facility do not have secondary containment features; therefore, a spill or leak from these ASTs and other improperly stored containers could enter the facility’s stormwater conveyance system and be discharged to the LDW. Spills that may occur at the property could enter the onsite storm drain system and be discharged to the Duwamish through the outfalls located on the west side of the parcel and the north side of the S. Myrtle Street Embayment.

Soil and Groundwater

The potential for sediment recontamination via soil and groundwater pathways is unknown. Past operations at the site indicate a potential for contamination of soils and groundwater; however, no soil or groundwater sampling has been conducted. Sediment samples collected near this property contained dioxins and PCBs.

Bank Erosion/Leaching

No information was available on the construction of the banks in this area, and the potential for bank erosion is unknown. Sediment samples collected in the LDW near this property indicated the presence of PCBs in one surface sample at a concentration above the SQS, and dioxins and furans were detected in this area. If soil contamination is present at this property, bank erosion and leaching is a potential pathway for sediment recontamination.

Surface Runoff/Spills

The extent and configuration of the stormwater system at Seattle Boiler Works is unknown. Spills that may occur at this property could enter the LDW via surface runoff.

4.2.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Seattle Boiler Works parcel is listed below.

Stormwater Discharge

- A June 2007 stormwater compliance inspection noted several deficiencies. No follow-up inspections of this facility have been conducted. Operations at this facility should be monitored to ensure compliance with permit requirements and stormwater BMPs to prevent release of contaminants to the Duwamish.
- Six outfalls to the LDW are located on Seattle Boiler Works property, however only one outfall is identified in the facility’s stormwater permit. Information on the sources of discharges (if any) to these outfalls is needed.
- Stormwater and stormwater solids samples are needed to assess the potential for transport of contaminants to the LDW via this pathway. In addition, a facility plan showing the locations of all catch basins and stormwater conveyance lines should be generated and made available, and a line tracing survey should be conducted at this facility.

Groundwater Discharge

- Due to the presence of dioxins and PCBs in sediments adjacent to this property, data on contaminant concentrations in soil and groundwater are needed in order to evaluate the potential for groundwater from this site to recontaminate RM 2.3-2.8 East sediments.

Bank Erosion/Leaching

- If soil or groundwater contamination is present at this property, a bank survey should be conducted to evaluate the potential that contaminants are entering the LDW via bank erosion or leaching.

Surface Runoff/Spills

- Additional information on the stormwater system configuration at this property is needed to evaluate the potential for contaminant transport to the LDW via surface runoff.

4.3 Seattle Iron & Metals Corporation

Facility Summary: Seattle Iron & Metals Corporation	
Address	601 S. Myrtle Street 620 S. Othello Street
Tax Parcel No.	213620076 and 2924049089
Property Owner	Shalmar Group
Parcel Size[11]	Parcel 0076: 8.22 acres (358,063 sq. ft.) Parcel 9089: 1.44 acres (62,726 sq. ft.)
Facility/Site ID	12153465 (Myrtle Street Property) 94727791 (Seattle Iron & Metals) 9872313 (Whitehead Company) 6368989 (All Alaskan Seafoods)
SIC Code	26: Paper and Allied Products (Myrtle Street Property) 5093: Scrap and Waste Materials (Seattle Iron & Metals)
EPA ID No.	WAH000010678
NPDES Permit No.	WA0031968A – Individual SO3003645 – General (to be canceled)
UST/LUST ID No.	9634 (Whitehead Company) 10855 (Manson Construction)

The Shalmar Group owns two adjacent parcels, 0076 and 9089 (Figure 4). The parcels were previously owned by the Othello Street Warehouse Corporation. The addresses for the parcels are 601 S. Myrtle Street (0076) and 620 S. Othello Street (9089). The larger of the two parcels (0076) is 8.22 acres in size with 10 buildings erected on the property. The smaller parcel (9089) is 1.44 acres in size with one building erected on the property.

These parcels are located adjacent to the LDW in an industrial area of Seattle (Figure 2). Seattle Iron & Metals is bordered by Seattle Boiler Works and S. Myrtle Street to the north, Trim Systems/CVG Commercial Vehicle Group, Pioneer Distribution and 7th Avenue S. to the east, Puget Sound Truck Lines and S. Othello Street to the south, and the LDW to the west.

Parcel 0076 is listed on the CSCSL as “The Myrtle Street Property” at 606 S. Myrtle Street. The Ecology Facility/Site ID is 12153465. Petroleum contamination in soil and groundwater has been confirmed for the property. The Myrtle Street property is part of Ecology’s Voluntary Cleanup Program (VCP); the VCP ID is NW0093.

Ecology Facility/Site ID 9872313 is also assigned to this parcel under the name “Whitehead Company” at 600 S. Myrtle Street. Two leaded gasoline USTs with capacities up to 1,100 gallons were removed from the property (UST Site ID 9634).

In 1998, The Port of Seattle arranged to demolish the existing 28,400-sq. ft. warehouse and grade approximately 16,000 cubic yards of soil to allow Seattle Iron & Metals to use the facility.

[11] For simplicity, the last four digits of a parcel number are used to identify that parcel in the text and in Figure 4.

Othello Street Warehouse Corporation placed a Restrictive Covenant on this parcel following completion of an Independent Remedial Action.

Of the 10 buildings on parcel 0076, one 14,849-sq. ft. office building was constructed in 1929. The nine remaining buildings were built in 1999 and include:

- A 9,840-sq. ft. warehouse,
- A 6,500-sq. ft. garage,
- A 20,010-sq. ft. covered storage area,
- A 1,728-sq. ft. metal scrap shed,
- A 900-sq. ft. furnace cover,
- A 480-sq. ft. scale house/office building,
- A 1,305-sq. ft. shredder works building,
- A 200-sq. ft. annex scale house/office building, and
- A 1,972-sq. ft. stormwater treatment building/equipment shed.

The building on parcel 9089 is a 1,554-sq. ft. equipment building that was constructed in 1999.

Soil beneath these parcels is comprised of sands interbedded with silt from the ground surface to approximately 10 to 20 feet below ground surface (bgs), based on exploration soil logs. Groundwater is encountered between 6 and 11 feet bgs (City of Seattle 1998).

4.3.1 Current Operations

Seattle Iron & Metals currently occupies the two adjacent parcels owned by the Shalmar Group. Seattle Iron & Metals is a recyclable material wholesaler, specializing in preparing scrap metal for recycling. The business's primary address is 601 S. Myrtle Street. Seattle Iron & Metals moved to this location in 1999 from its previous facility on Harbor Island, where it had operated for more than 70 years.

The following information regarding Seattle Iron & Metals was collected from EPA and Ecology databases:

- RCRA ID No. WAH000010678
- Ecology Facility/Site ID 94727791
- Industrial Stormwater General Permit No. SO-3003645C (coverage began June 4, 1999, permit to be cancelled [Ecology 1999b, 2008c])
- UST Site ID 10855
- North American Industry Classification System (NAICS) Codes: 042393 (Recyclable Material Merchant Wholesalers)

In 2007, Seattle Iron & Metals applied for and received an individual NPDES Permit No. WA-003196-8.

Site Facilities and Operations

Seattle Iron & Metals is a full-service metals recycler. Iron, steel, aluminum, brass, copper, and other non-ferrous metals are processed, sorted, and packed. Seattle Iron & Metals uses a 4,000-horsepower metal shredder to break up larger pieces of ferrous and non-ferrous metals into smaller pieces, which are then sold to metal recyclers for further processing (Ecology 2007a). Mixed metals, such as automobiles and appliances, are processed then separated magnetically, electrically, and by air to refine the ferrous and non-ferrous metal components into a uniform size and grade of recycled material. The facility's guillotine shear is one of the largest in the northwest and has the ability to slice through steel plate and beams up to five inches thick. Over-sized scrap, such as ship plate, is processed by torch cutters.[12]

Trucks enter the site on the east side and pull into a scale for weighing. Workers examine the trucks and record the weight and other information prior to the trucks moving to unloading areas. The trucks then are reweighed prior to the leaving the facility (Ecology 2007a).

A large crane runs along tracks on the edge of the wooden wharf used to remove or place scrap metal into barges on the waterway. The facility is fenced with sound deadening material to reduce the noise impact on neighbors.

Unloaded metal, depending on size, is either sent to the shearer or to the shredder. The shearer can cut up metal up to 4 inches thick. The shredder is a large (50-foot high) machine that can crush automobiles into small pieces. The shredder is open so employees in the shredder's control tower can see into the machine as it cuts up the material. Scrap metal is then sorted by type and placed into the appropriate shed or warehouse awaiting distribution.

Other features of the facility include a stationary fueling station, a garage, two piers, a high capacity dock crane, rail access, and a certified railroad scale. All equipment and vehicle maintenance and repair are performed in the garage. Outside storage and parking areas are paved[13] (Ecology 2006g).

A furnace used to burn insulation off electrical wire may have been relocated to Seattle Iron & Metals' current facility from the former Harbor Island facility. The furnace was registered with Puget Sound Air Pollution Control Agency (PSAPCA) and Seattle Iron & Metals was not required to obtain an Air Operating Permit for the furnace (City of Seattle 1998).

The property was capped prior to Seattle Iron & Metals' occupancy; however, the cap was cracked. Seattle Iron & Metals planned to install a new cap, which required Ecology's approval under Section 3 of the Restrictive Covenant for the property (Ecology 1998a, 1998c). Seattle Iron & Metals installed a 10-inch thick layer of concrete over the 9.5-acre property.[14] Significant contaminated soil was removed prior to installing the concrete platform. U.S. SeaCon, Inc. installed 110 stone pile columns to support the 10-inch concrete platform.

[12] Seattle Iron & Metals Corporation website: http://www.seairon.com/pages/3/index.htm
[13] Seattle Iron & Metals Corporation website: http://www.seairon.com/pages/2/index.htm
[14] Seattle Iron & Metals Corporation website: http://www.seairon.com/pages/1/index.htm

Waste Handling

Potentially hazardous liquids that are present in junked cars are burned during the shredding process (Ecology 2006g).

Wastewater Discharges

The receiving area for non-ferrous materials is covered and all runoff (i.e., fluids from materials mixed with process water) and process water drained from the shredder are conveyed to the process water treatment area and then discharged to the King County sanitary sewer (Ecology 1998c). Trucks bringing salvage to the facility are hosed down in a covered and bermed vehicle wash down area so wash water is not mixed with stormwater. Wash water is directed to the sanitary sewer (Ecology 2007a). Seattle Iron & Metals operates under Discharge Authorization No. 705 as a minor discharger.

Stormwater Discharges

Stormwater from the industrial areas of the facility is directed to a treatment system which consists of flocculation and metal precipitation. Contaminated stormwater is held in an underground storage vault (Ecology 2007a). Stormwater samples are collected at a spigot tapped into the treatment system's effluent pipe. Treated stormwater is discharged directly to the LDW. Discharge at the outfall is a mixture of Seattle Iron & Metals' treated stormwater and stormwater draining from S. Orchard Street (Ecology 2006g).

Parking lot and roof drain stormwater on the northwest side of the facility is discharged to the S. Myrtle Street outfall, and parking lot and roof drain stormwater on the northeast side of the facility discharges into a private outfall located in the LDW. The stormwater treatment system has gutters next to the LDW shoreline to catch any runoff before it enters the waterway. The captured water is sent through a filtering system prior to discharge.

According to a 2002 letter from Seattle Iron & Metals to Ecology, water is used to suppress dust generated by the shredder. Most water vaporizes or is consumed through production, though some water does reach the ground and mingles with stormwater. This process water and stormwater mixture is treated in the stormwater treatment system prior to discharge to the LDW (Seattle Iron & Metals 2002).

Seattle Iron & Metals has one permitted stormwater outfall, which is believed to be Outfall No. 2034 (see Section 3.2). The outfall is constructed of 6-inch-diameter steel (Windward 2007c).

Regulatory History

Administrative Order No. DE 99WQ-N383, requiring the company to apply for an Individual State Waste Discharge Permit, was issued to Seattle Iron & Metals on May 28, 1999 (Ecology, No Date).

Ecology conducted a water compliance inspection of the facility on April 13, 2000. Seattle Iron & Metals was still in the process of bringing the stormwater treatment system up to satisfactory performance following the business relocation from Harbor Island to the S. Myrtle Street location. Ecology recommended that Seattle Iron & Metals use collected stormwater to wash down the site, which could then be treated prior to discharge. However, Ecology directed Seattle Iron & Metals to discharge wash-down water from the vicinity of the shredder to the sanitary sewer. Due to the urgency of the business relocation, Ecology noted many deficiencies including scrap metal stored too close to the LDW, incomplete implementation of the SWPPP, oil spills, damaged asphalt, and fuel tanks that were not stored under cover. Ecology concluded that additional stormwater protection would be necessary at the facility (Ecology 2000a).

In May 2000, Seattle Iron & Metals was issued Notice of Violation No. DE 00WQNR-1034 for discharging stormwater to surface waters. Turbidity readings and concentrations of copper, lead, and zinc in the stormwater exceeded permitted effluent limits (Ecology 2000b).

Ecology conducted a stormwater compliance inspection on March 29, 2006. The inspection was in response to a complaint that scrap metal from the facility spilled into the LDW. According to the facility's discharge monitoring reports (DMRs), the total zinc concentration reported during Second Quarter 2005 exceeded permit limits. The inspector noted petroleum stains around a stationary fueling station and recommended implementation of fuel station and source control BMPs to prevent petroleum contamination of stormwater (Ecology 2006g).

Following the scrap metal spill, Seattle Iron & Metals installed an additional barrier to prevent future material overflow (Ecology 2006g).

In August 2006, Ecology expressed concern regarding an auto shredder residue (ASR) sample which failed standards for lead, and advised Seattle Iron & Metals that if future samples failed, additional sampling would be required. Additionally, Ecology directed Seattle Iron & Metals to sample sludge collected from the stormwater treatment system for metals. Sludge material would be handled as a hazardous waste if it did not meet metals criteria. If sludge material did meet metals criteria, then Seattle Iron & Metals would need to conduct a fish bioassay test to determine if it was a Washington State-only hazardous waste (Ecology 2006i).

Ecology more recently performed a stormwater compliance inspection at the Seattle Iron & Metals facility on April 19, 2007, prior to issuing Seattle Iron & Metals' individual NPDES permit. The Ecology inspector noted that the facility appeared to be in very good order (Ecology 2007a).

According to an Ecology NPDES inspection performed at the adjacent Seattle Boiler Works facility in June 2007, explosions frequently occur when the vehicle shredder is operating at Seattle Iron & Metals, and the residue from the explosions leaves a film on vehicles parked at the Seattle Boiler Works facility (Ecology 2007b).

Another NPDES inspection was performed at Seattle Iron & Metals in December 2007. The processing facility was overstocked with inventory due to transportation problems outbound. Ecology inspectors expressed some concerns about processing too close to the waterway and stormwater capacity during heavy rain events. Seattle Iron & Metals uses the Safety Kleen Continuous Use Program to collect some of the facility's waste streams and Ecology inspectors advised Seattle Iron & Metals about changes to this program (Ecology 2008a).

4.3.2 Historical Operations

Prior to their purchase by the Shalmar Group, the two parcels that make up this property were owned by the **Othello Street Warehouse Corporation**. No information regarding operations at the property during its ownership by the Othello Street Warehouse Corporation was available for review during preparation of this Data Gaps report.

All Alaskan Seafoods, Inc. formerly occupied a portion of parcel 0076 with an address at 501 S. Myrtle Street in Seattle. The facility was adjacent to Seattle Boiler Works and Seattle Iron & Metals. The business operated under EPA ID No. WA0000229062 (inactive). The Ecology Facility/Site ID is 6368989, and the NAICS Codes is 114112 (Shellfish Fishing).

No listings for All Alaskan Seafoods, Inc. were found on the Washington Secretary of State – Corporations Search website or in current telephone directories. No additional information regarding this company was available in the files reviewed by SAIC.

In February 1988, **Northland Services, Inc.** filed a first Notification of Dangerous Waste Activities form with Ecology. The form indicates that Northland was operating as a transporter of dangerous waste. The address for these activities is listed as 601 S. Myrtle Street, which indicates that Northland was operating at this parcel. Manson Construction and Engineering (Manson Construction) is listed as the property owner (Northland 1988).

In October 1994, Northland filed a revised Notification of Dangerous Waste Activities form with Ecology. The form indicates that Northland was operating as a transporter of dangerous waste via highway and waterway transportation. The EPA Site ID is listed as WAD981773005. Northland is listed as the property owner (Northland 1994).

Manson Construction and Engineering operated on the 601 S. Myrtle Street property from 1982 to 1988. According to Ecology's ISIS database, there are two USTs on the property which may have been installed during Manson's occupancy. One UST is used for heating fuel and the other has been closed in place. The UST Site ID is 10855.

According to the 1945 report *Sources of Pollution in the Duwamish-Green River Drainage Area*, **Continental Can Co.**, one of the largest machine shops in the Northwest, was located on this parcel (Foster 1945). Cooling water from their compressor was discharged directly to the Duwamish. Some cutting oil may have also been spilled on the ground and could have reached the LDW after filtering through the soils before reaching the LDW.

Seattle Concrete Pipe Company may have been located on one of these parcels or further south along the Duwamish, within the RM 2.3-2.8 East source control area. Waste from the pipe company included machine cleanings consisting of dry mixture concrete, which was dumped on the river bank to create fill above the high tide line (Foster 1945).

Maust Trucking is mentioned as a previous operator at the current Seattle Iron & Metals facility in the City of Seattle's Analysis and Decision Document for Seattle Iron & Metals' construction and land use permit (City of Seattle 1998). No additional information regarding this company was available in the files reviewed by SAIC.

4.3.3 Environmental Investigations and Cleanups

According to City of Seattle records, soil studies were conducted to determine the nature and extent of contamination and environmental cleanup at the property (City of Seattle 1998). Othello Street Warehouse Corporation conducted an Independent Remedial Action at the 606 S. Myrtle Street property (Ecology Facility/Site ID 12153465) prior to 1998. Residual concentrations of petroleum hydrocarbons and copper in soil and groundwater were in exceedance of the Model Toxics Control Act (MTCA) residential cleanup levels for soil and groundwater following the completion of the Independent Remedial Action. The property was capped and a restrictive covenant was placed on the property.

Following cleanup activities, Ecology issued a “No Further Action” letter for the property. The restrictive covenant states that the property is restricted to industrial use, the groundwater cannot be used without prior approval from Ecology, and no release or removal of soil that may result in an exposure pathway is allowed (City of Seattle 1998, Ecology 1998a). The Independent Remedial Action is documented in Hart Crowser’s *Voluntary Cleanup Action Report, 606 South Myrtle Street, Seattle, Washington,* dated March 23, 1998 (Hart Crowser 1998 as cited Ecology 1998a). Hart Crowser’s report was not available to SAIC for review.

A 1998 e-mail from Ecology indicates that there are six monitoring wells on the property (Ecology 1998c).

Eleven surface sediment samples and one subsurface sediment sample have been collected from the LDW adjacent to the Seattle Iron & Metals facility. PAHs, PCBs, and metals were detected in the surface and subsurface sediment samples at concentrations below the SQS. PCB concentrations in samples 685 and 717 exceeded the SQS by factors of 1.2 and 1.02, respectively (Table 1). Furans were detected in samples 682, 683, 684, 685, and 717. Tributyltin was detected in samples 683 and 717.

4.3.4 Potential for Sediment Recontamination

Seattle Iron & Metals has been operating at this location since 1999. Prior to this time, an independent cleanup was conducted and, due to the presence of residual concentrations of petroleum hydrocarbons and copper in soil and groundwater, a restrictive covenant was placed on the property. PCBs above the SQS are present in sediments near the Seattle Iron & Metals facility; in addition, metals, PAHs, furans and tributyltin have been detected in sediment samples.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

This facility has an individual NPDES industrial stormwater discharge permit. Operations at this Seattle Iron & Metals have resulted in violations of the facility’s stormwater permit. Little information regarding current discharge monitoring activities at the facility was available.

Several facility inspections were completed during 2007 by Ecology prior to issuing the individual NPDES permit. During the most recent inspection, Ecology inspectors expressed concern about processing too close to the Duwamish and if the facility's stormwater treatment system had the capacity for heavy rain events. Stormwater is therefore considered a potential source of sediment recontamination.

Soil and Groundwater

Residual petroleum hydrocarbons and metals are present in soil and groundwater beneath this facility. Current soil and groundwater concentrations are unknown. The ground surface has been covered with a protective 10-inch concrete cap to minimize infiltration and transport of contaminants to the LDW. There is a restrictive covenant in place that prevents use of groundwater from the property without prior approval from Ecology. Transport of contaminants to the LDW via groundwater may occur, however the presence of a concrete cap reduces the potential for this to occur.

Bank Erosion/Leaching

Little information was available on the construction of the banks in this area and the potential for sediment recontamination via this pathway. Contaminants in soils along the banks of the LDW could be released directly to sediments via erosion.

Surface Runoff

This property is serviced by a stormwater collection system. The potential for sediment recontamination via surface runoff is considered unlikely.

Spills Directly to the LDW

Activities at Seattle Iron & Metals include loading and unloading of scrap metal into barges. Scrap metal from Seattle Iron & Metals spilled into the LDW in 2006. Spills are therefore considered a potential pathway for sediment recontamination.

Atmospheric Deposition

The adjacent facility, Seattle Boiler Works, has expressed concern that residue from Seattle Iron & Metals' automobile shredder will elevate chemical concentrations in stormwater originating from Seattle Boiler Works. Shredder residue and particulates reportedly emanating from auto shredder explosions have the potential to enter the LDW and may be a source of sediment recontamination.

4.3.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Seattle Iron & Metal property is listed below.

Stormwater Discharge

- Ecology directed Seattle Iron & Metals to sample sludge material from the stormwater treatment system for metals in August 2006. No further information regarding this required sampling was found in the files. Additional data are needed to determine if the sludge should be handled as a hazardous waste and to determine if this sludge has the potential to reach the LDW.
- No information is available regarding any follow-up to the December 2007 stormwater compliance inspection.

Groundwater Discharge

- Hart Crowser's 1998 *Voluntary Cleanup Action Report, 606 South Myrtle Street, Seattle, Washington* should be located and reviewed to evaluate the extent of soil and groundwater sampling that has been conducted at this property and to identify whether sediment COCs were detected in soil or groundwater samples.

Bank Erosion/Leaching

- Additional information on the construction of the banks in this area is needed. Residual soil contamination is present at this property, therefore if bank erosion is likely, then data on contaminant concentrations in bank soils is necessary to evaluate the potential for sediment recontamination via this pathway.

Atmospheric Deposition

- Investigation is needed to determine if the shredder residue is reaching the LDW directly or via the Seattle Boiler Works storm drain system. Additional data are needed to determine if the residue contains COCs.
- The status of the furnace used to burn insulation off electrical wire should be investigated to determine if it was relocated from the Harbor Island facility to Seattle Iron & Metals Corporation's current facility. Additionally, current furnace operations, if any, should be determined.

4.4 Puget Sound Truck Lines

Facility Summary: Puget Sound Truck Lines	
Address	7303 8th Avenue S. (Puget Sound Truck Lines) 7401 8th Avenue S. (Phil's Finishing Touch)
Tax Parcel No.	2136200681 and 2136200670
Property Owner	R&A Properties, LLC (Parcel 0681) Puget Sound Truck Lines (Parcel 0670)
Parcel Size	Parcel 0681: 3.83 acres (166,835 sq. ft.) Parcel 0670: 2.50 acres (108,900 sq. ft.)
Facility/Site ID	41684823 (Puget Sound Truck Lines) 26468911 (Phil's Finishing Touch)

Facility Summary: Puget Sound Truck Lines	
SIC Code	7538: General Automotive Repair Shops 4231: Terminal Maintenance Facilities for Motor Freight Transportation 7532: Top, Body, and Upholstery Repair Shops and Paint Shops
EPA ID No.	WAD173274499 (inactive) WAD982653271 (inactive)
NPDES Permit No.	WAR000949
UST/LUST ID No.	7820

Puget Sound Truck Lines occupies two adjacent parcels (0681 and 0670; Figure 4). Puget Sound Truck Lines leases the northern parcel (0681) from R&A Properties LLC and owns the southern parcel (0670). An automobile detailing business, Phil's Finishing Touch, operates in a building on the southern parcel.

The facility is located near the LDW in an industrial area of Seattle (Figure 2). The two parcels form a triangle that is bordered on the north by Seattle Iron & Metals and S. Othello Street, on the west by the LDW, on the south and east by Seattle City Light and 8th Avenue S.

The addresses for the parcels are 7303 8th Avenue S. (parcel 0081) and 7401 8th Avenue S. (parcel 0670), with 7303 8th Avenue S. used as the primary address for Puget Sound Truck Lines. The northern parcel is 3.83 acres and the southern parcel is 2.50 acres. Three buildings are present on the parcels:

- A 12,440-sq. ft. office and garage built in 1966 on the northern parcel,
- An 11,280-sq. ft. warehouse used as a garage for service and repair built in 1954 on the southern parcel (building used by Phil's Finishing Touch),
- A 2,000-sq. ft. warehouse used as a garage for service and repair built in 1956 on the southern parcel.

Parcel 0081 is listed on the UST and LUST lists. Four USTs (ID Numbers 43813, 43844, 43889, 43924) have been removed from the property. The contents of USTs 43813 and 43924 were leaded gasoline and used-oil, respectively. The UST site ID is 7820. According to the LUST list, the release ID is 2352 and soil cleanup was finished in September 1995.

4.4.1 Current Operations

Puget Sound Truck Lines is a regional truckload carrier of general freight commodities and bulk wood residuals.[15] The company operates at this property under SIC Codes 7538 (General Automotive Repair Shops) and 4231 (Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation).

The following information regarding Puget Sound Truck Lines was gathered from EPA and Ecology databases:

[15] Puget Sound Truck Lines website: http://www.psfl.com/

- EPA ID No.: WAD173274499 (inactive according to Ecology's website, but compliant 1st Quarter 2005 through 4th Quarter 2007 according to EPA)
- Ecology Facility/Site ID: 41684823
- Industrial Stormwater General Permit No. SO3000949.

The site is paved. Ecology inspectors noted the following facilities at the property during a 2005 site inspection (2005d):

- An onsite fueling station which discharges to sanitary sewer. There is no cover over the fueling pad, and Ecology inspectors noted that there is potential for large spills to miss the sanitary sewer and enter stormwater system.
- Multiple and distinct series of catch basins discharging to the LDW. The catch basin series nearest the fueling station has a shut-off valve which can be closed in the event of a spill.
- A washing pad which discharges to the sanitary sewer.
- A truck maintenance area.

<u>Regulatory History</u>

Ecology performed a stormwater compliance inspection at Puget Sound Truck Lines on June 9, 2005, at the facility's request. Puget Sound Truck Lines acknowledged that it was not meeting the discharge sampling and monitoring requirements of the general NPDES permit and asked for clarification of the permit requirements. The Ecology inspector noted that the onsite catch basins needed to be cleaned and recommended that materials and oily parts be stored under cover, empty containers be removed, and the pavement swept (Ecology 2005d). No information on any follow-up inspections was identified.

<u>Stormwater Discharges</u>

The facility has a stormwater conveyance system (Ecology 2005d). A photograph of Puget Sound Truck Lines' facility plan is included as Appendix C. There are five stormwater outfalls on the Puget Sound Truck Lines parcels (Section 3.2). Outfall 2036 is owned by Puget Sound Truck Lines, while outfalls 2037, 2038, 2039, and 2040 are owned by R&A Properties. According to the Draft LDW Phase 2 RI, Outfall 2036 may also drain the adjacent street surfaces (Windward 2007c).

Phil's Finishing Touch, which specializes in paint and auto body repair and services to classic automobiles, is located at 7401 8th Avenue S. The business operates in a building on parcel 0670, which is owned by Puget Sound Truck Lines.

The following information regarding Phil's Finishing Touch was gathered from EPA and Ecology databases:

- EPA ID No. WAD982653271 (inactive according to Ecology's website, but compliant from 1st Quarter 2005 through 4th Quarter 2007 according to EPA)

- Ecology Facility/Site ID 26468911,
- SIC Codes: 7532, Top, Body, and Upholstery Repair Shops and Paint Shops

No additional information regarding this parcel was available in the files reviewed by SAIC.

4.4.2 Historical Operations

One of these two parcels may have been the historical location of **Seattle Concrete Pipe Company** (Foster 1945; see also Section 4.3.2). No other information on historical operations was available.

4.4.3 Environmental Investigations and Cleanups

According to Ecology's LUST list, soil cleanup activities were completed in September 1995. No records of environmental investigations or cleanups for the Puget Sound Truck Lines parcels were found in the files reviewed by SAIC.

Fifteen surface sediment and two subsurface sediment samples have been collected from the LDW adjacent to the Puget Sound Truck Lines. PAHs, PCBs, and metals were detected at concentrations below the SQS in these samples. Furans and tributyltin were detected in sample 740.

PCB concentrations in five surface sediment samples (SS88, 82, 166, 169, and 740) exceeded the SQS. The PCB concentration reported for samples SS88 and SS89 (collected in 2005) exceeded the SQS by factors 3.2 and 15, the highest exceedances for this area. PCB concentrations reported for later samples SS333 and SS334 (collected in 2006) were below the SQS. Mercury was detected above the SQS in sample SS88 by a factor of 1.5. Chrysene and fluoranthene were detected above the SQS in sample 740 by factors of 1.03 and 1.1, respectively (Table 1).

4.4.4 Potential for Sediment Recontamination

Puget Sound Truck Lines conducts truck maintenance and repair at this location; Phil's Finishing Touch operates an auto body repair shop on a portion of the property. No information on historical site uses was available. PCBs, PAHs, and mercury have been detected at concentrations above the SQS in LDW sediments adjacent to this property.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

This facility operates under an Industrial Stormwater General Permit. The most recent stormwater compliance inspection (June 2005) indicated that Puget Sound Truck Lines is not in compliance with discharge sampling and monitoring requirements. Ecology inspectors noted that the catch basins needed to be cleaned, in addition to other housekeeping deficiencies. Therefore, contaminants may enter the onsite storm drain system and be discharged to the LDW through the outfalls located on the west side of the parcel. In addition, storm drainage from the streets surrounding Puget Sound Truck Lines may transport contaminants to LDW sediments.

Soil and Groundwater

The potential for sediment recontamination via soil and groundwater pathways is unknown. Although the LUST list indicates that soil cleanup activities were completed in 1995, no additional information was found in the files reviewed by SAIC.

Bank Erosion/Leaching

Little information was available on the construction of the banks in this area and the potential for sediment recontamination via this pathway. Contaminants in soils along the banks of the LDW could be released directly to sediments via erosion.

Surface Runoff

This property is serviced by a stormwater collection system. The potential for sediment recontamination via surface runoff is considered unlikely.

4.4.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Puget Sound Truck Lines property is listed below.

Stormwater Discharge

- A stormwater compliance inspection was last conducted in 2005. A follow-up inspection is needed to determine whether catch basins have been cleaned and housekeeping has been improved, and whether the facility is in compliance with discharge monitoring and other permit requirements and stormwater BMPs.

Groundwater Discharge

- Ecology’s LUST list indicates that soil cleanup was completed at the facility in September 1995; however, no records of cleanup activities were found in the files reviewed by SAIC. Satisfactory completion of cleanup activities should be confirmed to eliminate groundwater discharge as a potential sediment recontamination pathway for this property.

Surface Runoff

- A facility plan showing the locations of all catch basins and storm drains is needed to evaluate whether any stormwater may be entering the LDW directly via surface runoff.

4.5 Seattle City Light

The address for Seattle City Light Parcel No. 2136200666 is 7551 8th Avenue S. According to King County Tax Assessor records, Seattle City Light is the taxpayer and Ms. Sandra L. Campbell is the property owner. A pumping station is present on the 0.27 acre (11,761-sq. ft.) parcel. The parcel is bordered by the LDW to the south, Puget Sound Truck Lines to the west and 8th Avenue S. to the east (Figure 4).

A 4-inch diameter concrete pipe, previously listed as Outfall 2041 (171E) is located on this parcel. This pipe is not an outfall, but is the old water intake for the Georgetown Steam Plant (Windward 2007c).

No records of environmental investigations or cleanups for the Seattle City Light parcel were found in the files reviewed by SAIC; no additional information regarding this parcel was available in the files reviewed by SAIC. This property is not likely to pose a significant risk for recontamination of RM 2.3-2.8 East sediments.

4.6 Crowley Marine Services

Facility Summary: Crowley Marine Services	
Address	7400 8th Avenue S.
Tax Parcel No.	2136200641
Property Owner	Crowley Marine Services
Parcel Size	15.86 acres (690,862 sq. ft.)
Facility/Site ID	1940187 (Crowley Marine Services) 63123962 (Alaska Logistics, LLC)
SIC Code	4492: Towing and Tugboat Services 4449: Water Transportation of Freight 4491: Marine Cargo Handling
EPA ID No.	WAD988470647 (Alaska Logistics, LLC) WAD980981846 (Samson Tug & Barge) WAD981768377 (Crowley Marine Services; inactive)
NPDES Permit No.	WAR009728 (Construction Stormwater General Permit)
UST/LUST ID No.	None

Crowley Marine Services owns parcel 2136200641, which is subdivided into two parcels, D and F. Parcel D comprises the southern two-thirds of the parcel and Parcel F forms the northern third of the parcel. The city of Seattle purchased a portion of the property near the head of Slip 4 in October 2007. Crowley leases the parcels to several businesses including Alaska Logistics, LLC (Alaska Logistics), Samson Tug and Barge (Samson), and Union Pacific Domestic Container Terminal (Union Pacific).

The property address is 7400 8th Avenue S. Crowley purchased the 15.86-acre property from Evergreen Marine Leasing in December 1992. According to tax records, there are no permanent structures on the property. Business offices are housed in semi-permanent trailers. There is a covered area at the northern end of the property which appears to be used by Union Pacific. Buildings adjacent to E Marginal Way S. appear to be abandoned.

The facility was listed on the CSCSL on August 31, 2007, with a site status of Awaiting Site Hazard Assessment (SHA). Site drive-bys were made in December 2007 and January 2008 to confirm environmental features of the site regarding containment features such as paving and buildings in order to complete the SHA. The SHA was completed in February 2008 and the facility received a ranking of 2 on a scale of 1 to 5, where 1 represents the highest risk and 5 represents the lowest (Ecology 2008b).

This property is also included in the Early Action 3 (Slip 4) source control area. Comprehensive descriptions of the property’s history and previous environmental investigations are available in the *Lower Duwamish Waterway Slip 4 Early Action Area, Engineering Evaluation/Cost Analysis* (Integral 2006) and the *LDW Source Control Action Plan for the Slip 4 Early Action Area* (Ecology 2006h).

Geological and Hydrogeological Information

The property is underlain by approximately 4 to 14 feet of sand to silty sand fill overlying native tide flat and river deposits. The native soils consist primarily of interbedded sands and silts. A shallow, water-table aquifer is developed in these materials, and based on regional studies, it is thought to extend to a depth of 70 to 80 feet bgs where the alluvial materials become significantly finer grained and less permeable (SAIC 2006b).

The water table is tidally influence and ranges in depth across the property from about 6 to 10 feet bgs at high tide and about 7 to 14 feet bgs at low tide. Groundwater from the extreme south and west margins discharges directly to the LDW, within the RM 2.3-2.8 East area (SAIC 2006b).

Wastewater Discharges

Wastewater is presumably discharged to the sanitary sewer. It is not clear if Crowley, Alaska Logistics, Samson, or Union Pacific perform any vehicle or container washing activities at the property, and if so, where wash water is discharged.

Stormwater Discharges

Surface drainage for this property discharges to six 8-inch outfalls located along the north side of Slip 4 and the LDW. Two of these outfalls (2042 and 5006) are within the RM 2.3-2.8 East source control area (Figures 5 and 7). These are described in Section 3.2.

During a joint SPU/Ecology inspection of the Crowley property in June 2004, a solids sample was collected from one of the onsite catch basins. The catch basin contained zinc (1,220 mg/kg DW) at levels above the SQS. Bis(2-ethylhexyl)phthalate (BEHP) was measured at 1.6 mg/kg DW, but did not exceed the SQS when the data were OC-normalized (SPU 2004). PCBs were below the detection limit.

4.6.1 Current Operations

The following information regarding **Crowley Marine Services** was gathered from EPA and Ecology databases:

- EPA ID WAD988470647, WAD981768377 (inactive)
- Ecology Facility/Site ID 1940187
- SIC Codes: 4492 (Towing and Tugboat Services), 4449 (Water Transportation of Freight), 4491 (Marine Cargo Handling)
- NAICS Code 483211 (Inland Water Freight Transportation)

A Construction Stormwater General Permit (WAR009728) was issued to Crowley Marine Services on August 15, 2007 and expires on May 31, 2008.

Service Specialties Inc. is listed as an alternative name for Crowley on the EPA Envirofacts Warehouse website. Service Specialties Inc.'s NAICS Code is 36611 (Ship Building and Repairing).

Alaska Logistics, Inc., a current tenant at the property, transfers containers for shipment to and from Alaska. The business was registered with Washington State in February 2003. The facility was subject to a joint Ecology/SPU inspection during 2005; during this site visit, outfalls and drainage destination were identified.

The upland area of the parcel is used by Alaska Logistics for cargo container storage. Most of the facility is paved, with only the area adjacent to East Marginal Way S. remaining unpaved. Some minor vehicle maintenance occurs on the site. Equipment and vehicles being transported occasionally leak oils and other fluids. During a recent inspection, spill control materials were available onsite, but no spill response plan was available (SPU 2004 as cited in Ecology 2006h).

The following information regarding Alaska Logistics was gathered from EPA and Ecology databases:

- EPA ID WAD988470647 (compliant with RCRA from 1st Quarter 2005 through 4th Quarter 2007 according to the ECHO website); this is the same RCRA ID as Crowley
- Ecology Facility/Site ID 63123962
- SIC Codes: 4492 (Towing and Tugboat Services), 4449 (Water Transportation of Freight), 4491 (Marine Cargo Handling)
- NAICS Code: 483211 (Inland Water Freight Transportation)

Samson Tug and Barge was founded in 1937 with a single tug providing freight hauling services throughout Southeast Alaska. The Samson fleet expanded and by the 1980s, a military contract for freight services to Adak was awarded to the company. This propelled Samson into the large-scale freight hauling arena and led to a service a route which encompassed the entire Pacific Rim of Alaska.

Samson provides shipment of 20-foot and 40-foot dry containers and 20-foot shipping platforms. Samson transports 5,000-gallon International Standards Organization (ISO) tanks and bulk Liquefied Petroleum Gas (LPG) tanks. Samson offers trucking services in Seattle as well as connecting carrier agreements to transport cargo around the world. Samson is certified by the EPA to transport hazardous materials and hazardous waste.

Samson operates at two parcels within the RM 2.3-2.8 East Source Control Area. The yard is on the Crowley parcel at the 7400 8th Avenue S. address. Samson also leases warehouse space at the Pioneer Distribution facility (see Section 5.5). The warehouse receiving address is:

> Pioneer Industries Warehouse - Bays 5, 6 & 7
> 660 South Othello Street
> Seattle,WA 98108.[16]

Samson's EPA ID No. is WAD980981849. According to EPA's ECHO website, Samson is compliant with RCRA from 1st Quarter 2005 through 4th Quarter 2007. Ecology has not assigned a Facility/Site ID to Samson for this location.

4.6.2 Historical Operations

Northland Services, Inc. previously leased a portion of this parcel. Northland carried an Industrial Stormwater General Permit (No. SO3003646) while operating at this property. The EPA ID for Northland was WAH000012096 (Ecology 2002a).

Ecology performed a facility inspection in February 2002. Dangerous waste was stored at the facility. The Ecology inspector recommended revision of the facility's emergency action plan, improvements to general facility documents, and regular refresher training for employees handling dangerous waste (Ecology 2002a). Northland implemented these recommendations to Ecology's satisfaction by July 2002 (Ecology 2002d; Northland 2002b).

Historical sources indicate other operations that were conducted at this property include wood treating, pipe dipping, log storage, and aluminum window manufacturing operations. Portions of the property were unpaved for much of its history. Large equipment has been used at the facility for much of its history. Soil and groundwater contamination is associated with USTs at the property. Companies that have previously operated at this property are (Foster 1945, Ecology 2007e):

- Pankrantz Lumber
- Washington Excelsior and Manufacturing
- Puget Timber
- Washington Supply Manufacturing Company
- Layrite Concrete Products
- Hydraulic Supply Manufacturing
- Port of Seattle (part of Terminal 118)

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[16] Samson Tug and Barge website: http://www.samsontug.com/

- Marine Power & Equipment
- Evergreen Marine Leasing

4.6.3 Environmental Investigations and Cleanups

Environmental investigations at Parcels D and F of the Crowley property were previously summarized in the *Lower Duwamish Waterway Slip 4 Early Action Area, Engineering Evaluation/Cost Analysis* (Integral 2006), the *LDW Source Control Action Plan for the Slip 4 Early Action Area* (Ecology 2006h), and *Technical Memorandum, Crowley and First South Properties, Potential for Slip 4 Sediment Recontamination via Groundwater Discharge* (SAIC 2006b), and are summarized below. Tables 4 and 5 present chemical concentrations detected above screening levels in soil and groundwater samples, respectively. Figures 8 and 9 show areas of the property where chemicals have been detected above screening levels in soil and groundwater.

<u>Parcel D</u>. Several investigations to assess conditions resulting from past site uses have been conducted at Parcel D (SEA 2004). Soil samples collected in 1988 through 1990 detected several contaminants in soil at concentrations above MTCA cleanup levels: arsenic (up to 2,800 mg/kg), total petroleum hydrocarbons (TPH; up to 29,000 mg/kg), carcinogenic PAHs (cPAH; up to 1,396 mg/kg), and PCBs (up to 2.5 mg/kg). The elevated arsenic appeared to be localized in the vicinity of a former pole-dipping facility. Hart Crowser estimated that approximately 9,000 cubic yards of soil exceeded cleanup levels (Hart Crowser 1989b). Monitoring wells installed and sampled during 1988 through 1990 detected arsenic, copper, and cPAHs above surface water quality criteria (SEA 2004). Additional information about environmental sampling at Parcel D is provided in Appendix D. There is no record of soil or groundwater remediation on Parcel D.

<u>Parcel F</u>. Several investigations to assess conditions resulting from past site use have been conducted at Parcel F (SEA 2004). Soil samples collected in 1989 and 1990 detected several contaminants including PCBs, but only TPH was detected above MTCA cleanup levels (Hart Crowser 1989b). Copper and BEHP were detected above surface water quality criteria in groundwater samples (Hart Crowser 1989a, 1991). PCBs were not detected in groundwater. Additional information about environmental sampling at Parcel F is provided in Appendix D. Except for the removal of two underground storage tanks, there are no records of soil or groundwater remediation on Parcel F.

In its *Technical Memorandum, Crowley and First South Properties, Potential for Slip 4 Sediment Recontamination* (SAIC 2006b), SAIC compared historical concentrations of contaminants of concern in soil and groundwater to draft sediment screening levels (SLs).[17] While this technical

[17] These screening levels were developed to assist in the identification of upland properties which may pose a potential risk of recontamination of sediments at Slip 4. The screening levels incorporate a number of conservative assumptions, including the absence of contaminant dilution and ample time for contaminant concentrations in soil, sediment, and groundwater to achieve equilibrium. In addition, the screening levels do not address issues of contaminant mass flux from upland to sediments nor do they address the area or volume of sediment that might be affected by upland contaminants. Because of these assumptions and uncertainties, these screening levels are most appropriately used for one-sided comparisons. If contaminant concentrations in upland soil or groundwater are below these screening levels, then it is unlikely that they will lead to exceedance of marine sediment CSLs. However, upland concentrations that exceed these screening levels *may or may not* pose a threat to marine sediments; additional site-specific information must be considered in order to make such an assessment.

memorandum focused on the potential for sediment recontamination in Slip 4, it also provides valuable information regarding the potential for recontamination of sediments in the RM 2.3-2.8 East area. Information from the memorandum that is pertinent to the RM 2.3-2.8 Source Control Area is presented below.

PAHs exceeded soil-to-sediment screening levels in soil samples in roughly half the borings in Parcel D; these exceedances were distributed throughout most of the areas in Parcel D that have been investigated. The highest exceedances were found in three soil borings in northwestern and central portions of Parcel D. Soil borings with exceedances in the western and southern portions of Parcel D were DB-2 through DB-4, HC-103, and HC-110. There were no PAH exceedances of soil-to-sediment screening levels in soil samples in the northern portion of Parcel F (Figure 8).

Soil samples where PAHs exceeded screening levels ranged in depth from approximately 2 to 17 feet bgs; most such samples were from depths of less than 6 feet. Examination of individual boring logs and/or water-table elevation data indicated that most soils exceeding screening levels were located above the high-tide water table. However, the highest PAH concentrations in groundwater were associated with areas of deeper soil contamination. Groundwater in the area of well DMW-3, which had the highest exceedance for PAHs, flows towards the RM 2.3-2.8 East portion of the LDW during low tide (Appendix D-4).

PAHs exceeded groundwater-to-sediment screening levels in groundwater samples from roughly half the monitoring wells in Parcel D; these wells were located in or near borings where soil also exceeded screening levels. Groundwater exceeded screening levels by a factor of up to 27 in these wells. There were no PAH exceedances of screening levels in monitoring wells in Parcel F (Figure 9).

Groundwater in the western and southern portions of the property discharges to the LDW within the RM 2.3-2.8 East area (Figure 9). The downgradient extent of groundwater with significant PAH exceedances of SLs, particularly in the vicinity of DMW-3, is poorly defined. According to groundwater elevation and flow direction maps, groundwater in the vicinity of this well flows towards RM 2.3-2.8 East during low tide. However, there are no monitoring data that allow direct assessment of whether COCs are currently discharging to RM 2.3-2.8 East in this area and at what concentrations.

Six surface sediment samples (84, 170, 171, 741, SS92 and SS94) and one subsurface sediment sample (SC45) have been collected in the LDW near the Crowley parcel within the RM 2.3-2.8 East area. PCBs, PAHs, and metals were detected in these samples at concentrations above the SQS. Furans were detected in sample 741. Concentrations of the PAHs benzo(a)anthracene, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, total HPAH and total LPAH exceeded the SQS as discussed in Section 2.2.2 and shown in Table 1. PCB concentrations in surface sediment sample SS92 and the 2- to 4-foot depth interval in subsurface sample location SC45 exceeded the SQS by factors of 6.3 and 4.4, respectively (Tables 1 and 2).

4.6.4 Potential for Sediment Recontamination

The Crowley Marine Services property has a long history of industrial operations that may have resulted in soil and groundwater contamination. Available soil and groundwater data indicate that metals, TPH, PAHs and other SVOCs, and PCBs are present at this property at concentrations above MTCA Method A cleanup levels and/or soil-to-sediment or groundwater-to-sediment SLs. PCBs, PAHs, and metals have been detected at concentrations above the SQS in LDW sediments adjacent to this property.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

Stormwater

The property is paved, except for the area adjacent to East Marginal Way S., which reduces the likelihood that historical soil contaminants are carried into the LDW by stormwater. The current operator at the property does not have a stormwater permit. Spills and releases from current operations at the property could enter the onsite storm drain system and be discharged to the LDW through the outfalls located on the west side of the parcel.

Soil and Groundwater

Soil and groundwater contamination is present at this property in concentrations above soil-to-sediment and/or groundwater-to-sediment SLs. Based on groundwater flow directions shown in Figure 9, these contaminants could be transported to RM 2.3-2.8 East during low tide. Groundwater in this area is shallow, and the area reportedly has a high seepage level. Filtered and unfiltered seep samples collected adjacent to the Crowley property exceeded chronic and acute water quality criteria (Table 3).

Bank Erosion/Leaching

Little information was available on the construction of the banks in this area and the potential for sediment recontamination via this pathway. If contaminants are present in soils along the banks of the LDW, they could be released directly to sediments via erosion.

Surface Runoff

This property is serviced by a stormwater collection system. The potential for sediment recontamination via surface runoff is not considered a significant pathway for sediment recontamination at this property.

<u>Spills Directly to the LDW</u>

Activities at the Crowley Marine Services property include loading and unloading of cargo containers and liquid fuels. Accidental releases during loading or unloading operations are considered a potential pathway for sediment recontamination.

4.6.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Crowley Marine Services property is listed below.

Stormwater Discharge

- The current property occupants (Alaska Logistics, Samson Tug and Barge, Union Pacific) do not have a stormwater permit or a SWPPP. Inspections are needed at these facilities to evaluate whether current operations at the property could be a source of LDW sediment recontamination.
- Stormwater runoff and inline solids data from the storm drain lines that discharge to RM 2.3-2.8 East are needed to evaluate the potential for transport of contaminants to the LDW via stormwater.

Groundwater Discharge

- Additional data on contaminant concentrations in soil and groundwater at the western and southern portions of the property that abut the LDW are needed to evaluate the potential for groundwater from this property to recontaminate RM 2.3-2.8 East sediments.

Bank Erosion/Leaching

- Additional information on the construction of the banks in this area is needed. Soil contamination is present at this property. Therefore, if bank erosion is likely, then data on contaminant concentrations in bank soils is necessary to evaluate the potential for sediment recontamination via this pathway.

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5.0 Potential for Sediment Recontamination from Upland Properties

Upland properties that could potentially affect RM 2.3-2.8 East sediments include:

- Fox Avenue Building/Fox Avenue Building #2 (Section 5.1)
- Whitehead Company/Former Tyee Industries (Section 5.2)
- Whitehead Company/Former Perkins Lot (Section 5.3)
- Trim Systems (Section 5.4)
- Nitze-Stagen/Frye Parcels (Section 5.5)
- Nelson Trucking (Section 5.6)
- Former Sternoff Parcel (Section 5.7)
- Markey Machinery Company (Section 5.8)
- El Gallo D'Oro/James Dore (Section 5.9)

Because these properties are not adjacent to the LDW, surface runoff directly to the waterway, bank erosion, and spills directly to the waterway are not potential sediment recontamination pathways and therefore are not discussed further in this section. Contaminants from upland properties could be transported to the LDW via stormwater and groundwater pathways.

The Whitehead Parcel/Former Perkins Lot, the former Trim Systems parcel, the larger Nitze-Stagen/Frye Parcel (current Pioneer Distribution), and the Former Sternoff Parcel are connected to municipal storm drain and sewer systems. However, based on storm drain and sewer line maps provided by SPU, stormwater and surface water originating from these properties may enter nearby, off-property storm drains that connect to the municipal outfalls discharging to the LDW. Current operational practices at these parcels may contribute to the movement of contaminants to the LDW; however, the potential for sediment recontamination via this pathway is low.

5.1 Fox Avenue Building and Fox Avenue Building #2

Facility Summary: Fox Avenue Building and Fox Avenue Building #2	
Address	6900 Fox Avenue S.
Tax Parcel No.	0001800087 and 0001800089
Property Owner	Fox Avenue Building, LLC
Parcel Size	Parcel 0087: 2.53 acres (110,207 sq. ft.) Parcel 0089: 1.19 acres (51,836 sq. ft.)
Facility/Site ID	2282
SIC Code	5169 (Chemical and Allied Products - Wholesale): Cascade Columbia Distribution
EPA ID No.	WAD008957961
NPDES Permit No.	None
UST/LUST ID No.	3803

Parcel 0087 is located at 6900 Fox Avenue S. with parcel 0089 immediately adjacent to the east. No address is listed for parcel 0089. The parcels are located in an industrial area of Seattle (Figure 4). The parcels are bordered by Shultz Distributing and S. Willow Street to the north, East Marginal Way S. to the east, the Whitehead Company, Inc./Former Tyee Industries parcel to the south, and Dawn Food Products and Fox Avenue S. to the west.

Parcel 0087 is owned by Fox Avenue Building LLC. There are two buildings on the 2.53-acre parcel, a 38,650-sq. ft. warehouse and office building built in 1959 and a 4,000-sq. ft. warehouse built in 1929. This parcel is listed on the CSCSL as the "Fox Avenue Building" for confirmed halogenated organics, non-halogenated solvent, petroleum product, and PAH contamination in soil and groundwater. The Ecology Facility/Site ID is 2282.

Great Western Chemical (GWC) Properties LLC sold adjacent parcel 0089 to Fox Avenue Building #2 LLC in February 2005. The 1.19-acre lot is currently vacant.

The following information for the Fox Avenue Building was collected from EPA and Ecology databases:

- EPA ID WAD008957961
- LUST 3803.

Twenty-six (26) USTs are listed for GWC (former property owner) on the UST list. Twenty of the USTs have been removed and the remaining six USTs were closed in place. The former contents for 17 of the USTs are listed as a Hazardous Substance, and no information regarding the former contents of the remaining USTs is listed. The UST ID numbers are 9556, 9575, 9586, 9612, 9624, 9637, 9650, 9664, 9694, 15864, 15936, 15946, 16005, 16024, 16059, 16086, 16102, 16139, 16207, 21073, 21082, 21141, 21222, 21271, 21338, and 21348. The UST site ID is 3803, and the LUST release ID is 1819. Soil cleanup began in June 1995; no completion date is listed.

The histories of Fox Avenue Building, Cascade Columbia Distribution (Cascade Columbia) and GWC were previously summarized in Ecology and Environment's (E&E) draft Data Gaps report for RM 2.0-2.3 East (Slip 3; E&E 2008), dated January 2008. Information regarding the current facilities and operations at Cascade Columbia, including stormwater discharges associated with this facility, is also available in E&E's report. Stormwater discharges from this property are conveyed to Slip 3. Groundwater beneath this property, however, flows towards the S. Myrtle Street Embayment, which is within the RM 2.3-2.8 East source control area. Pertinent information from E&E's report, as it relates to the RM 2.3-2.8 East source control area, is cited and summarized within this section.

5.1.1 Current Operations

Cascade Columbia Distribution Company currently operates at 6900 Fox Avenue S. Cascade Columbia is a Northwest-based company that provides chemicals for aerospace, electronics, food manufacturing, personal care, metal plating, and water treatment industries.[18]

[18] Cascade Columbia Distribution Company website: http://www.cascadecolumbia.com/Home/tabid/58/Default.aspx

5.1.2 Historical Operations

Great Western Chemical Company (GWCC), a Division of McCall Oil and Chemical Corporation (Ecology 1986g) formerly operated at 6900 Fox Avenue S. GWCC handled the following chemical classes and product types at the property (Terra Vac and Floyd & Snider 2000a):

- Ketones: methyl ethyl ketone, methyl *iso*-butyl ketone, and acetone
- Monocyclic aromatic solvents: toluene and xylenes
- Alcohols and glycols: isopropyl alcohol, ethyl alcohol, methyl alcohol, ethylene glycol, and propylene glycol
- Mineral spirits/petroleum solvents: kerosene and Chevron solvents 325, 350-B, 410, and 450
- Chlorinated compounds: methylene chloride, tetrachloroethene (PCE), pentachlorophenol, trichloroethylene (TCE), and 1,1,1-TCE
- Acids: nitric, sulfuric, and muriatic (hydrochloric) acids
- Dry products: phosphates, soda ash, titanium dioxide, borax and boric acid, calcium chloride, and calcium sulfate
- Miscellaneous chemicals: ferric and ammonium chloride etchants, phenols, hydrogen peroxide, and linseed oil
- Stoddard solvents
- Sodium chlorate
- Potassium carbonate
- Caustic soda.

<u>Regulatory History</u>

GWCC or Great Western International (GWI) and now Fox Avenue Building LLC entered into Agreed Order No. DE TC91-N203 with Ecology effective September 30, 1991 (Terra Vac and Floyd & Snider 2000a as cited in E&E 2008).

An interim action is in process, which began in December 1993, to be completed by January 2010. An RI/FS is in process under Ecology's Agreed Order; it began in August 1991 and is scheduled to be completed by December 2008. Also under the Agreed Order, a hazardous sites listing and SHA were completed in 1994. A site discovery/report, early notice letter, and initial investigation were completed in 1990. The site status is listed as "remedial action in progress" (Ecology 2007d as cited in E&E 2008).

5.1.3 Environmental Investigations and Cleanups

Numerous environmental investigations and cleanups relating to GWCC's past operations occurred between 1989 and 2001. Over 100 soil borings and 70 temporary and permanent groundwater monitoring wells have been installed on and adjacent to the property to determine the nature and extent of groundwater and soil contamination beneath the property. Off-property groundwater monitoring wells were installed on S. Willow Street between Fox Avenue S. and East Marginal Way S., on Fox Avenue S. between S. Willow and S. Myrtle Streets, and on S. Myrtle Street between the LDW and the Whitehead Company, Inc./Former Tyee Industries parcel.

Groundwater beneath the property occurs in two water-bearing zones (WBZs), referred to as the 1st WBZ and the 2nd WBZ. The 1st WBZ is the uppermost groundwater-bearing unit beneath the GWI site; it is unconfined with depth to the water table ranging between 7 to 13 feet bgs. The 1st WBZ is most vulnerable to impacts from surface activities. The 2nd WBZ ranges in depth from 15 to 45 feet bgs and is contained within a semi-confined (i.e., locally unconfined) aquifer. Groundwater flow direction is to the southwest, towards the S. Myrtle Street Embayment (Terra Vac and Floyd & Snider 2000a).

Groundwater monitoring wells and seeps located in the S. Myrtle Street Embayment were sampled annually from 1993 to 1999. A detailed summary of the environmental activities related to the former GWCC facility is provided in E&E's Slip 3 Data Gaps report (E&E 2008). Relevant figures from this report illustrating the extent of the groundwater plume are included in Appendix E. Specific results relating to the potential for sediment recontamination in the RM 2.3-2.8 East source control area are discussed below. Additional information regarding previous environmental investigations at the property is included in Appendix E.

<u>Soil Contamination</u>

Soil beneath the property has been contaminated as a result of historical operations at the former GWCC facility. Table E-1 presents sampling results for all chemicals detected in soil at this property. Areas of the property where chemical concentrations in soil exceed screening levels are shown on Figure 10. Table 6 provides a list of chemicals detected in soil samples at concentrations above MTCA Method A or B cleanup levels or the soil-to-sediment SLs. Chemicals with exceedances greater than 10 and the greatest exceedance factor are listed below:

Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
1,1,1-TCA	160		2		80
1,2-Dichlorobenzene	18		15	0.0038	4,737
1,4-Dichlorobenzene	5.9		42	0.015	393
1,4-Dimethylbenzene	0.5	J	42	0.015	33
2,4-Dimethylphenol	0.52		1,600	0.037	14
2-Methylnaphthalene	2.8		320	0.073	38
Benzene	12		0.03		400
Benzo(a)pyrene	1		0.1	4.2	10
Bis(2-Ethylhexyl)Phthalate	110		71	0.078	1,410
Butylbenzylphthalate	1.3		16,000	0.066	20

Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Di-n-butyl phthalate	110	B	8,000	2.0	55
Ethylbenzene	470		6		78
Gasoline-Range Hydrocarbons	6,500		30		217
Mercury	8.8		2	0.030	293
Methylene Chloride	780	B	0.02		39,000
Naphthalene	4.6		5	0.20	23
PCE	19,000		0.05		380,000
Pentachlorophenol	490	D	8.3	0.037	13,243
TCE	1,100		0.03		36,667
Toluene	1,800	J	7		257
Total Hydrocarbons (Light)	20,000		30		667
Xylenes (total)	1,200		9		133

a - The lower of MTCA Method A or B cleanup levels was selected, from https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx
b - From: SAIC 2006a

Groundwater Contamination

Groundwater beneath the property has been contaminated as a result of historical operations at the former GWCC facility. Table E-2 presents sampling results for all chemicals detected in groundwater at this property. The PCE, TCE, 1,2-dichloroethenen (DCE), and vinyl chloride (VC) groundwater plume originating from the former GWCC facility extends southwest through the Seattle Boiler Works property to the S. Myrtle Street Embayment. Concentrations of these contaminants exceed MTCA Method A cleanup levels. The groundwater plume is present in both water-bearing zones. High concentrations of DCE and VC exceeding cleanup levels are present in the 2nd WBZ groundwater and discharge from Seep S-13 in the S. Myrtle Street Embayment (Terra Vac and Floyd & Snider 2000a). Areas of the property where chemical concentrations in groundwater exceed screening levels are shown on Figure 11.

Table 7 provides a list of chemicals detected in groundwater samples at concentrations above MTCA Method A or B cleanup levels or the groundwater-to-sediment SLs. Chemicals with exceedances greater than 10 and the greatest exceedance factor are listed below:

Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
1,1,1-TCA	16,000		200		80
1,1,2-TCA	68	J	0.77		88
1,2,4-Trimethylbenzene	11,000		400		28
1,2-DCA	200		5		40

Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
1,2-DCE (total)	73,000		72		1,014
1,2-Dichlorobenzene	1,000		720	5.2	192
1,2-Dichloropropane	82	J	0.64		128
1,3,5-Trimethylbenzene	9,600		400		24
1,4-Dichlorobenzene	290		1.8	21	161
2-Butanone	170,000		4,800		35
2-Methylphenol	750		400	7.1	106
4-Methyl-2-Pentanone	14,000		640		22
Acetone	18,000		800		23
Arsenic (total)	140		5	370	28
Benzene	1,300		0.8		1,625
Bis(2-Ethylhexyl)Phthalate	76		6.3	0.47	162
Chromium (total)	16,000		50	320	320
cis-1,2-DCE	75,000		80		938
Diesel-Range Hydrocarbons	19,000		500		38
Gasoline-Range Hydrocarbons	120,000		800		150
Lead (total)	140		15	13	11
Mercury (total)	6.2		2	0.0074	838
Methanol	40,000		4,000		10
Methylene Chloride	23,000		5		4,600
PCE	160,000		5		32,000
Pentachlorophenol	11,000		0.73	10	15,068
Phosphorus (total)	2,600		0.16		16,250
Styrene	2,500	J	1.5		1,667
TCE	94,000		0.11		854,545
Toluene	76,000		640		119
Vinyl Chloride	25,000		0.029		862,069
Zinc (total)	1,300		4,800	76	17

a - The lower of MTCA Method A or B cleanup levels was selected, from https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx
b - From: SAIC 2006a

S. Myrtle Street Embayment Study

GWI conducted an investigation to determine whether groundwater is discharging into the S. Myrtle Street Embayment through a finite number of seeps, or through broad areas of groundwater upwelling through the S. Myrtle Street Embayment sediments. The study indicated that no generalized upwelling was measurable (Terra Vac and Floyd & Snider 2000b).

As part of the S. Myrtle Street Embayment study, Terra Vac and Floyd & Snider analyzed 1999 groundwater monitoring data to determine typical concentrations of PCE, TCE, total DCE, and VC in wells adjacent to the S. Myrtle Street Embayment and seeps:

Chemical of Concern (µg/L)	Wells screened in the 1st WBZ Groundwater	Wells screened in the 2nd WBZ Groundwater	Seeps
PCE	11	130	4 to 200
TCE	5.7	<100	2 to 270
Total-DCE	7.6	21,200	5 to 3,200
VC	2.2	23,000	<1 to 3,500

Seep sampling locations are shown in Figure 12. Additional information regarding the S. Myrtle Street Embayment Study is included in Appendix E.

5.1.4 Potential for Sediment Recontamination

Soil and groundwater contamination have been documented at the Fox Avenue Building/Fox Avenue Building #2 property. Available data indicate that VOCs, SVOCs, metals, and petroleum hydrocarbons are present at this property above MTCA cleanup levels and soil-to-sediment or groundwater-to-sediment screening levels.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Stormwater from this facility is conveyed to Slip 3, which is north of RM 2.3-2.8 East. Therefore, this property does not represent a potential source of sediment recontamination to the RM 2.3-2.8 East source control area.

<u>Soil and Groundwater</u>

Soil and groundwater beneath the Fox Avenue Building is contaminated. Previous environmental investigations have shown that contaminants originating from soil and groundwater beneath the property are transported via groundwater to the S. Myrtle Street Embayment. Contaminated groundwater from this facility may be an ongoing source of sediment recontamination to RM 2.3-2.8 East sediments.

5.1.5 Data Gaps

An RI/FS is in progress at this property, under an Agreed Order with Ecology, to investigate and remediate soil and groundwater contamination.

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Fox Avenue Building property is listed below. Data gaps associated with the stormwater pathway were identified in E&E's Draft Slip 3 Data Gaps report. The data gaps listed below apply to the RM 2.3-2.8 East source control area since groundwater from this facility flows towards the S. Myrtle Street Embayment.

Groundwater Discharge

- Dioxins and furans were detected in some environmental samples collected from the property, additional data are needed to determine the extent of contamination and to determine potential pathways for sediment recontamination.
- Annual groundwater, seep, and porewater data monitoring has not been conducted since 1999. Additional data are needed to determine the current levels of contamination in these media in order to evaluate this pathway as a source of sediment recontamination.
- No information was available to document implementation of the expanded Soil Vapor Extraction pilot study.

5.2 Whitehead Company, Inc./Former Tyee Industries

Facility Summary: Whitehead Company, Inc./Former Tyee Industries	
Address	730 S. Myrtle Street
Tax Parcel No.	2734100270
Property Owner	Whitehead Company, Inc.
Parcel Size	3.22 acres (140,263 sq. ft.)
Facility/Site ID	48578491
SIC Code	Unknown
EPA ID No.	WAD009244179 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

This 3.22-acre, vacant parcel is owned by Whitehead Company, Inc. and the taxpayer is Reliable Transportation and Storage. The parcel address is 730 S. Myrtle Street. The parcel is located in an industrial area of Seattle (Figure 4). The parcel is bordered by the Fox Avenue Building parcels to the north, El Gallo d'Oro Restaurant to the east, the Whitehead Company, Inc./Former Perkins Lot parcel, Seattle Iron & Metals and S. Myrtle Street to the south, and Seattle Boiler Works and Fox Avenue S. to the west.

5.2.1 Current Operations

Seattle Iron & Metals leases the parcel for employee parking and truck storage. Based on a reconnaissance visit conducted in January 2008, the parcel appears to be unpaved. SPU storm drain and sewer line maps indicate that surface water from this parcel drains to the combined sewer overflow (CSO).

5.2.2 Historical Operations

Tyee Industries (Tyee) was previously located at 765 S. Myrtle Street. Based on this address, Tyee's former location should have been on the south side of S. Myrtle Street. Tyee operated at the property from approximately 1906. The improvements on the property were purchased by CECO Corporation in 1982. The property owners, Messrs. Paul Duncan and Arnie Thorson, were operating a pentachlorophenol dip tank at the property. CECO discontinued use of the tank when it took over operations in 1982 (Ecology 1986a).

The following information regarding Tyee Industries was collected from EPA and Ecology databases:

- EPA ID WAD009244179 (inactive)
- Ecology Facility/Site ID 48578491
- Alternative Name: Tyee Dry Kilns, Inc.

<u>Regulatory History</u>

Ecology performed a facility inspection following a complaint from METRO of a milky white liquid from a pipe at the back of the facility. The Ecology inspector found that the liquid discharged to an open pit, then flowed to another pit equipped with a sump pump. Overflow from the second pit was conveyed to the Fox Avenue storm drain via the loading dock area and another sump pump (Ecology 1986a; METRO 1986). The Tyee plant manager identified the discharge as polyvinyl acetate glue and stated that the discharge had occurred daily for years. Historically the glue contained high concentrations of metals, but the current formula contained much lower metals concentrations (Ecology 1986a). METRO collected samples of the discharge for laboratory analysis; concentrations of copper exceeded marine acute standards and nickel exceeded marine chronic standards (METRO 1986).

A Cease Discharge Order was issued to Tyee Lumber by Ecology in February 1986 (King County Department of Metropolitan Services [METRO] 1987).

Approximately 300 gallons of pentachlorophenol were removed from an UST at this site in early 1986 and confirmation soil samples were collected (Ecology 1986b, 1986i). Soil sample results were not found in the files reviewed by SAIC.

In June 1986, Ecology performed an inspection. Tyee was in the process of closing operations in Seattle and relocating to Lacey, Washington (Ecology 1986h).

Ecology performed another facility inspection on March 6, 1987, following a complaint from METRO. Ecology noted that stormwater was conveyed to the LDW at Slip 3 via the Fox Avenue storm sewer. Tyee's tenant, Freelance Woodworking, had covered a radiator vent, which misdirected radiator condensate to the storm sewer (Ecology 1987b).

5.2.3 Environmental Investigations and Cleanups

Supplemental Investigation Report on the Whitehead Property

A Supplemental Investigation was conducted at the Whitehead Property to further assess and document VOC and SVOC contamination in soil and groundwater on the property. Eleven temporary wells were installed at the Whitehead property and sampling was conducted from August 9 to August 11, 2000. A total of 31 soil samples and 11 groundwater samples were collected during the investigation and selected samples were analyzed for VOCs, SVOCs, TPH, non-aqueous phase liquid (NAPL), and TOC (Terra Vac and Floyd & Snider 2001b).

The primary VOCs detected in soil samples from this investigation were PCE, TCE, DCE, VC, toluene, and gasoline-range TPHs. Concentrations did not exceed 5 mg/kg, with the exception of one cis-DCE concentration of 6.6 mg/kg (Terra Vac and Floyd & Snider 2001b).

Based on the groundwater data collected during the supplemental investigation, chlorinated hydrocarbons were present in groundwater beneath the property. These impacts extended to the western property boundary and southwest of the property boundary to Fox Avenue S. The easterly extent of these groundwater impacts could not be determined from the data collected during this investigation. Groundwater at the property contained detectable concentrations of PCE, TCE, DCE, VC, toluene, and TPHs (Terra Vac and Floyd & Snider 2001b).

Tables 8 and 9 summarize the chemical concentrations detected above screening levels in soil and groundwater samples, respectively. Additional information regarding this environmental investigation is included in Appendix F.

5.2.4 Potential for Sediment Recontamination

Soil and groundwater contamination have been documented at the Whitehead Company/Former Tyee Industries property. Available indicate that VOCs, pentachlorophenol, and petroleum hydrocarbons are present at this property above MTCA cleanup levels and soil-to-sediment or groundwater-to-sediment screening levels.

Potential Pathways to RM 2.3-2.8 Sediments

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Stormwater from this facility is conveyed to Slip 3, which is north of RM 2.3-2.8 East. Therefore, this property does not represent a potential source of sediment recontamination to the RM 2.3-2.8 East source control area.

<u>Soil and Groundwater</u>

Groundwater beneath this property is contaminated with VOCs and other chemicals. Based on previous environmental investigations, groundwater flow direction in this area is towards the S.

Myrtle Street Embayment and the LDW. VOCs have also been detected in seep water samples collected at the S. Myrtle Street Embayment. Contaminated groundwater from this facility may be an ongoing source of sediment recontamination to RM 2.3-2.8 East sediments.

Seattle Iron & Metals leases the parcel from the Whitehead Company for employee parking. Based on a parcel reconnaissance visit in January 2008, the parcel appears to be unpaved. Small leaks from vehicles in the lot may infiltrate the unpaved surface of the lot and percolate into the deeper soil and could further contribute to groundwater contamination.

5.2.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Whitehead Company/Former Tyee Industries property is listed below. Data gaps associated with the stormwater pathway were identified in E&E's Draft Slip 3 Data Gaps report. The data gaps listed below apply to the RM 2.3-2.8 East source control area since groundwater from this facility flows towards the S. Myrtle Street Embayment.

Groundwater Discharge

- Recent aerial photos indicate that the site may be used for activities other than Seattle Iron & Metals employee parking. A property inspection is needed to determine current use of the property.
- Additional soil and groundwater data are needed to determine the current levels of contamination in soil and groundwater beneath and downgradient of the property.

5.3 Whitehead Company, Inc./Former Perkins Lot

Facility Summary: Whitehead Company, Inc./Former Perkins Lot	
Address	719 S. Myrtle Street 711 S. Myrtle Street 700 S. Orchard Street 745 S. Myrtle Street
Tax Parcel No.	2136200525
Property Owner	Whitehead Company, Inc.
Parcel Size	2.78 acres (121,097 sq. ft.)
Facility/Site ID	56476471 (Commercial Welding & Fabrication) 43114188 (Perkins Lot) 65495133 (Royal Line Cabinet Company) 29782814 (American Dry Ice Corporation)
SIC Code	3441: Fabricated Structural Metal 3443: Fabricated Plate Work (Boiler Shops) 3449: Miscellaneous Structural Metal Work 484: Truck Transportation 4214: Local Trucking with Storage 2435: Hardwood Veneer and Plywood 2813: Industrial Gases

Facility Summary: Whitehead Company, Inc./Former Perkins Lot	
EPA ID No.	WAD988484556 (Commercial Welding & Fabrication; inactive) WAD099039489 (Royal Line Cabinet Company; inactive) CRK000039150 (American Dry Ice Corp.; inactive)
NPDES Permit No.	None
UST/LUST ID No.	522 (Nelson Trucking and Perkins Lot)

Parcel 2136200525 is located at 719 S. Myrtle Street in an industrial area of Seattle (Figure 4). The parcel is bordered by the Seattle Iron & Metals employee parking lot and S. Myrtle Street to the north, Nelson Trucking and 8th Avenue S. to the east, Trim Systems/CVG Commercial Vehicle Group, the smaller of the two Frye parcels, and S. Orchard Street to the south, and Seattle Iron & Metals and 7th Avenue S. to the west.

The 2.78-acre parcel is owned by Whitehead Company, Inc. According to King County Tax Assessor Records, the property name is Nelson Trucking.

There are five buildings on the property:

- A 9,000-sq. ft. industrial light manufacturing building, constructed in 1940,
- A 25,190-sq. ft. industrial light manufacturing building constructed in 1936,
- A 6,000-sq. ft. warehouse built in 1967,
- A 5,064-sq. ft. warehouse and office built in 1981, and
- A 3,888-sq. ft. office building constructed in 1951.

Nelson Trucking is listed as the property owner in some Ecology records. According to the UST list, there were three USTs at this property, which were registered to Nelson Trucking Company/Leaseway Corporation. The USTs have been removed. The UST ID numbers are 7855, 7917, and 7946; UST 7855 was used to store used oil. The Ecology Facility/Site ID is 43114188 and the UST site ID is 522.

5.3.1 Current Operations

The approximate locations of each facility currently operating at this parcel are shown on Figure 13.

Commercial Welding and Fabrication operates at 711 S. Myrtle Street. The following information regarding Commercial Welding and Fabrication was gathered from EPA and Ecology databases:

- EPA ID WAD988484556 (inactive),
- Ecology Facility/Site ID 56476471,
- SIC Codes: 3441 (Fabricated Structural Metal), 3443 (Fabricated Plate Work - Boiler Shops) and 3449 (Miscellaneous Structural Metal Work),
- NAICS Code: 3323312 (Fabricated Structural Metal Manufacturing).

No additional information regarding this facility was available in the files reviewed by SAIC.

Caffe D'Arte Roasting Plant currently operates at 719 S. Myrtle Street. Caffe D'Arte began operations in 1985. Caffe D'Arte coffee blends are roasted in small wood fired roasters and gas fired roasters.[19] The primary SIC and NAICS descriptions for Caffe D'Arte are Roasted Coffee and Coffee and Tea Manufacturing, respectively. No additional information regarding this facility was available in the files reviewed by SAIC.

Taxi King Auto Wrecking currently operates at 720 S. Orchard Street. According to Ecology's Perkins Lot file, this is the same address as 719 S. Myrtle Street. Taxi King Auto Wrecking apparently subleased a portion of its facility to Sam Perkins (see Section 5.3.2 and Figure 13). The facility is a salvage yard primarily for police cars and taxis (SPU 2005b). Car parts including doors, tires, steering wheels and other parts are removed from the cars and sold.

A stormwater pollution prevention inspection was conducted by SPU on November 14, 2005 (SPU 2005b). At that time, the facility generated waste antifreeze, batteries, and oils. The inspector noted that the shop was fairly clean, however a sheen was observed in front of the building. There are no catch basins located on this property; stormwater flows to a catch basin at the end of S. Orchard Street. A fenced-in dirt yard (leased to Sam Perkins, see Section 5.3.2 below) was located next to this facility. The facility was requested to prepare a written spill prevention and cleanup plan, post it at appropriate locations, obtain spill containment and cleanup materials, and educate employees about the spill plan and containment/cleanup materials (SPU 2005c). A re-inspection conducted on December 20, 2005 indicated that the spill plan had been prepared and posted, and the facility was judged to be in compliance (SPU 2005f, 2005g).

United Rentals Trench Safety currently operates at 7135 8th Avenue S. Nelson Trucking formerly occupied this portion of the Whitehead parcel (Seattle Fire Department 1990, 1991).

In November 1991, one 12,000-gallon diesel UST was removed from the Whitehead parcel at the 7135 8th Avenue S. address. Three soil samples were collected from the UST excavation and submitted for laboratory analysis; diesel-range hydrocarbons were reported in one sample at a concentration below MTCA Method A cleanup levels (Seattle Fire Department 1990, 1991; Laucks 1991). This is one of the three USTs assigned to Nelson Trucking under UST ID 522.

5.3.2 Historical Operations

The **Former Perkins Lot** is an area of the Whitehead parcel immediately east of Taxi King Auto Wrecking. It is called the Perkins Lot because a Mr. Sam Perkins used the area to store, dismantle, and repair automobiles. Based on information in the files reviewed by SAIC, it appears that Mr. Perkins was not authorized to perform these activities and that Ecology assigned the 719 S. Myrtle Street address to this area of the property.

The following information regarding the former Perkins Lot was collected from Ecology databases:

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[19]Coffee Universe website: http://coffeeuniverse.com/expo/coffee-roasters.

- Ecology Facility/Site ID 43114188
- SIC Codes: 484 (Truck Transportation), 4214 (Local Trucking with Storage)
- ERTS ID 550992

In November 1990, one 8,000-gallon diesel UST and one used-oil UST (size unknown) were removed from the Whitehead Parcel at the 719 S. Myrtle Street address. According to the Seattle Fire Department's records, the USTs were not replaced and no soil contamination was found in the excavated area (Seattle Fire Department 1990, 1991). These are two of the three USTs assigned to Nelson Trucking under UST site ID 522.

A stormwater pollution prevention inspection was conducted by SPU on November 14, 2005 (SPU 2005a). The fenced-in dirt and gravel lot that makes up this site has no direct discharge to a catch basin, however surface flow was observed to catch basins along the adjacent street. At the time of the inspection, about 20 cars were stored on the lot. Evidence of spills, drips, and leaking vehicles was observed. The facility was requested to prepare a written spill prevention and cleanup plan, obtain spill containment and cleanup materials, and properly capture and dispose of fluids drained or dripping from vehicles (SPU 2005d).

In December 2005, Ecology staff visited the site and were told that Mr. Perkins had been evicted from the property, and that the lot would be cleaned by December 9, 2005 (Szelag 2005). Several vehicles, lead acid batteries, and two unlabeled 55-gallon drums had been removed from the property, however several tire piles and propane tanks were still onsite.

On January 31, 2006, SPU re-inspected the facility (SPU 2006a); several trucks were parked in the planting strip and other materials were still present at the site. Ecology had received a complaint about an oil sheen running down the street in this area. SPU informed Mr. Perkins that he is not allowed to park vehicles on the planting strip in front of Taxi King because he is no longer leasing space. He was informed that drip pans should be placed under leaking vehicles, and that the vehicles should be removed. No information was available to determine whether these actions were completed.

In February 2006, the former Perkins Lot was listed on Ecology's CSCSL due to the presence of petroleum soil staining on the property. Three soil samples were collected at the lot in April 2006 by Seattle-King County Department of Public Health (SKCDPH); analytical results indicated the presence of diesel- and heavy oil-range hydrocarbons and lead at concentrations below MTCA Method A cleanup levels. The SHA prepared by SKCDPH notes that little surface water leaves the lot. SKCDPH recommended "No Further Action" for the former Perkins Lot (SKCDPH 2006a).

In September 2007, Ecology received a complaint of an "oil and grease mess" from auto-wrecking operations and possible soil contamination at the former Perkins Lot. Ecology notified the property owners, the Whitehead family (Ecology 2007c). Additional information regarding the former Perkins Lot is included as Appendix G.

Files reviewed by SAIC indicate that the following businesses have operated at the Whitehead Company parcel; however, the period of operations was not identified.

Royal Line Cabinet Company (Royal Line) operates or has previously operated on, the Whitehead Company, Inc./Former Perkins Lot parcel using the address 700 S. Orchard Street.

The following information was collected from Ecology's Facility/Site database:

- Ecology Facility/Site ID: 65495133
- SIC Code: 2435 Hardwood Veneer and plywood
- NAICS Code: 321211 Hardwood veneer and plywood manufacturing

In April 1991, Royal Line revised its Notification of Dangerous Waste Activities status with Ecology. Royal Line estimated that it would generate approximately 25 pounds waste lacquer wash thinner annually (Royal Line Cabinet Company 1991). In April 1996, Ecology attempted to conduct a site visit to provide business assistance to 1993 delinquent dangerous waste activity reporters. No one from Royal Line was present at the site. Ecology later spoke to the site contact person and sent the forms required to withdraw the facility's RCRA ID (Ecology 1996c). No additional information regarding this facility was found in the files reviewed by SAIC.

American Dry Ice Corporation, Repair Division operates or has previously operated on, the Whitehead Company, Inc./Former Perkins Lot parcel using the address 745 S. Myrtle Street.

The following information was collected from Ecology's Facility/Site database:

- Ecology Facility/Site ID 29782814,
- SIC Code: 2813 (Industrial Gases).

Bigley's hand-made furniture facility opposed the Seattle Iron & Metals move to S. Myrtle Street because it involved widening the road, which eliminated Bigley's parking (Ecology 1998c). No additional information regarding this facility was found in the files reviewed by SAIC.

5.3.3 Environmental Investigations and Cleanups

Except for the UST removal activities noted in Sections 5.3 and 5.3.2, no other records of environmental investigations or cleanups for the Whitehead Company, Inc./Former Perkins Lot parcel were found in the files reviewed by SAIC. Chromium was detected above the MTCA Cleanup Level in soil (Table 10).

5.3.4 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Based on information from SPU, stormwater from this property discharges to the city of Seattle storm drain outfall located at the S. Myrtle Street Embayment. Spills that may occur at the property could enter the onsite storm drain system and be discharged to the LDW through this outfall.

Soil and Groundwater

Soil samples collected at this parcel following UST removal activities indicate that the soil is not contaminated. Based on SAIC's file review, it is not known if groundwater beneath this facility is contaminated. A SHA was prepared and no further action was recommended by SKCDPH. Therefore, the potential for sediment recontamination due to groundwater transport is considered low.

5.3.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Whitehead Company/Former Perkins Lot property is listed below.

Stormwater Discharge

- Little information regarding the operations of the businesses currently occupying the property was available. Facility inspections should be completed to determine if any of the activities at these facilities require an NPDES permit, and if required, to ensure compliance with permit requirements and stormwater BMPs to prevent release of contaminants to the LDW.
- Facility plans for each business showing the locations of all catch basins and storm drains should be generated and made available.
- A list of previous tenants is needed to determine if operations at the property could have resulted in soil and groundwater contamination.

5.4 Trim Systems

Facility Summary: Trim Systems	
Address	701 S. Orchard Street
Tax Parcel No.	2136200380
Property Owner	Tempress, Inc.
Parcel Size	2.45 acres (106,722 sq. ft.)
Facility/Site ID	93184477
SIC Code	544: Species Dies and Tools 3089: Plastic Products 3079, 3949: Sporting and Athletic Goods
EPA ID No.	WAD004906376
NPDES Permit No.	None
UST/LUST ID No.	None

Trim Systems (Parcel 2136200380) is located at 701 S. Orchard Street in an industrial area of Seattle (Figure 4). The parcel is bordered by the Whitehead Company, Inc./Former Perkins Lot parcel and S. Orchard Street to the north, the smaller of the two Frye parcels to the east, S. Garden Street and Pioneer Distribution to the south, and Seattle Iron & Metals to the west.

The parcel taxpayer is Tempress Inc. (Tempress). Tempress purchased the parcel from Manson Construction and Engineering in August 1986. The property name is Trim Systems. There are five buildings on the 2.45-acre parcel. These include:

- A 131,400-sq. ft. office and factory built in 1933,
- A 2,160-sq. ft. industrial light manufacturing shop built in 1975,
- A 3,072-sq. ft. storage warehouse/shed built in 1975,
- A 720-sq. ft. materials storage shed built in 1980, and
- A 768-sq. ft. materials storage shed built in 1975.

5.4.1 Current Operations

Trim Systems/CVG Commercial Vehicle Group/Tempress began operations in Ballard in 1967 under the name Ace Tool & Die. The facility moved operations to South Park in 1970 and to 701 S. Orchard Street in 1974 (Kleinfelder 1988). Tempress/Trim Systems has been at this location for 36 years; Tempress was acquired by Trim Systems in October 1998. Trim Systems is an Interior Systems Division of CVG Commercial Vehicle Group. Based on files reviewed by SAIC, it appears that Trim Systems was acquired by CVG sometime after October 1998.

Trim Systems currently operates at 701 S. Orchard Street. The following information regarding Trim Systems was collected from EPA and Ecology databases:

- EPA ID: WAD004906376,
- Ecology Facility/Site ID: 93184477,
- SIC Codes: 3544 (Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds), 3089 (Plastics Products), 3079, 3949 (Sporting and Athletic Goods).
- NAICS Codes: 326199 (Plastics Product Manufacturing), 333514 (Special Die and Tool, Die Set, Jig and Fixture Manufacturing), 33992 (Sporting and Athletic Goods Manufacturing)

Tempress operated using SIC Codes: 3544, 3949, 3079 (Tempress 1988b).

Trim Systems is closing the Seattle facility. The company's operations have recently moved to North Carolina, and Vancouver and Kent, Washington.

<u>Materials Used in Operations</u>

Trim Systems designs, engineers, manufactures, and delivers interior soft trim and hard trim products for the trucking industry. Electronic and electrical distribution systems from its wire harness business are also incorporated into the trim products. Soft trim products are produced using 2D, dielectric, and cut-and-sew processes. Hard trim products are manufactured using rotary thermoforming, injection molding, vacuum forming, six axis router cutting, reinforced vinyl clad RIM, and 3D compression molding processes.[20]

[20] CVG Commercial Vehicle Group website: http://www.cvgrp.com/trim.aspx?terms=&searchtype=1&fragment=True

Tempress manufactured car dashboard parts for trucking and fishing industries (Ecology 1998d). Parts were made of molded polyurethane resins. Mineral spirits and silicone were sprayed into molds for easy removal of cured resin. Methylene chloride was used to clean resin line after molds were poured. The primary materials used in production were solid styrene shot, urethanes, isocyanates, mold release wax with 20% methylene chloride, machine cleaning/flushing off-specification products made of dimethyldiisocyanate (MDI) and poly-ol, and paint line purging solvents (Ecology 1998f, 1988b).

Wastes Generated and Waste Handling

Historically, Tempress was classified as a small-quantity hazardous waste generator. Tempress's waste streams included: methylene chloride purge, n-methyl-pyrrolidone, fluorescent tubes (Ecology 1998f), paper towels contaminated with solvent mixture, methylene chloride waste and sludge, organic solvent, methylene chloride mixtures, mineral spirits and silicone mixture, MDI, propylene glycol, floor dry, and safety clothes. Tempress estimated 10,000 pounds of waste generated per month (Tempress 1988b).

Kleinfelder identified areas of improper dangerous and hazardous waste handling and made recommendations to Tempress to correct the deficiencies cited by Ecology (see Regulatory History) (Ecology 1988b, Kleinfelder 1988).

In September 1989, Tempress received SKCDPH's approval to dispose of approximately 7 tons per day of waste in Cedar Hills Landfill (SKCDPH 1989). The only permitted wastes were:

- Packing waste, scrap plastic,
- Empty containers,
- Scrap wood and sawdust,
- Maintenance refuse,
- Quick sorb (traction promoter),
- Reacted polyurethane foam,
- Sand and abrasives,
- Gel pack ice,
- Grinding dust,
- Scrap Vinyl,
- Expanded polystyrene, and
- Scrap paper.

Currently, Trim Systems transfers wastes to offsite locations for treatment and disposal. From 1987 to 2005, over 133,000 pounds of dichloromethane was disposed of at various private treatment facilities. From 1987 to 1994 over 30,000 pounds of methylenebis (phenylisocyanate) were transferred to Burlington Environmental and Chempro.

Trim Systems has sold surplus urethane raw materials including poly-ol and isocyanates to Chemstar Urethanes, Inc. (Chemstar) for reuse and repackaging into new urethane products. The surplus would otherwise be sent to a landfill for disposal (Chemstar 1999).

Known Releases

The following releases from Trim Systems were reported on EPA's Toxics Release Inventory (TRI) database:

- 1,995 pounds of dichloromethane were released to the environment in 2005.
- Less than 500 pounds of ethylene glycol were released annually from 1987 to 2005.
- Air Emissions: Over 420,000 pounds from 1987 to 2005; approximately 4,850 pounds released in 2005 (last year reported). Chemicals released were dichloromethane (all years reported), diisocyanates (1995), methylenebis (phenylisocyanate) 1987 to 1994, trichlorofluoromethane (1987 to 1995).

In 1988, Ecology found that Tempress was illegally venting methylene chloride to the atmosphere (Ecology 1988b).

Regulatory History

On August 25, 1983, Tempress submitted a Notification of Dangerous Waste Activities form indicating that it was a generator of aged MDI, a dangerous waste (Tempress 1983). Ecology assigned EPA/State ID No. WAD004906376 to Tempress in September 1983 (Ecology 1983).

Ecology conducted a RCRA Compliance Inspection at the facility in April 1988 and in July 1988 Ecology issued a warning letter to Tempress along with a copy of its inspection report (Ecology 1988b). In November 1988, Tempress was cited and fined by Ecology for the following hazardous waste handling deficiencies:

- Illegal land disposal of hazardous waste,
- No labeling or dating of hazardous waste containers,
- No hazardous waste personnel training plans,
- No hazardous waste preparedness and prevention plan,
- No contingency plan,
- Inadequate management of containers,
- No weekly inspection reports for hazardous waste containers, and
- No secondary containment for hazardous waste containers (Ecology 1988a, 1988c).

As of August 1989, Tempress was taking "extraordinary efforts" to alter its manufacturing processes to eliminate hazardous waste generation (Ecology 1989).

Ecology inspected Tempress on November 3, 1998, following its acquisition on October 29, 1998 by Trim Systems. The purpose of the inspection was to determine Tempress' level of compliance with the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC). Tempress was renamed Trim Systems after the acquisition. Tempress was working on removing methylene chloride from its processes by January 1, 1999 (Ecology 1998d, 1998e, 1998f).

Ecology inspected Trim Systems on March 27, 2008. Most manufacturing equipment had been removed though some manufacturing continued on the second floor. Trim Systems planned to remove all equipment from the building by the end of March 2008. No hazardous waste violations were found at the facility; however, Ecology recommended that Trim systems appropriately label and keep tightly closed all accumulated wastes awaiting designation (i.e., hazardous or non-hazardous) (Ecology, 2008d).

5.4.2 Historical Operations

Manson Construction previously operated at this parcel. Manson Construction's activities included material and equipment storage, cargo marshaling, packing, shop and storage buildings, and vessel moorage (City of Seattle 1984).

Based on shoreline development permits reviewed by SAIC, Manson Construction may have constructed a new wharf in the southern portion of the S. Myrtle Street Embayment in the mid 1980s (City of Seattle 1984, Manson Construction 1984); however, aerial photographs from 1980, 1985, and 1990 do not show any major differences in the shoreline of the embayment (Appendix B).

Northwest Container Services, Inc. (Northwest Container) previously operated at 600 S. Garden Street. The company currently operates at 110 W. Marginal Way SW (Terminal 115) and 635 S. Edmunds, Seattle.

The following information regarding Northwest Container for the 600 S. Garden Street facility was collected from EPA and Ecology databases:

- EPA ID WAD988517744 (compliant from 1st Quarter 05 through 4th Quarter 07, inactive according to Ecology),
- EPA ID WAD008957961 (inactive),
- Ecology Facility/Site ID 4524834,
- SIC Codes: 3799 (Transportation Equipment), 4491 (Marine Cargo Handling).

According to EPA's Envirofacts Warehouse, the facility had an NPDES Stormwater Permit; however a permit number was not located in the files reviewed by SAIC.

Following a traffic accident on May 23, 1997, approximately 30 to 40 gallons of diesel fuel spilled at the corner of E. Marginal Way S. and Brighton Street. Northwest Container recovered approximately 15 to 20 gallons of fuel with absorbent pads. The spill area was approximately 6 feet by 5 feet in size. On May 29, 1997, Northwest Container's consultant removed approximately 10 tons of contaminated soil and transported it to Holnam/Evergreen Inc. for treatment. The excavated area measured approximately 10 feet by 7 feet by 5 feet deep. Soils were removed until no visible stains or odors were present (Ecology 1997b, Foss 1997). No fuel was discharged to a nearby storm drain (Ecology 1997a). It should be noted that this accident and cleanup occurred in the RM 2.0-2.3 East source control area, to the north of the RM 2.3-2.8 East source control area.

In March 1992, **Northland Services, Inc.** filed a Notification of Dangerous Waste Activities form with Ecology. The form indicates that Northland was operating as a generator and transporter of dangerous waste. The EPA Site ID is listed as WAD981773005. The address for these activities is listed as 600 S. Garden Street, which indicates that Northland was operating at this parcel (Northland 1992).

Files reviewed by SAIC indicate that the following businesses have also operated at the Trim Systems parcel; however, the period of operations was not identified. The information listed for each business is the only information available in the files reviewed by SAIC.

- **Orchard Street Drums**

  701 S Orchard Street
  EPA ID WAD988474557 (inactive)

- **AT&T Wireless Tempress**

  701 S. Orchard Street
  Ecology Facility/Site ID 6254510
  SIC Code: 4812 (RadioTelephone Communications)

- **Coastal Alaska Marine Lines**

  745 S Orchard Street
  EPA ID WAD980834527 (inactive)
  Ecology Facility/Site ID 67744521
  NAICS Code: 483113 (Coastal and Great Lakes Freight Transportation)

5.4.3 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups for the Trim Systems parcel were found in the files reviewed by SAIC.

5.4.4 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Manufacturing at this facility apparently took place indoors and all waste were reportedly transferred offsite for treatment and disposal. Presumably all spills that occurred as a part of the manufacturing process took place indoors and did not reach the storm drain or sewer system. One previous site tenant, Northwest Container Services, may have had an NPDES permit.

Spills that occur at uncovered areas of the property could enter the city of Seattle storm drain system and be discharged to the LDW through the storm drain outfall located at S. Garden Street, based on storm drain system maps obtained from SPU.

<u>Soil and Groundwater</u>

The potential for sediment recontamination via soil and groundwater pathways is unknown. Although Tempress was cited by Ecology for hazardous waste handling deficiencies in 1988, there is no information to indicate that spills at this property may have resulted in soil or groundwater contamination. The potential for sediment recontamination via groundwater transport is believed to be low.

5.4.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Trim Systems property is listed below.

Stormwater Discharge

- After a new tenant occupies this property, a business inspection is needed to ensure that operations at the facility are in compliance with applicable regulations and BMPs to prevent the release of contaminants to the LDW. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

5.5 Nitze-Stagen/Frye Parcels

Facility Summary: Nitze-Stagen/Frye Parcels	
Address	660 S. Othello Street 7101 8th Avenue S.
Tax Parcel No.	2136200695 and 2136200375
Property Owner	Nitze-Stagen & Company (taxpayer) Charles & Emma Frye Free Public Art Museum (owner)
Parcel Size	Parcel 2136200695: 3.54 acres (154,202 sq. ft.) Parcel 2136200375: 0.46 acre (20,038 sq. ft.)
Facility/Site ID	41689573 (Pacific Terminals Ltd.) 76518153 (Dinol US)
SIC Code	4321: Terminal Maintenance Facilities for Motor Freight Transportation 4225: General Warehousing and Storage 2869: Industrial Organic Chemicals
EPA ID No.	WAD988467700 (Pacific Terminals Ltd.; inactive) WAH000005264 (Dinol US; inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 0695 is located at 660 S. Othello Street in an industrial area of Seattle (Figure 4). The parcel is bordered by Trim Systems/CVG Commercial Vehicle Group, the smaller of the two Frye Parcels and S. Garden Street to the north, by Markey Machinery Company and 8th Avenue S. to the east, by Puget Sound Truck Lines and S. Othello Street to the south, and by Seattle Iron & Metals to the west.

The parcel is 3.54 acres in size with one building on the property, a 119,661-sq. ft. warehouse which was built in 1960. The parcel taxpayer is Nitze-Stagen & Co. Inc., a real estate investment firm. According to the Nitze-Stagen & Co., Inc. website, this property is called the Frye Distribution Center and two warehouse bays are vacant.[21]

Pioneer Human Services purchased the property from the Othello Street Warehouse Corporation in October 1998 and sold it to Charles & Emma Frye Free Public Art Museum in November 2004.

Parcel No. 0375, which is adjacent to parcel 0380 (Trim Systems), has the same owner/taxpayer history as parcel 0695. The 0.46-acre parcel is vacant. Tax assessor records indicate it is used as a storage yard. The address for this parcel is 7101 8th Avenue S. The parcel is bordered by the Whitehead parcel and S. Orchard Street to the north, the former Sternoff parcel and 8th Avenue S. to the east, Pioneer Distribution (larger Frye parcel) and S. Garden Street to the south, and by Trim Systems to the west.

5.5.1 Current Operations

As of January 2008, building signage is for **Pioneer Distribution**. No information regarding Pioneer Distribution was found in the files reviewed by SAIC.

5.5.2 Historical Operations

Pacific Terminals Ltd. previously operated the warehouse at this parcel. In June 1989, Pacific Terminals was given EPA ID No. WAD988467700 as a generator of hazardous waste. In October 1989 this number was cancelled. The following information for Pacific Terminals was collected from Ecology's Facility/Site Database:

- Ecology Facility/Site ID 41689573,
- SIC Codes: 4231 (Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation), 4225 (General Warehousing and Storage),
- NAICS Code: 48849 Other Support Activities for Road Transportation.

Pacific Terminals is currently located between Port of Seattle Terminals 5 and 18. No additional information regarding Pacific Terminals was available in the files reviewed by SAIC.

Dinol US previously operated at 650 S. Othello Street. Dinol US produces products for the aerospace and automotive aftermarket industries and general industry. Aerospace products include corrosion inhibiting compounds for prolonging the life of commercial, military, and private aircraft. Automotive aftermarket products include car care, body repair products, and bonding products for auto glass replacement and for the manufacturing of buses and trucks. Industrial products include Dinitrol rust preventative waxes, paint primers, lacquers and corrosion preventative fluids.[22]

The following information regarding Dinol US was collected from EPA and Ecology databases:

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[21] Nitze-Stagen website: http://www.officespace.com/BldSpc.cfm?BuildingID=1359571751&OSOFmt=Nitze-Stagen

[22] Dinol US website: http://www.tuffkote.co.kr/tuffkote/dinolus/products1.htm and Glass on Web website: http://www.glassonweb.com/directory/details.php?id=1626&page=products

- Ecology Facility/Site ID 76518153
- EPA ID WAH000005264 (inactive),
- SIC Code: 2869 (Industrial Organic Chemicals)
- NAICS Code: 325199 (Basic Organic Chemical Manufacturing)

5.5.3 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups for the Nitze-Stagen parcels were found in the files reviewed by SAIC.

5.5.4 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

Stormwater

Based on sewer line maps obtained from SPU, spills that may occur at uncovered areas of the larger parcel could enter the city of Seattle storm drain system and be discharged to the LDW through the Puget Sound Truck Lines Outfall No. 2046 located at S. Othello Street. Spills that may occur at the smaller Frye parcel may enter the city storm drain system and be discharged to the RM 2.3-2.8 East via the S. Garden Street outfall.

Soil and Groundwater

The potential for sediment recontamination via soil and groundwater pathways is unknown. No information was found that would indicate that soil or groundwater contamination is present at this property. Therefore, the potential for sediment recontamination via groundwater transport is believed to be low.

5.5.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Nitze-Stagen/Frye parcels is listed below.

Stormwater Discharge

- A business inspection is needed at this property to ensure that operations at the Pioneer Distribution facility are in compliance with applicable regulations and BMPs to prevent the release of contaminants to the LDW. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

5.6 Nelson Trucking

Facility Summary: Nelson Trucking	
Address	7130 8th Avenue S.
Tax Parcel No.	2136200035
Property Owner	Reliable Transportation and Storage
Parcel Size	0.32 acre (13,939 sq. ft.)
Facility/Site ID	66879333
SIC Code	9999: Nonclassifiable Establishment
EPA ID No.	WAD981765779 (inactive) WAD150089787 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Nelson Trucking (Parcel 0035) is located at 7123 East Marginal Way S. in an industrial area of Seattle (Figure 2). The 0.32-acre parcel is triangularly shaped and is bordered by El Gallo d'Oro Restaurant and S. Myrtle Street to the north, East Marginal Way S. to the east, the former Sternoff parcel to the south, and the Whitehead Company, Inc./Former Perkins Lot parcel and 8th Avenue S. to the west. The taxpayer is Reliable Transportation and Storage. A 7,678-sq. ft. service garage, built in 1980, is the only building on the property.

Nelson Trucking currently occupies this parcel. The business address for the location is 7130 8th Avenue S. The following information was obtained using EPA and Ecology databases:

- EPA ID WAD981765779 (inactive), WAD150089787 (inactive)
- Ecology Facility/Site ID 66879333
- NAICS Code: 48411 (General Freight Trucking, Local)

According to their website, Nelson Trucking provides the following services[23]:

- Machinery Moving,
- Printing Equipment Experts,
- Rigging & Crane Service,
- Rigging Forklifts up to 80,000 lb. Capacity,
- Hydraulic Gantry for Heavy-Lift of up to 400 tons,
- Heavy Hauling (up to 12 axles) to 150,000 lbs.,
- Flatbed/Stepdeck/Double-Drop & Canopy trailers,
- Air-ride tractors for delicate/sensitive freight, and
- Crating Service.

No additional information regarding Nelson Trucking's operations at this property was available in the files reviewed by SAIC.

[23] Nelson Trucking website: http://www.nelsontrucking.com/

5.6.1 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups for the Nelson Trucking parcel were found in the files reviewed by SAIC.

5.6.2 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Based on storm drain system maps obtained from SPU, stormwater from this facility does not drain to RM 2.3-2.8 East. Spills that may occur at the outdoor areas of this property and stormwater are likely conveyed to the combined sewer line at East Marginal Way S. Therefore, there is little potential for contaminants to be transported to RM 2.3-2.8 East sediments via stormwater.

<u>Soil and Groundwater</u>

The potential for sediment recontamination via soil and groundwater pathways is unknown. No information was found that would indicate that soil or groundwater contamination is present at this property. Therefore, the potential for sediment recontamination via groundwater transport is believed to be low.

5.6.3 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Nelson Trucking property is listed below.

Stormwater Discharge

- A business inspection should be conducted at this property to confirm that stormwater does not drain to RM 2.3-2.8 East, and to ensure that operations at the Nelson Trucking facility are in compliance with applicable regulations and BMPs. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

5.7 Former Sternoff Parcel

Facility Summary: Former Sternoff Parcel	
Address	7201 East Marginal Way S.
Tax Parcel No.	2136200075
Property Owner	Ellis Garage, LLC
Parcel Size	1.85 acre (80,586 sq. ft.)
Facility/Site ID	2057
SIC Code	33: Primary Metal Industries

Facility Summary: Former Sternoff Parcel	
EPA ID No.	WAH000023432 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

The former Sternoff Parcel (No. 0075) is located at 7201 East Marginal Way S. in an industrial area of Seattle (Figure 4). The parcel is bordered to the north by Nelson Trucking, to the east by East Marginal Way S., to the south by Markey Machinery Company, Crowley Parcel F, and S. Garden Street, and to the north by the smaller Frye parcel and 8th Avenue S.

The parcel is currently owned by Ellis Garage, LLC. The parcel was vacant farmland until it was purchased by the Sternoff family in the early 1940s. The parcel was sold to Robert Goodstein in the 1980s. Dennis and Patricia McLeod bought the property from Robert Goodstein in July 1998. Then in June 2004, the parcel was purchased by Noble Homes LLC and sold to Ellis Garage LLC on the same day.

According to tax records, the parcel is 1.85 acres in size and there are no permanent structures on the property. However, previous environmental investigations describe the presence of asbestos-containing materials in the facility's aluminum smelter office, locker rooms, and office buildings. Additionally in the 1995 aerial photograph, at least two buildings are present on the property (Appendix B).

Depth to groundwater is approximately 10 to 11 feet bgs and groundwater flows both westerly towards the LDW and southerly to Slip 4, and may be tidally influenced (Terra Associates [Terra] 1987, SEACOR 1991)

The parcel is listed on the CSCSL under the name Sternoff Metals. Contamination of soil and groundwater have been confirmed by Ecology and contamination of surface water is suspected. COCs include priority pollutant metals, PCBs, and petroleum products (in groundwater only). The Ecology Facility/Site ID is 2057.

5.7.1 Current Operations

CDL Recycle is a receiver and processor of construction, demolition, and land-clearing debris (CDL). CDL Recycle receives co-mingled loads of recyclable waste materials from construction projects and sorts those loads into re-usable and recyclable commodities. CDL Recycle's Material Recovery Facility is a full scale facility capable of processing up to 60,000 tons of fully co-mingled CDL material per year. CDL Recycle recovers wood, metals, old corrugated cardboard, plastics, carpeting, soil mix, concrete and aggregates.[24]

No additional information regarding CDL Recycle was available in the files reviewed by SAIC.

[24] CDL Recycle website: http://www.cdlrecycle.com/

5.7.2 Historical Operations

Sternoff Metals Corporation/Remedco. The Sternoff family manufactured trailers for logging trucks and operated a metal salvage yard at the property. Except for areas covered by buildings, the site was unpaved until the 1970s (SEACOR 1991).

The scrap metal salvage yard operated at the property for 45 years until approximately 1986. Until the 1970s, the facility received electrical transformers and capacitors which were sometimes filled with oils potentially containing PCBs (Terra 1987, SEACOR 1991). The salvage yard's facilities included an aluminum smelter (SEACOR 1991), an auto crusher near 8th Avenue S. (Ecology 1987d), and a nonferrous metal building in the northwest portion of the property.

Scrap metal was crushed, cut and bailed using hydraulic equipment. The primary sources of the scrap metal were automobiles and the airline manufacturing industry. Several thousand automobile batteries were reportedly stored between the aluminum smelter and warehouse buildings. A portable furnace powered by diesel and transformer oil was used to melt aluminum prior to the installation of the aluminum smelter in the 1970s. Iron and other ferrous metals were stored in the southeastern portion of the property (SEACOR 1991).

The nonferrous metal building was used to sort brass and copper. A natural gas-powered incinerator was used to melt insulation from copper wiring and the resulting ash was sold for additional reclamation processing due to the high metal content of the ash. This activity began in the late 1960s and continued intermittently until the 1980s (SEACOR 1991).

In the early 1980s a tenant used the property for equipment storage and metal storage container fabrication. The tenant's manufacturing process including painting, and xylenes were stored near the painting area (SEACOR 1991). In the 1990s, the Sternoff family leased the property to Nelson Trucking for truck and container storage. Nelson Trucking leased the site for dead storage of trucks and containers.

Nelson left the property in the mid 1990s. Ecology records indicate that Darrin Pickering of the Pickering Farms family occupied the property as early as February 1996. Mr. Pickering operated Remedco, a thermal treatment company. Mr. Pickering allegedly had contracts with King County and the City of Seattle to treat petroleum contaminated soil (PCS) (Ecology 1996b). According to Ecology notes, Remedco had applied for permits to treat soil at the facility but was unable to obtain an air quality permit to treat the soil. During a site inspection, the SKCDPH found that accumulated soils at the facility were contaminated with materials other than petroleum (e.g., metals, solvents, etc.). Remedco eventually went bankrupt and it is unclear whether the accumulated soils were ever treated or disposed of properly (Ecology 2005c).

Stormwater Discharges

A stormwater collection system was installed at the site in the early 1950s. The system consisted of seven catch basins draining to a sump located on 8th Avenue S. The sump pump was activated by a water level switch. The pump conveyed the water to the city storm drains discharging to METRO sewer (Ecology 1986c). As of the 1990s the pump had not been operational in "several years" and SEACOR reported that the system was filled with sediment and water, which resulted in water puddles forming on the property (SEACOR 1991).

Regulatory History

On September 3, 1980, Sternoff submitted a U.S. EPA Notification of Hazardous Waste Activity form indicating that Sternoff was a generator and transporter of non-federal toxic hazardous wastes (Sternoff 1980).

In 1981, Sternoff requested analysis of the Reverb furnace waste for Extraction Procedure (EP) toxic metallic contaminants. The laboratory analytical results indicated that the waste did not exceed the EP toxic metals limits (Clayton 1981).

Ecology performed an inspection on May 2, 1986, at the request of Terra Associates on behalf of their client, Merlino Construction. Merlino Construction desired to open a portable cement batch plant at the property and wanted to understand Ecology's concerns regarding the potential batch plant. Terra indicated the presence of PCBs over 75 parts per million (ppm) in the southern corner of the property (Ecology 1986c).

Ecology performed an inspection on May 13, 1986. The receiving water is the METRO sanitary sewer. The inspector noted the water treatment system consisted of a sump with an aging homemade oil-water separator (Ecology 1986e).

Water samples collected downstream from the facility in August 1986 contained concentrations of PCBs (Ecology 1986j, 1986l). Ecology collected a water sample from a facility sump in September 1986; PCBs were detected in the sample (Ecology 1987a). The sample consisted of the washwater from cleaning the sump and storm drains on the facility. Ecology notified Irving Sternoff that the water was considered extremely hazardous and required Sternoff to apply for a Hazardous Waste Transporter number (Ecology 1986k).

A revised Notification of Dangerous Waste Activities dated October 31, 1986, indicates that waste streams at Sternoff consist of miscellaneous metals and that Sternoff discontinued hazardous waste generator activities in February 1985 (Sternoff 1986).

In 1987, storm drain sediments were cleaned out, but no verification sampling was performed. Ecology determined that once verification sampling was complete, Sternoff could fill and close the system. It was assumed that the system discharged to the sanitary sewer since METRO was involved in defining the contamination in the system (Ecology 1987d). The Sternoff facility was referred to the EPA's Toxic Substance Control Act (TSCA) office in May 1987 (Ecology 1987c).

Auburn West Enterprises was a dump truck hauler. The company operated 19 to 20 trucks. Three buildings were present at the site, and a loading dock area had a catch basin. During a March 30, 2006 SPU and Ecology inspection, the loading area was full of water because the catch basin was not draining properly (SPU 2006b). SPU subsequently conducted a dye test and determined that the four catch basins at this property drain to the combined sewer system and therefore do not flow to RM 2.3-2.8 East. The following corrective actions were required as a result of the inspection (SPU 2006c):

- Clean catch basins in the center of the property;
- Complete a written spill prevention and cleanup plan and post at appropriate locations;
- Obtain spill containment and cleanup materials;
- Educate employees about the spill plan and spill containment/cleanup materials;
- Label containers appropriately;
- Store ground treatment chemicals in a covered area.

An August 2006 re-inspection indicated that actions had been completed and the facility was in compliance (SPU 2006d).

Commercial Renovators, LLC and **D and P McLeod, LLC** are other companies associated with the 7201 E Marginal Way S. address. D and P McLeod, LLC had a RCRA ID No. WAH000023432 (inactive). D and P McLeod, LLC owned the property prior to Ellis Garage, LLC (the current property owner).

5.7.3 Environmental Investigations and Cleanups

Several environmental investigations have been conducted at the former Sternoff parcel. Figures from these investigations (if available) are included as Appendix H. Tables 11, 12, and 13 list the chemicals present at concentrations above screening levels in soil, floor drain and storm drain solids, and groundwater samples, respectively.

Soil and Groundwater Sampling and Testing, Sternoff Metals Site (Terra 1987)

Terra performed an investigation for Bogle and Gates. Terra installed two groundwater monitoring wells and collected soil samples from four soil test holes. Soil samples were analyzed for PCBs and heavy metals. Terra also collected a sample from a trash pile to determine if it should be designated as hazardous waste. Terra had previously identified PCBs on the property in the spring of 1986. PCB concentrations in soil up to 75 mg/kg were detected, with the highest concentrations limited to the southwest corner of the property. PCB concentrations in groundwater were 2.57 µg/L. Metals concentrations in soil and groundwater were below the criteria for designation as dangerous waste. Terra recommended placement of an impermeable cap over the surface, installing a redesigned storm drainage system, and removing and disposing of the soil containing higher concentrations of PCBs from the southwest corner of the site. With regard to the trash pile, Terra recommended that it be cleaned up and treated as hazardous waste.

The 1986 investigation included excavation of 10 test pits. Analytical results showed that shallow soil samples contained relatively high concentrations of lead, cadmium, copper, and TPH; however, concentrations of these contaminants were significantly lower in deep samples indicating contaminants were not migrating vertically through the property.

Preliminary Results, Soil and Groundwater Investigation (SEACOR 1990)

SEACOR advanced nine soil borings and installed two groundwater monitoring wells at this property. Concentrations of metals, TPH, BTEX, PCBs, PAHs, and cyanides were detected in soil samples. SEACOR collected four floor drains samples and seven sediment samples; metals, PCBs, and TPH were detected in all samples (see Appendix H). Groundwater samples were collected from wells MW-1 through MW-3. Due to the presence of heavy oil free product in well MW-4, the well was not sampled. Low concentrations of metals and TPH were detected in the groundwater samples. PCBs were not detected in the groundwater samples. One water sample was collected from a sump; only TPH (at a low concentration) was detected in the sump sample (SEACOR 1990).

Feasibility Study Report (SEACOR 1991)

Sediment samples were collected from two storm drains by Ecology, seven storm drain samples by SEACOR, and the floor drain in the nonferrous scrap metal building. Approximately 70 cubic yards of material exceeded the MTCA Method A and/or C soil cleanups levels for copper, lead, mercury, PCBs, and TPH.

COCs in soil were identified as lead, mercury, PCBs, and TPH. MTCA Method A and/or C soil cleanup levels were exceeded for these chemicals in approximately 20,000 cubic yards of soil. The vertical extent of contamination was typically between 2.0 and 3.5 feet bgs; however, metals and TPH concentrations above MTCA levels were also encountered just above the water table, below 10 feet bgs. The lateral extent of contamination was not defined, but soil samples collected from central and southern portions of the property contained the highest concentrations of the chemicals of concern.

According to SEACOR, the soil contamination likely extended offsite into the 20-foot wide easement along S. Garden Street. The easement was owned by the city of Seattle and Sternoff stored salvaged automobile bodies in this area.

Groundwater samples from three monitoring wells on the property exceeded the EPA primary drinking water standard maximum contaminant level (MCL) for chromium. The sample from one well exceeded both the MCL and MTCA Method A cleanup level for lead. TPH concentrations in three wells exceeded MTCA Method A cleanup levels. Separate phase hydrocarbons were identified in wells MW-4 and MW-7.

Additionally SEACOR noted the presence of asbestos-containing materials in the aluminum smelter office, locker room, and office buildings at the property.

Groundwater Well Monitoring Report (Environmental Hazards Control, as cited in Ecology 1999c)

Groundwater was sampled by Environmental Hazards Control during April 1999. Two wells contained diesel and heavy oil range petroleum at concentrations of 1.3 milligrams per Liter (mg/L). One well, MW-4 contained 1,100 mg/L diesel; 5,500 mg heavy oil; and 18 µg/L PCBs (Aroclor-1254). Prior sampling in 1998 had found Aroclor-1260 at 760 µg/L and elevated levels of lead (570 µg/L).

Polychlorinated Biphenyls Contaminated Soils Report (Environmental Hazards Control, as cited in Ecology 1999c)

A pile of debris and soil known as the “trash pile” was sampled and found to contain 69 to 120 mg/kg PCBs. The property owner consulted with EPA and the trash pile and underlying soils were removed from the site on May 21, 1999. An estimated 52,187 pounds of soil was disposed at Waste Management in Arlington, Oregon. Sampling after removal showed soils at the sides and bottom of excavation still contained PCBs (9 to 77 mg/kg).

5.7.4 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

Stormwater

Stormwater at this property is conveyed to the King County combined sewer system. Stormwater runoff is therefore not considered to be a potential source of RM 2.3-2.8 East sediment recontamination.

Soil and Groundwater

Soil, groundwater, and sediment samples collected from this facility are contaminated with PCBs, PAHs, metals, and TPH at concentrations above soil-to-sediment and groundwater-to-sediment SLs (Tables 11 to 13). Historical groundwater investigations have shown that groundwater flow beneath the site has a westerly component and may discharge to the LDW. Sediment samples in the LDW downgradient from the former Sternoff parcel contained concentrations of PCBs above the SQS (Figure 3 and Table 1). Based on SAIC's review of the available files, the former metal salvage yard that operated at this property may be a source of PCBs and other COCs to the RM 2.3-2.8 East source control area. CDL Recycle's current operations likely do not contribute to the existing PCB contamination at this parcel.

5.7.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the Former Sternoff Parcel is listed below.

Groundwater Discharge

- No soil or groundwater samples have been collected at the property since at least 1999. Additional soil and groundwater data are needed to determine the potential for sediment recontamination via this pathway.
- Additional information on groundwater flow directions is needed to assess whether groundwater at this property may be transporting contaminants to RM 2.3-2.8 East.
- According to an Ecology memorandum summarizing a report prepared by Environmental Hazards Control, a PCB-contaminated "trash pile" and approximately 52,187 pounds of contaminated soil have been removed from the site; however, documents verifying Ecology's summary were not available for review.
- The disposition of PCS stockpiled at the property by Remedco is unknown.

5.8 Markey Machinery Company

Facility Summary: Markey Machinery Company	
Address	7266 8th Avenue S.
Tax Parcel No.	2136200210
Property Owner	Markey Machinery Company
Parcel Size	1.31 acre
Facility/Site ID	None
SIC Code	Unknown
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Markey Machinery (Parcel 0210) is located at 7266 8th Avenue S. in an industrial area of Seattle. The parcel is bordered by the former Sternoff parcel and S. Garden Street to the north, Crowley Parcel F to the east, Crowley Parcel D and S. Othello Street to the south, and Pioneer Distribution (larger Frye Parcel) and 8th Avenue S. to the west (Figure 4). The 1.31-acre parcel is owned by Markey Machinery Company. Two buildings are present on the property; both were built in 1941. The buildings are 12,000 sq. ft. and 8,000 sq. ft. in size. The buildings are identified as Plant 2 – Welding Shop and Plant 3 – Machine Shop.

Ecology inspected the facility on May 16, 1986. No floor drains were present in either shop except in restrooms. No water is used in the buildings except in restrooms and for fire suppression. Oil is stored in the buildings. Fuel for a forklift was stored in 80-gallon barrel on a metal frame. Markey planned fabricate a catch pan to place under the tank. Plant heating fuel is stored in USTs. Paint is stored in shed with large metal floor plan with a 4-inch lip (Ecology 1986f).

5.8.1 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups for the Markey Machinery parcel were found in the files reviewed by SAIC.

5.8.2 Potential for Sediment Recontamination

The potential for sediment recontamination associated with this property is summarized by transport pathway below.

<u>Stormwater</u>

Based on storm drain system maps obtained from SPU, stormwater from the Markey parcel is conveyed to the combined sewer line along East Marginal Way S. Therefore, stormwater does not represent a potential pathway for contaminants to RM 2.3-2.8 East sediments.

Soil and Groundwater

The potential for sediment recontamination via soil and groundwater pathways is unknown. However, no information was found that would indicate that soil or groundwater contamination is present at this property. Therefore, the potential for sediment recontamination via groundwater transport is believed to be low.

5.8.3 Data Gaps

No data gaps were identified for this property.

5.9 El Gallo D'Oro/James Dore

Facility Summary: El Gallo D'Oro/James Dore	
Address	7047 East Marginal Way S.
Tax Parcel No.	2734100260
Property Owner	James Dore Jr.
Parcel Size	0.27 acre
Facility/Site ID	None
SIC Code	Unknown
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

James Dore Jr. owns Parcel 0260. The parcel address is 7047 East Marginal Way S. The semi-triangular shaped parcel is bordered on the west by the Whitehead Company, Inc./Former Tyee Industries parcel, on the northeast and east by East Marginal Way S., and to the south by the Whitehead Company, Inc./Former Perkins Lot parcel and S. Myrtle Street. The parcel is 0.27 acre in size and there is one 5,676-sq. ft. building on the parcel.

Historically the building has been used as a nightclub, tavern, and restaurant. The current building occupant is El Gallo d'Oro Restaurant. According to SPU storm drain system maps, the stormwater from the property is discharged to the sanitary sewer. No additional information regarding this property was found in the files reviewed by SAIC.

5.9.1 Potential for Sediment Recontamination

Stormwater

Based on storm drain system maps obtained from SPU, stormwater from this parcel flows to the combined sewer system. Therefore, stormwater does not represent a potential pathway for contaminants to RM 2.3-2.8 East sediments.

Soil and Groundwater

The potential for sediment recontamination via soil and groundwater pathways is unknown. However, no information was found that would indicate that soil or groundwater contamination is present at this property. Therefore, the potential for sediment recontamination via groundwater transport is believed to be low.

5.9.2 Data Gaps

No data gaps were identified for this property.

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6.0 Summary of Data Gaps

Data gaps have been identified for outfalls, adjacent properties, and upland properties in Sections 3 through 5, respectively. These data gaps are summarized below, listed by potential sediment recontamination pathway.

6.1 Stormwater Discharge

Outfalls

- Data on contaminant concentrations in storm drain solids and stormwater near the S. Myrtle Street and S. Garden Street outfalls are needed to evaluate whether contaminants are being transported to RM 2.3-2.8 East sediments.
- If contaminants are present at concentrations of potential concern near these outfalls, then source tracing samples are needed to identify potential source(s) of contaminants.

Guimont Parcel

- A business inspection is needed at this property to ensure that operations at the Dawn facility are in compliance with applicable regulations and best management practices (BMPs) to prevent the release of contaminants to the LDW.
- If stormwater flows to the LDW, a facility plan showing the locations of catch basins and storm drains should be generated.

Seattle Boiler Works, Inc.

- A June 2007 stormwater compliance inspection noted several deficiencies. No follow-up inspections of this facility have been conducted. Operations at this facility should be monitored to ensure compliance with permit requirements and stormwater BMPs to prevent release of contaminants to the Duwamish.
- Six outfalls to the LDW are located on Seattle Boiler Works property, however only one outfall is identified in the facility's stormwater permit. Information on the sources of discharges (if any) to these outfalls is needed.
- Stormwater and stormwater solids samples are needed to assess the potential for transport of contaminants to the LDW via this pathway. In addition, a facility plan showing the locations of all catch basins and stormwater conveyance lines should be generated and made available, and a line tracing survey should be conducted at this facility.

Seattle Iron & Metals Corporation

- Ecology directed Seattle Iron & Metals to sample sludge material from the stormwater treatment system for metals in August 2006. No further information regarding this required sampling was found in the files. Additional data are needed to determine if the sludge should be handled as a hazardous waste and to determine if this sludge has the potential to reach the LDW.

- No information is available regarding any follow-up to the December 2007 stormwater compliance inspection.

Puget Sound Truck Lines

- A stormwater compliance inspection was last conducted in 2005. A follow-up inspection is needed to determine whether catch basins have been cleaned and housekeeping has been improved, and whether the facility is in compliance with discharge monitoring and other permit requirements and stormwater BMPs.

Crowley Marine Services

- The current property occupants (Alaska Logistics, Samson Tug and Barge, Union Pacific) do not have a stormwater permit or a SWPPP. Inspections are needed at these facilities to evaluate whether current operations at the property could be a source of LDW sediment recontamination.
- Stormwater runoff and inline solids data from the storm drain lines that discharge to RM 2.3-2.8 East are needed to evaluate the potential for transport of contaminants to the LDW via stormwater.

Whitehead Company, Inc./Former Perkins Lot

- Little information regarding the operations of the businesses currently occupying the property was available. Facility inspections should be completed to determine if any of the activities at these facilities require an NPDES permit, and if required, to ensure compliance with permit requirements and stormwater BMPs to prevent release of contaminants to the LDW.
- Facility plans for each business showing the locations of all catch basins and storm drains should be generated and made available.
- A list of previous tenants is needed to determine if operations at the property could have resulted in soil and groundwater contamination.

Trim Systems

- After a new tenant occupies this property, a business inspection is needed to ensure that operations at the facility are in compliance with applicable regulations and BMPs to prevent the release of contaminants to the LDW. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

Nitze-Stagen/Frye Parcels

- A business inspection is needed at this property to ensure that operations at the Pioneer Distribution facility are in compliance with applicable regulations and BMPs to prevent the release of contaminants to the LDW. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

Nelson Trucking

- A business inspection should be conducted at this property to confirm that stormwater does not drain to RM 2.3-2.8 East, and to ensure that operations at the Nelson Trucking facility are in compliance with applicable regulations and BMPs. A facility plan showing the locations of all catch basins and storm drains (if any) should be generated.

6.2 Groundwater Discharge

Seattle Boiler Works

- Due to the presence of dioxins and PCBs in sediments adjacent to this property, data on contaminant concentrations in soil and groundwater are needed in order to evaluate the potential for groundwater from this site to recontaminate RM 2.3-2.8 East sediments.

Seattle Iron & Metals Corporation

- Hart Crowser's 1998 *Voluntary Cleanup Action Report, 606 South Myrtle Street, Seattle, Washington* should be located and reviewed to evaluate the extent of soil and groundwater sampling that has been conducted at this property and to identify whether sediment COCs were detected in soil or groundwater samples.

Puget Sound Truck Lines

- Ecology's LUST list indicates that soil cleanup was completed at the facility in September 1995; however, no records of cleanup activities were found in the files reviewed by SAIC. Satisfactory completion of cleanup activities should be confirmed to eliminate groundwater discharge as a potential sediment recontamination pathway for this property.

Crowley Marine Services

- Additional data on contaminant concentrations in soil and groundwater at the western and southern portions of the property that abut the LDW are needed to evaluate the potential for groundwater from this property to recontaminate RM 2.3-2.8 East sediments.

Fox Avenue Building/Fox Avenue Building #2

- Dioxins and furans were detected in some environmental samples collected from the property, additional data are needed to determine the extent of contamination and to determine potential pathways for sediment recontamination.
- Annual groundwater, seep, and porewater data monitoring has not been conducted since 1999. Additional data are needed to determine the current levels of contamination in these media in order to evaluate this pathway as a source of sediment recontamination.
- No information was available to document implementation of the expanded Soil Vapor Extraction pilot study.

Whitehead Company, Inc./Former Tyee Industries

- Recent aerial photos indicate that the site may be used for activities other than Seattle Iron & Metals employee parking. A property inspection is needed to determine current use of the property.
- Additional soil and groundwater data are needed to determine the current levels of contamination in soil and groundwater beneath and downgradient of the property.

Former Sternoff Parcel

- No soil or groundwater samples have been collected at the property since at least 1999. Additional soil and groundwater data are needed to determine the potential for sediment recontamination via this pathway.
- Additional information on groundwater flow directions is needed to assess whether groundwater at this property may be transporting contaminants to RM 2.3-2.8 East.
- According to an Ecology memorandum summarizing a report prepared by Environmental Hazards Control, a PCB-contaminated “trash pile” and approximately 52,187 pounds of contaminated soil have been removed from the site; however, documents verifying Ecology’s summary were not available for review.
- The disposition of PCS stockpiled at the property by Remedco is unknown.

6.3 Surface Runoff

Guimont Parcel

- A business inspection is needed to evaluate whether surface runoff from current operations at this property could transport contaminants to RM 2.3-2.8 East.

Seattle Boiler Works

- Additional information on the stormwater system configuration at this property is needed to evaluate the potential for contaminant transport to the LDW via surface runoff.

Puget Sound Truck Lines

- A facility plan showing the locations of all catch basins and storm drains is needed to evaluate whether any stormwater may be entering the LDW directly via surface runoff.

6.4 Bank Erosion/Leaching

Seattle Boiler Works

- If soil or groundwater contamination is present at this property, a bank survey should be conducted to evaluate the potential that contaminants are entering the LDW via bank erosion or leaching.

Seattle Iron & Metals Corporation

- Additional information on the construction of the banks in this area is needed. Residual soil contamination is present at this property, therefore if bank erosion is likely, then data on contaminant concentrations in bank soils is necessary to evaluate the potential for sediment recontamination via this pathway.

Crowley Marine Services

- Additional information on the construction of the banks in this area is needed. Soil contamination is present at this property. Therefore, if bank erosion is likely, then data on contaminant concentrations in bank soils is necessary to evaluate the potential for sediment recontamination via this pathway.

6.5 Atmospheric Deposition

Seattle Iron & Metals Corporation

- Investigation is needed to determine if the shredder residue is reaching the LDW directly or via the Seattle Boiler Works storm drain system. Additional data are needed to determine if the residue contains COCs.
- The status of the furnace used to burn insulation off electrical wire should be investigated to determine if it was relocated from the Harbor Island facility to Seattle Iron & Metals Corporation’s current facility. Additionally, current furnace operations, if any, should be determined.

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Figures

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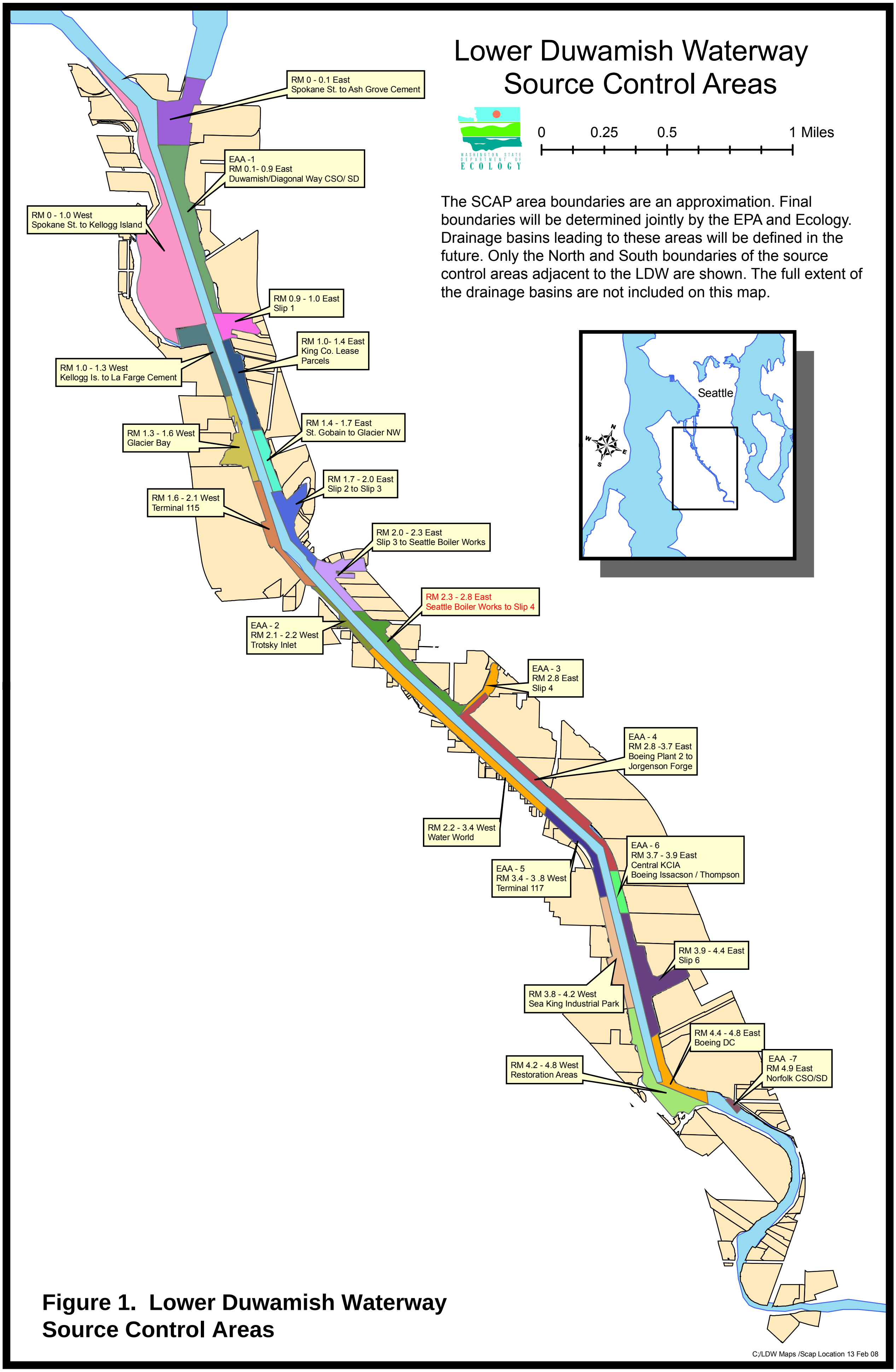

Figure 1. Lower Duwamish Waterway Source Control Areas

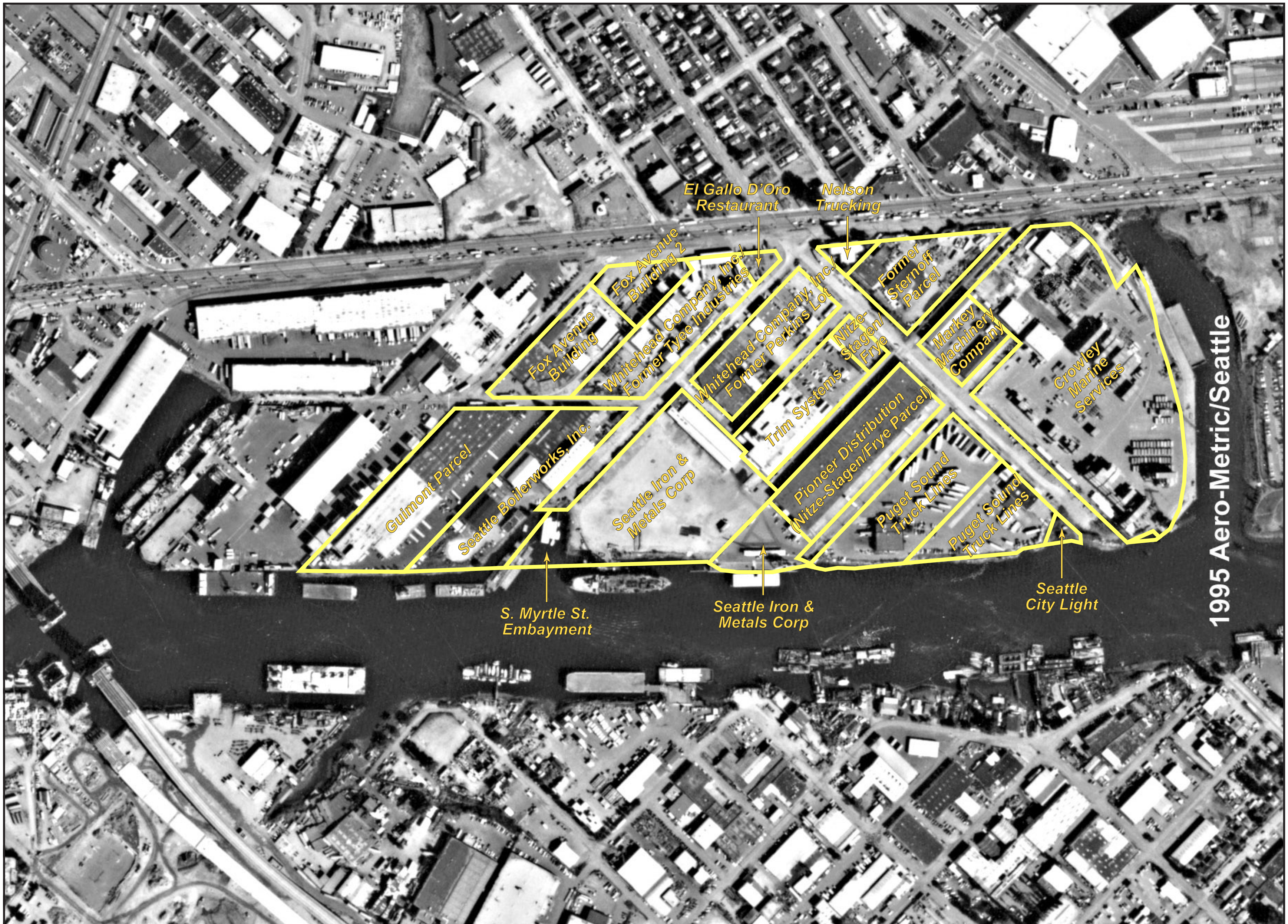

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Figure 2. RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
Source Control Area

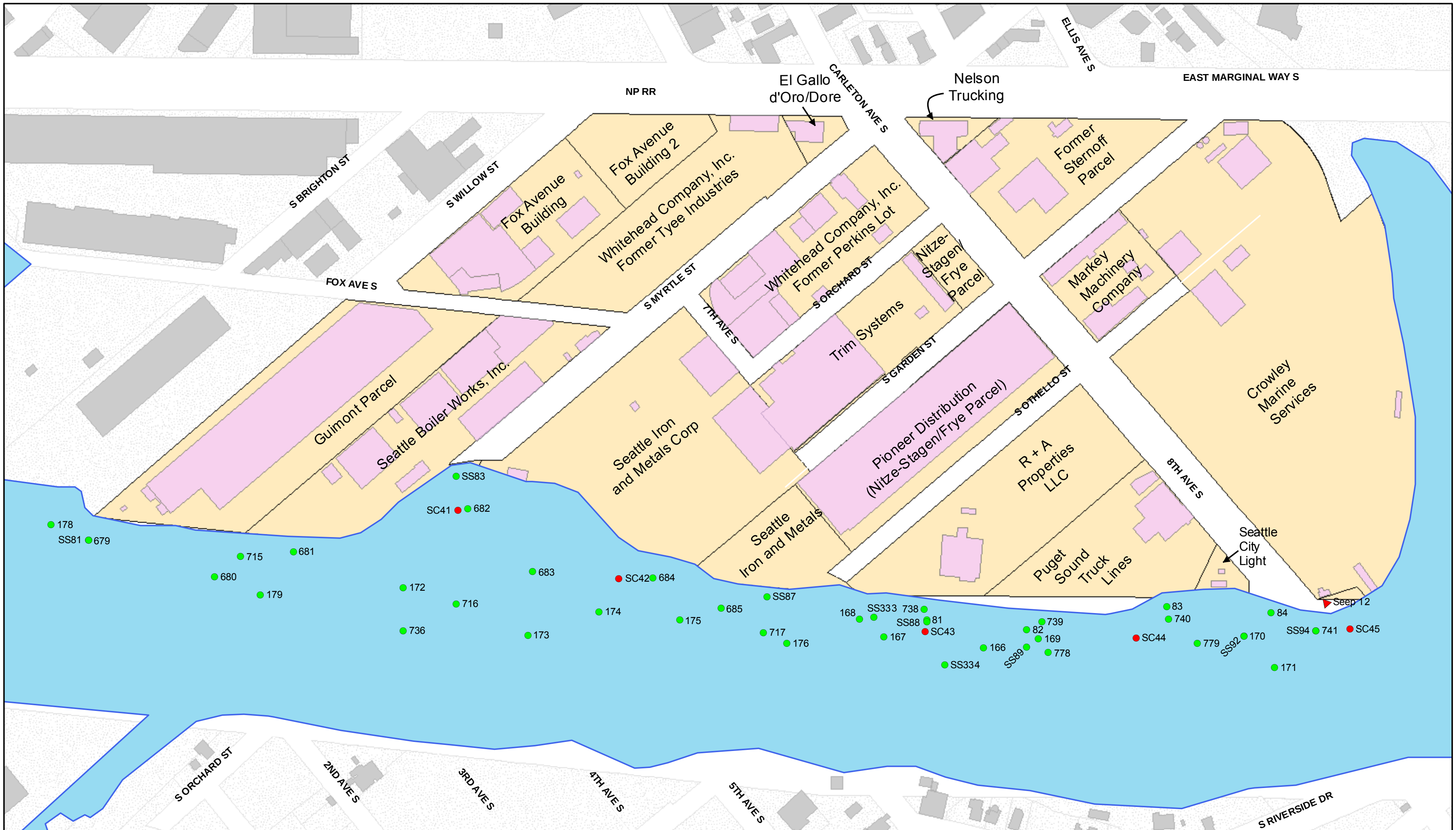

Figure 3. RM 2.3-2.8 East (Seattle Boiler Works to Slip 4) Source Control Area Sediment and Seep Sample Locations

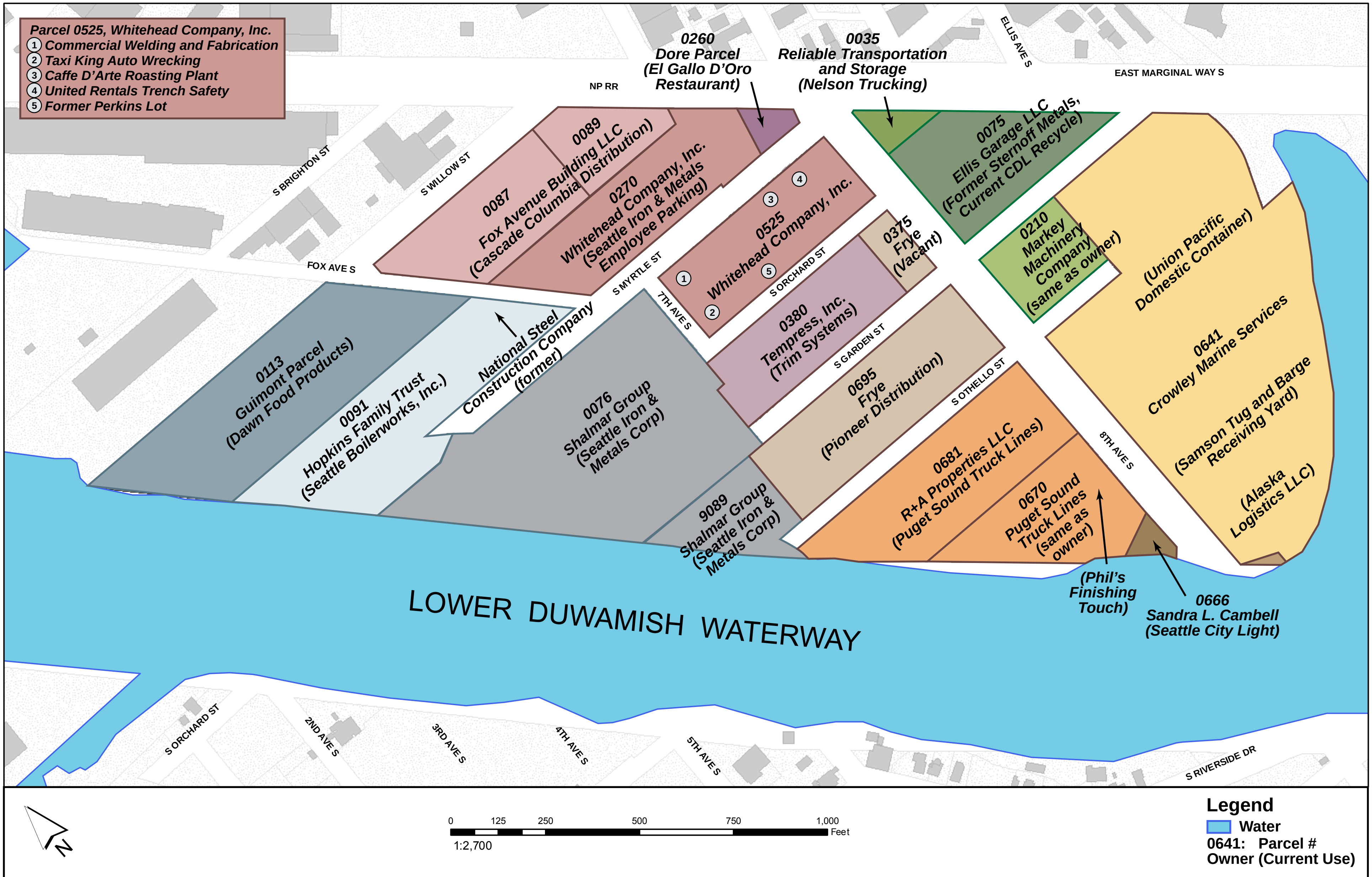

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Figure 4. RM 2.3-2.8 East (Seattle Boiler Works to Slip 4) Source Control Area Parcel Ownership and Uses

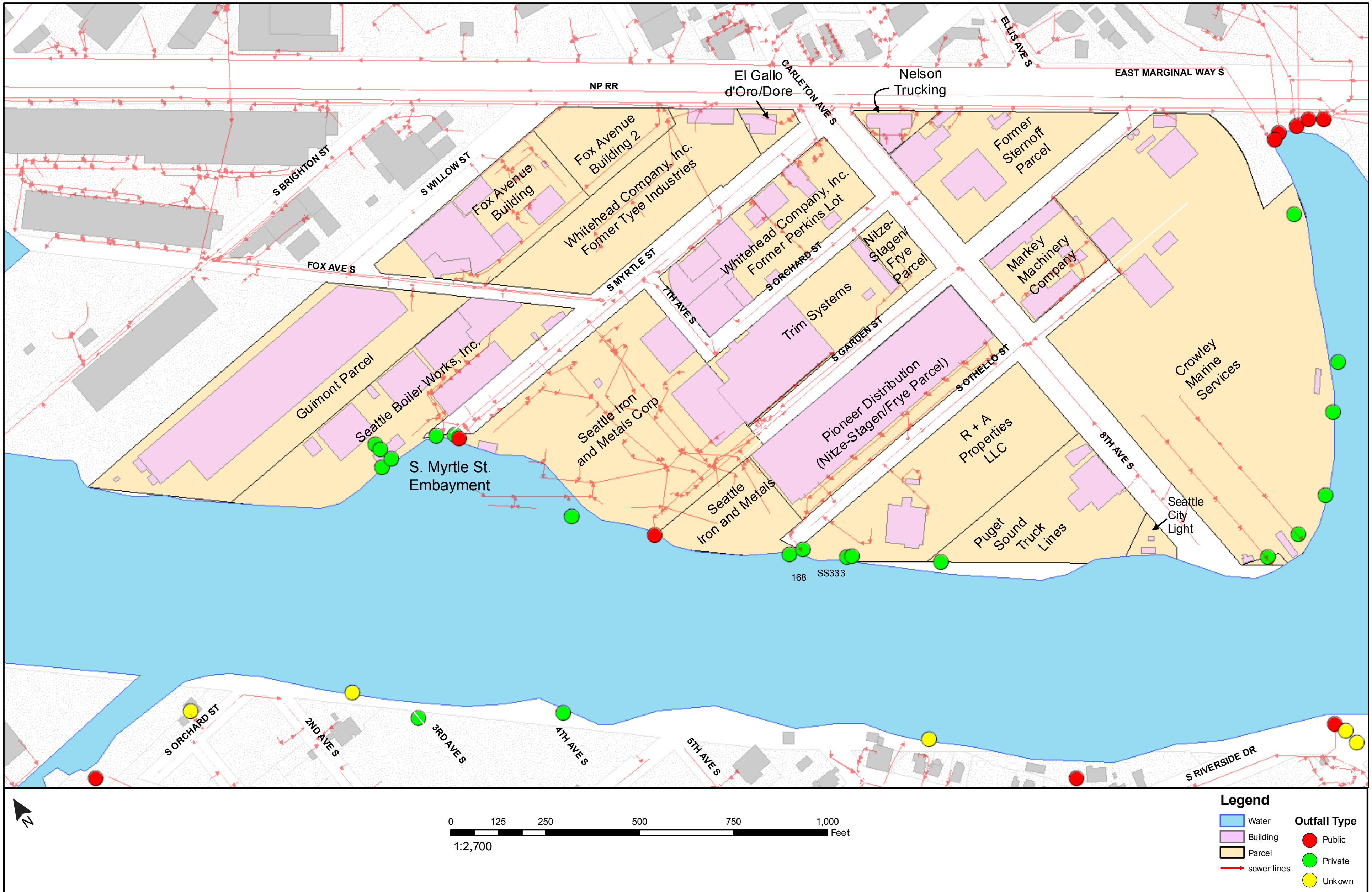

Figure 5. RM 2.3-2.8 East (Seattle Boiler Works to Slip 4) Storm Drain Lines

Note: The shape of the S. Myrtle St. Embayment has changed due to filling and wharf construction.

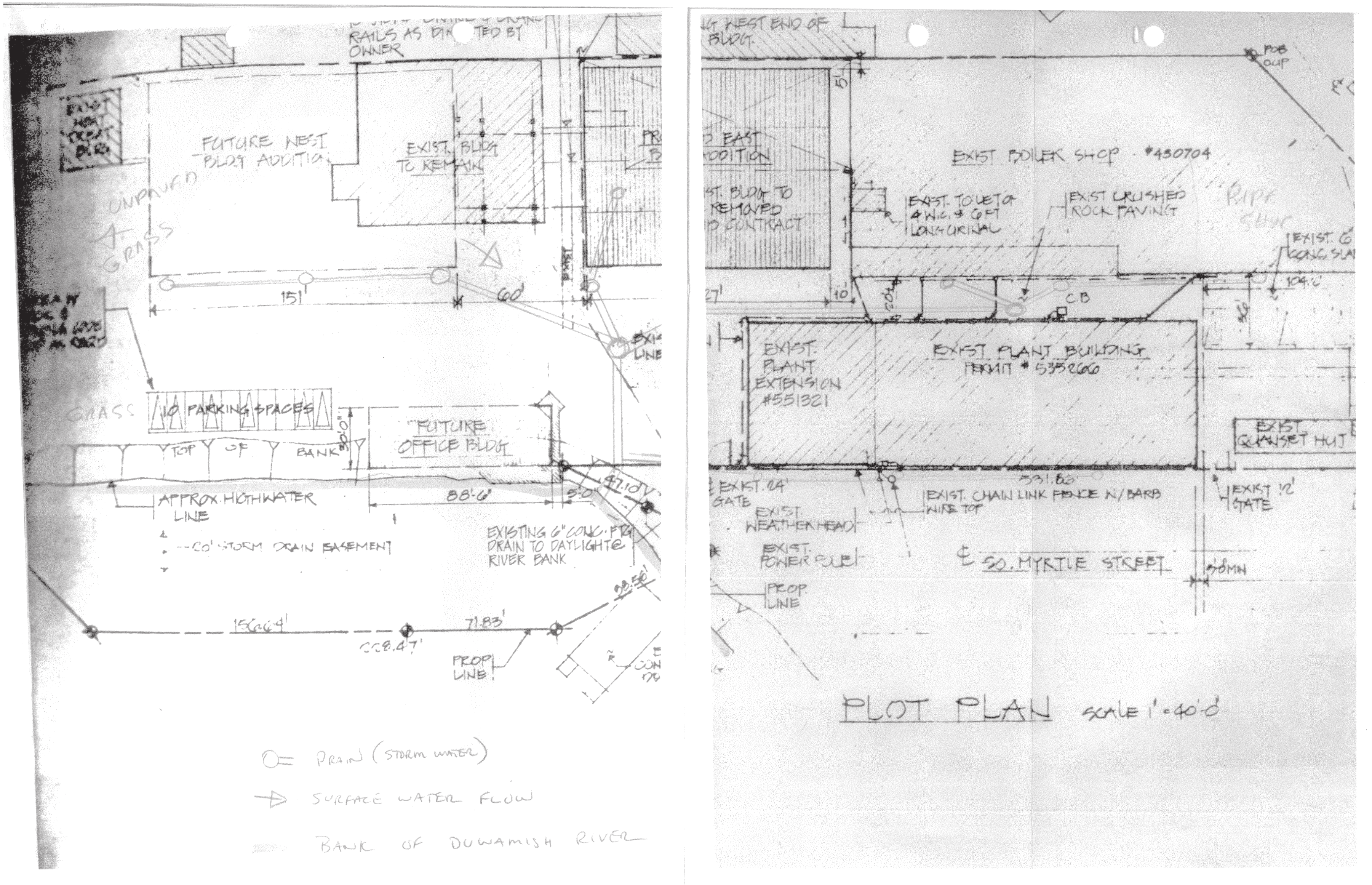

Figure 6. Seattle Boiler Works

Source: Seattle Boiler Works, Inc.

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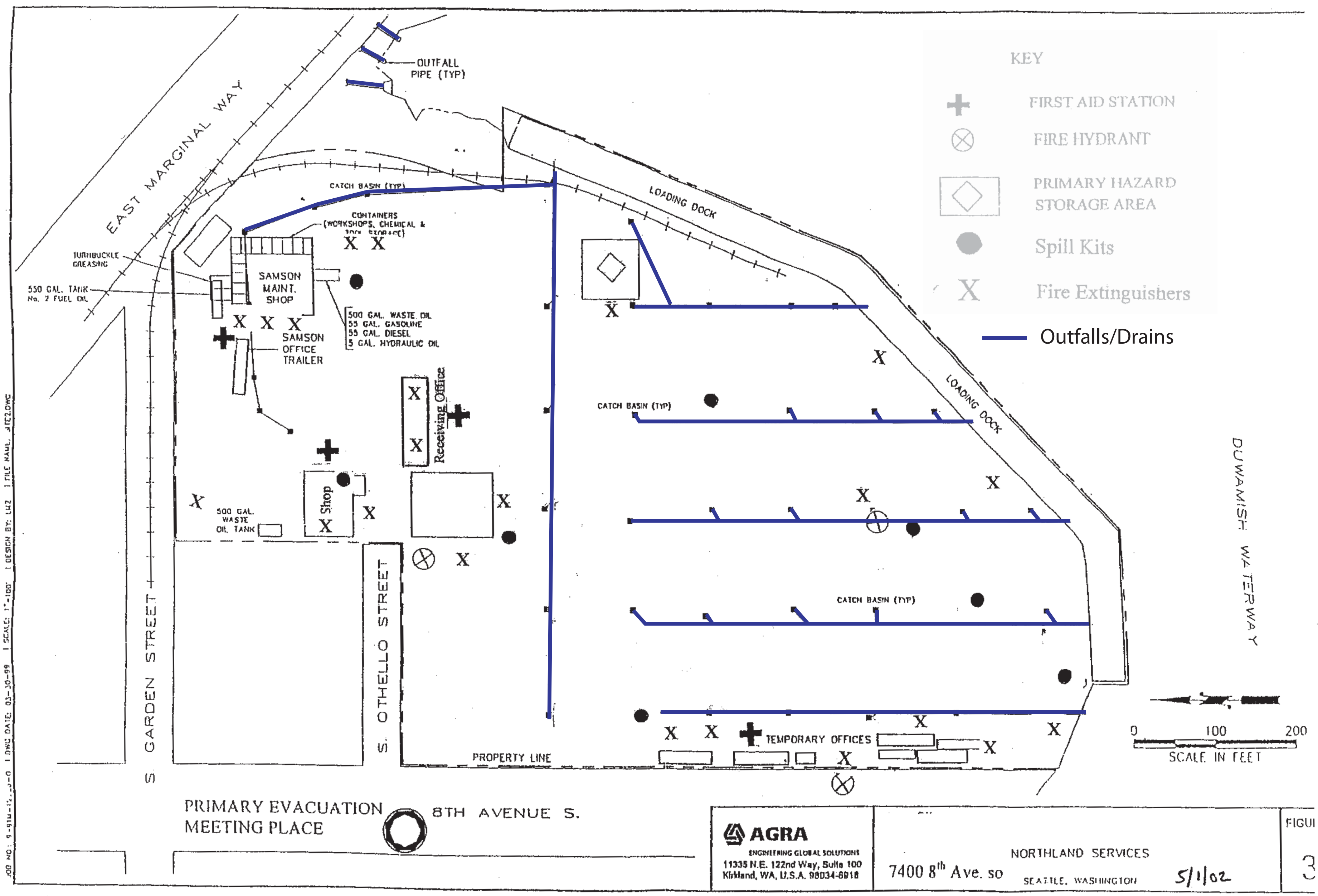

Figure 7. Drainage Map for Crowley Marine Services Property
Adapted from: Northland 2002

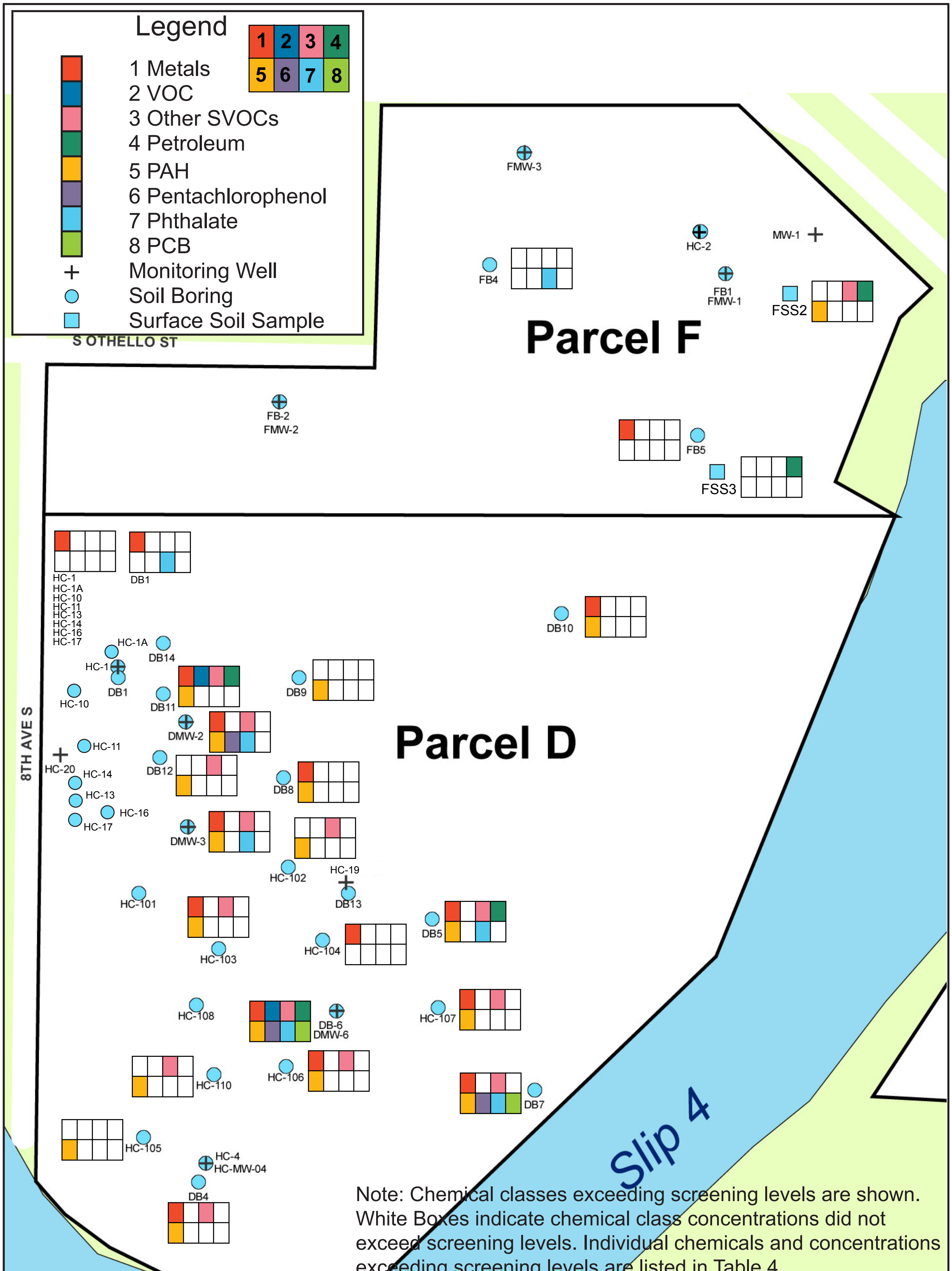

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Figure 8. Chemicals Above Screening Levels in Soil, Crowley Marine Services

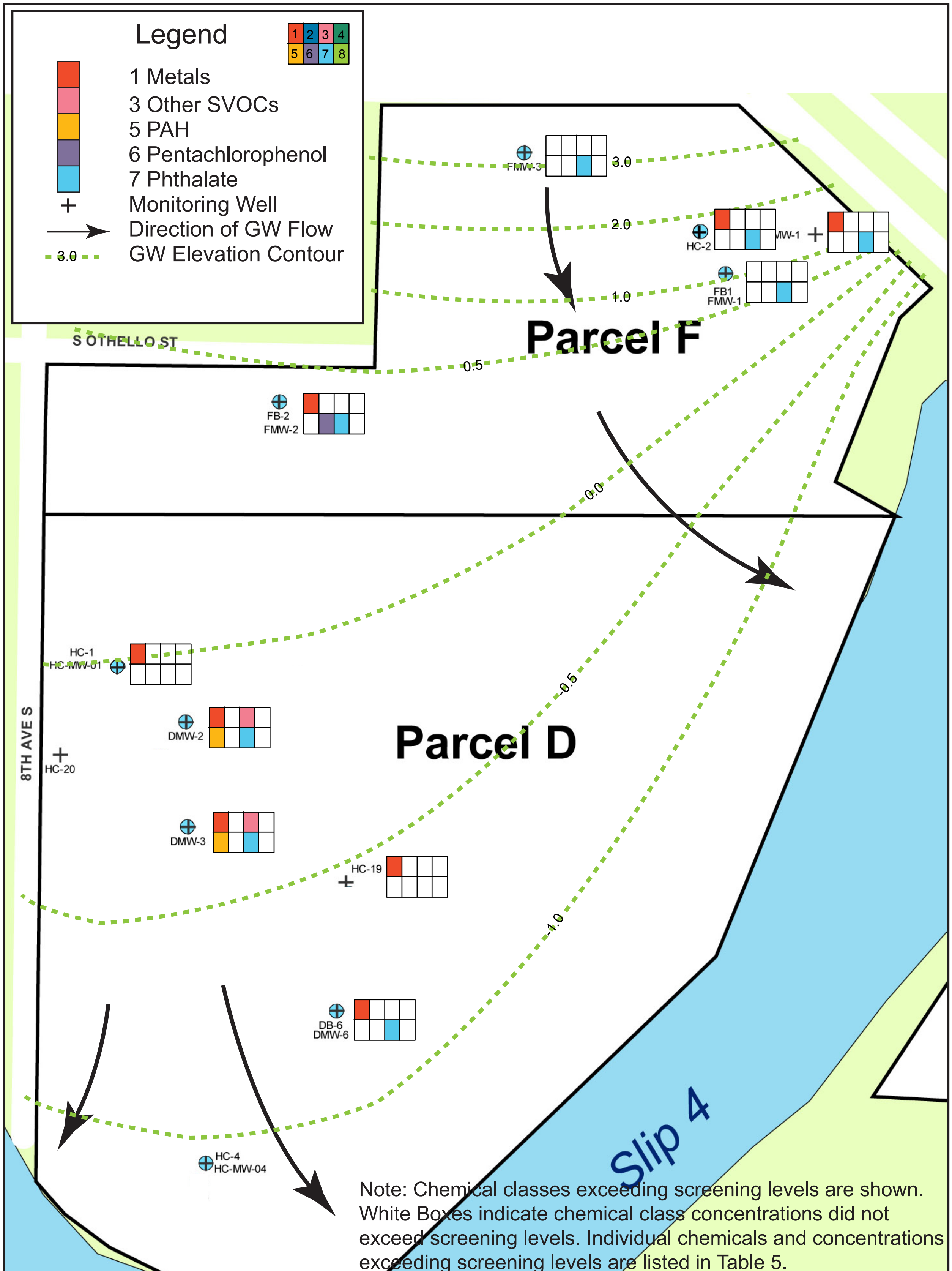

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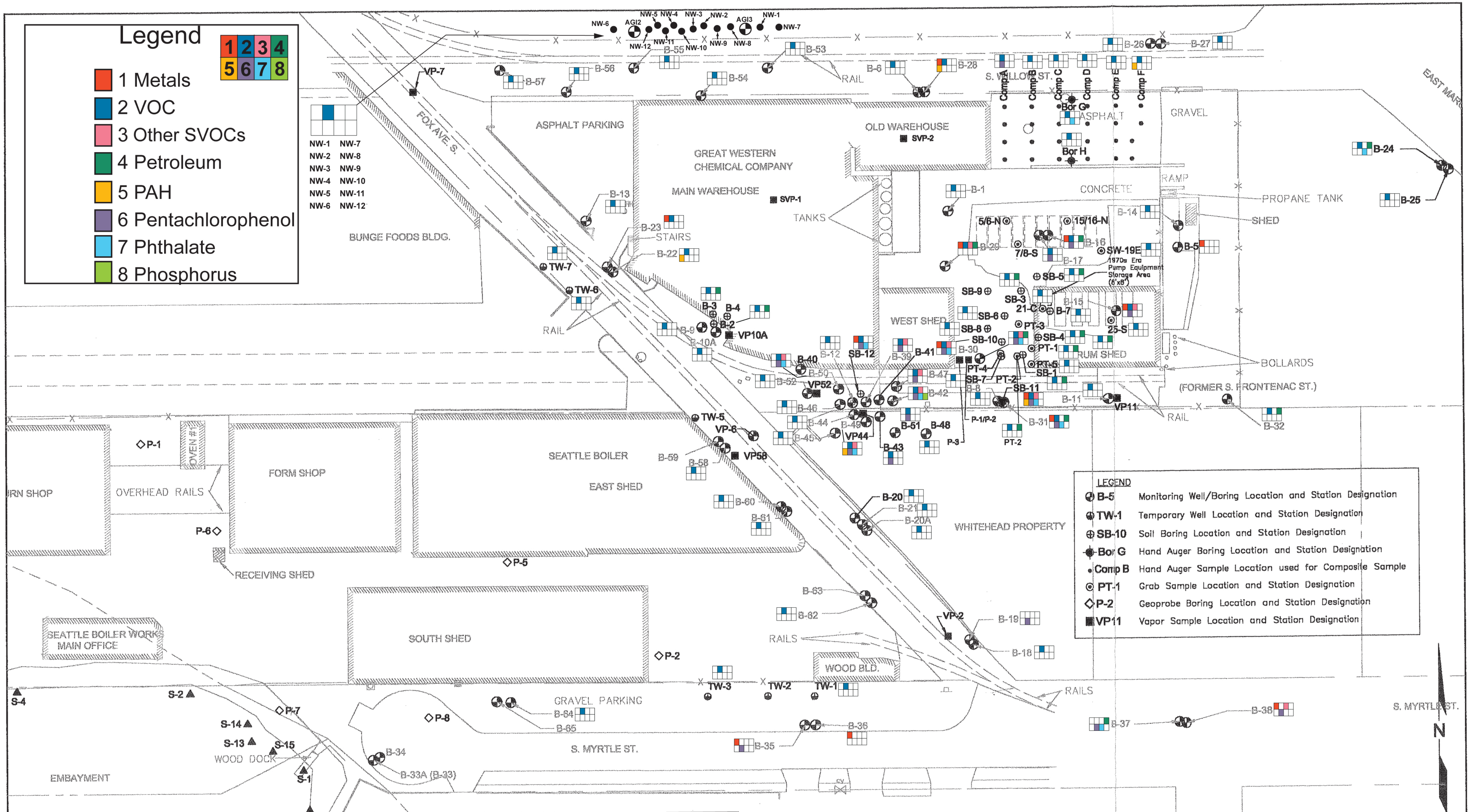
Figure 9. Chemicals Above Screening Levels in Groundwater, Crowley Marine Services



Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company Seattle, Washington

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Note: Chemical classes exceeding screening levels are shown. White Boxes indicate chemical class concentrations did not exceed screening levels. Individual chemicals and concentrations exceeding screening levels are listed in Table 6.

Figure 10. Chemicals Above Screening Levels in Soil, Fox Avenue Building (Former Great Western Chemical)

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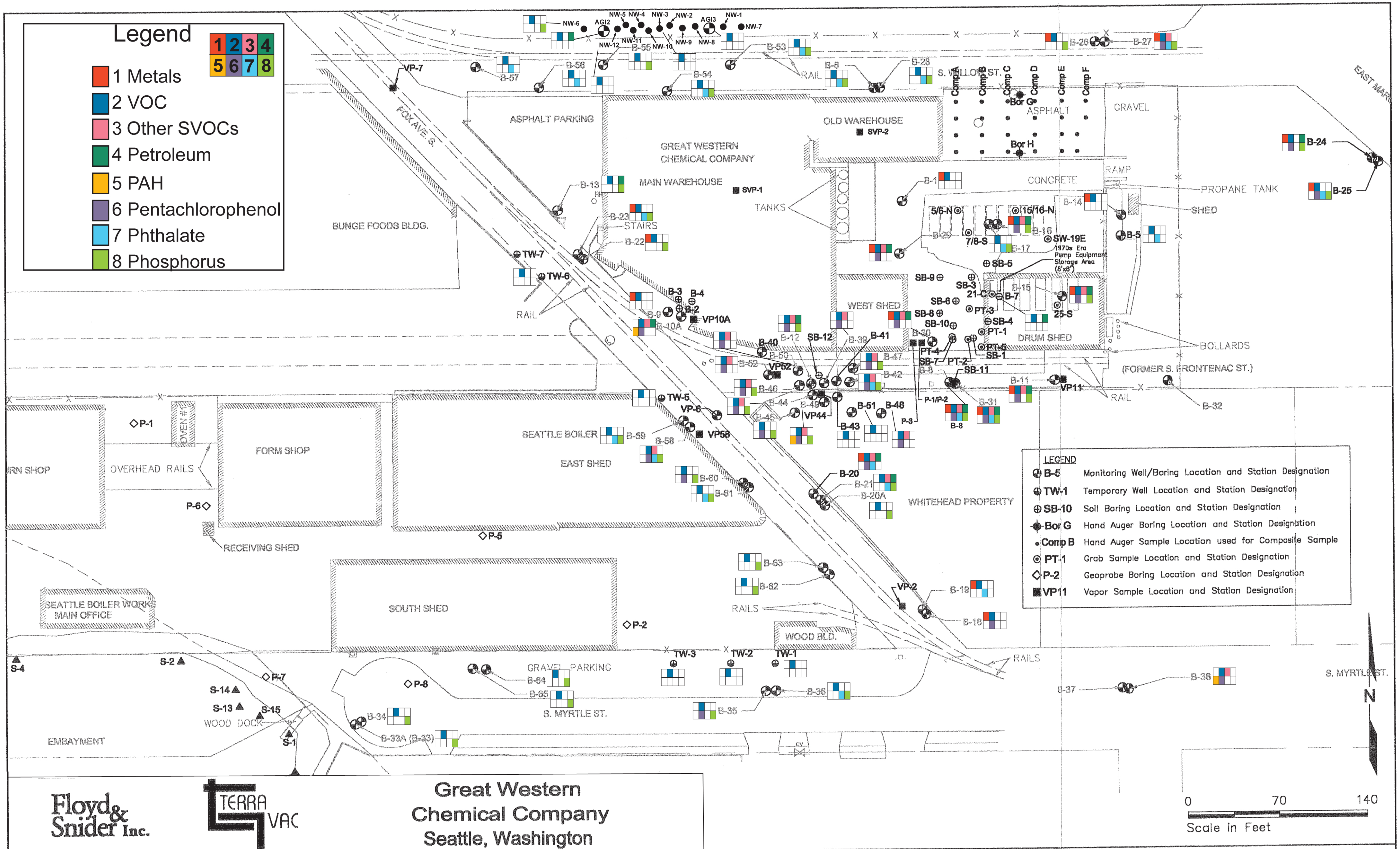

Note: Chemical classes exceeding screening levels are shown. White Boxes indicate chemical class concentrations did not exceed screening levels. Individual chemicals and concentrations exceeding screening levels are listed in Table 6.

Figure 11. Chemicals Above Screening Levels in Groundwater, Fox Avenue Building (Former Great Western Chemical)

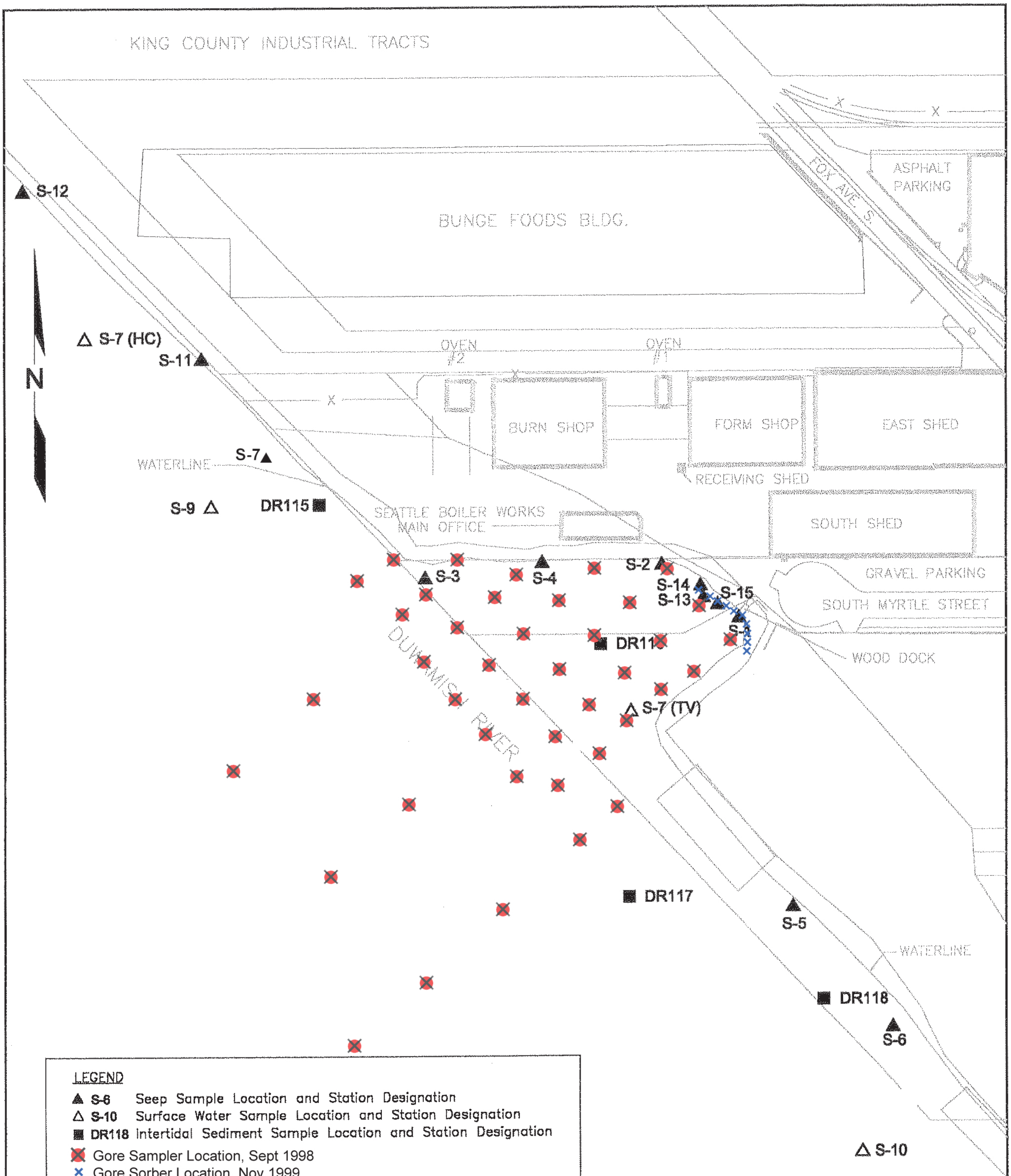

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Figure 12. Sediment and Seep Sample Stations
S. Myrtle Street Embayment

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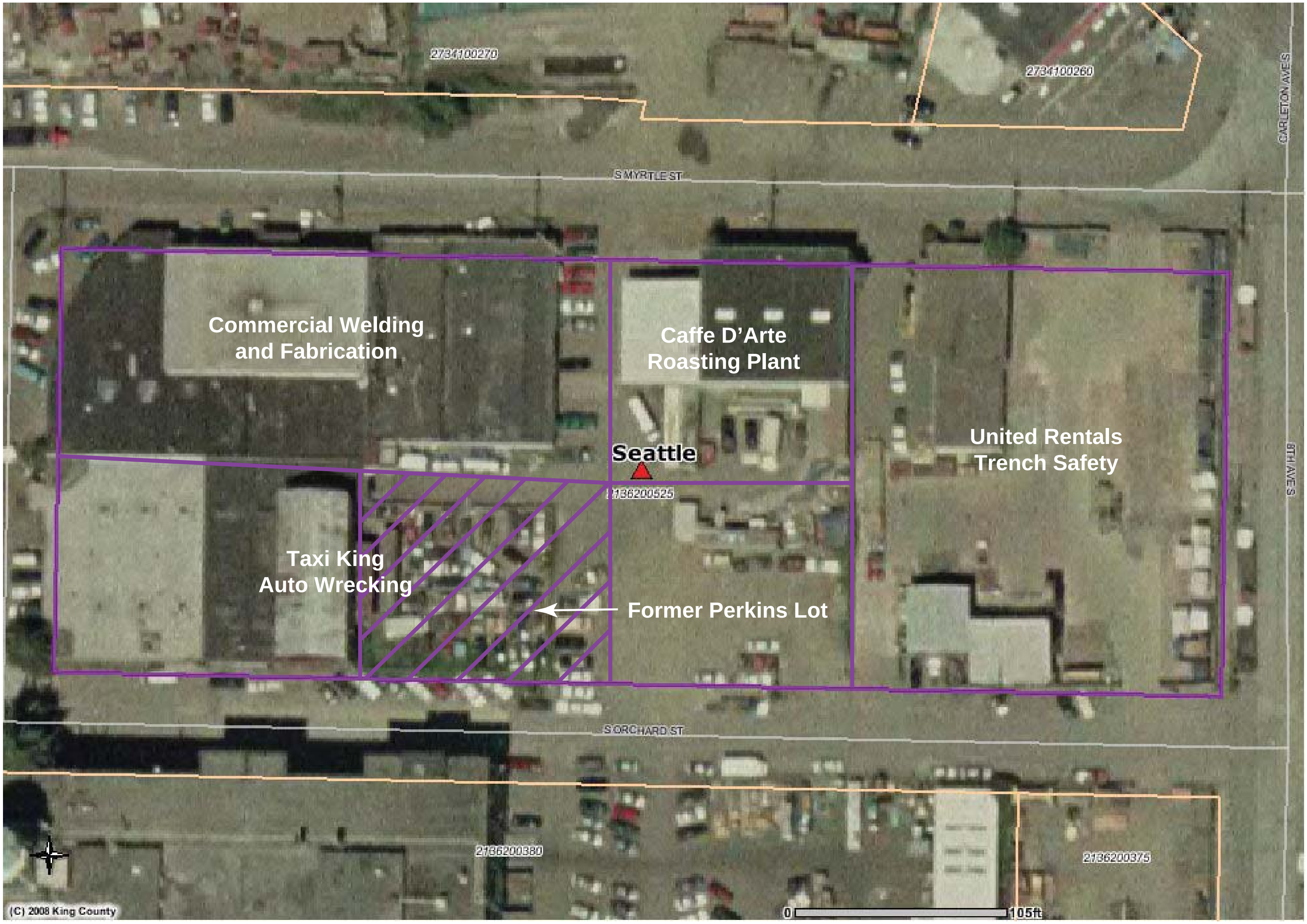

Figure 13. Tenants at the Whitehead Company, Inc. / Former Perkins Lot
Source: King County IMAP

Tables

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Table 1
Surface Sediment Sampling Results Above Screening Levels
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
Metals and trace elements											
LDWRI-SurfaceSedimentRound1	LDW-SS88	Mercury	6.20E-01		1.75		0.41	0.59	mg/kg dw	1.5	1.1
PAHs											
EPA SI	DR175 (741)	Benzo(a)anthracene	3.00E+00		1.74	1.72E+02	110	270	mg/kg OC-dry	1.6	
EPA SI	DR175 (741)	Chrysene	3.40E+00		1.74	1.95E+02	100	460	mg/kg OC-dry	2.0	
EPA SI	DR174 (740)	Chrysene	1.80E+00		1.59	1.13E+02	110	460	mg/kg OC	1.03	
EPA SI	DR175 (741)	Dibenzofuran	7.50E-01		1.74	4.31E+01	15	58	mg/kg OC-dry	2.9	
EPA SI	DR175 (741)	Fluoranthene	1.80E+01		1.74	1.03E+03	160	1200	mg/kg OC-dry	6.5	
EPA SI	DR174 (740)	Fluoranthene	2.80E+00		1.59	1.76E+02	160	1200	mg/kg OC	1.1	
EPA SI	DR175 (741)	Fluorene	1.70E+00		1.74	9.77E+01	23	79	mg/kg OC-dry	4.2	1.2
EPA SI	DR175 (741)	Indeno(1,2,3-cd)pyrene	6.60E-01		1.74	3.79E+01	34	88	mg/kg OC-dry	1.1	
EPA SI	DR175 (741)	Phenanthrene	1.60E+01		1.74	9.20E+02	100	480	mg/kg OC-dry	9.2	1.9
EPA SI	DR175 (741)	Total HPAH (calc'd)	4.12E+01		1.74	2.37E+03	960	5300	mg/kg OC-dry	2.5	
EPA SI	DR175 (741)	Total LPAH (calc'd)	2.00E+01		1.74	1.15E+03	370	780	mg/kg OC-dry	3.1	1.5
PCBs											
LDWRI-SurfaceSedimentRound1	**LDW-SS89**	**PCBs (total calc'd)**	**1.80E+00**		**1.02**	**1.76E+02**	**12**	**65**	**mg/kg OC**	**15**	2.7
LDWRI-SurfaceSedimentRound1	LDW-SS92	PCBs (total calc'd)	9.70E-01		1.27	7.64E+01	12	65	mg/kg OC	6.4	1.2
LDWRI-SurfaceSedimentRound1	LDW-SS88	PCBs (total calc'd)	6.60E-01		1.75	3.77E+01	12	65	mg/kg OC	3.1	
EPA SI	DR174 (740)	PCBs (total calc'd)	4.90E-01		1.59	3.08E+01	12	65	mg/kg OC	2.6	
EPA SI	DR119 (685)	PCBs (total calc'd)	3.90E-01	J	2.69	1.45E+01	12	65	mg/kg OC	1.2	
EPA SI	DR151 (717)	PCBs (total calc'd)	3.30E-01	J	2.68	1.23E+01	12	65	mg/kg OC	1.03	
NOAA SiteChar	EST182 (172)	PCBs (total calc'd)	2.50E-01		1.84	1.36E+01	12	65	mg/kg OC	1.1	
NOAA SiteChar	EST179 (169)	PCBs (total calc'd)	2.40E-01		0.98	2.45E+01	12	65	mg/kg OC	2.0	
NOAA SiteChar	EIT075 (82)	PCBs (total calc'd)	1.20E-01		0.54	2.22E+01	12	65	mg/kg OC	1.9	
NOAA SiteChar	EST176 (166)	PCBs (total calc'd)	1.20E-01		0.93	1.29E+01	12	65	mg/kg OC	1.1	
EPA SI	DR113 (679)	PCBs (total-calc'd)	2.03E+00	J	2.72	7.45E+01	12	65	mg/kg OC-dry	6.2	
NOAA SiteChar	EIT074 (81)	PCBs (total-calc'd)	4.50E-01		0.76	5.92E+01	12	65	mg/kg OC-dry	4.9	0.9
NOAA SiteChar	EST180 (170)	PCBs (total-calc'd)	2.30E-01		1.53	1.50E+01	12	65	mg/kg OC-dry	1.3	

DW - Dry weight
TOC - Total organic carbon
OC - Organic carbon normalized
SQS - Sediment Quality Standard
CSL - Cleanup Screening Level

PAH - Polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl

Exceedance factors are the ratio of the detected concentration to the CSL or SQS; exceedance factors are shown only if they are greater than 1. Chemicals with exceedance factors greater than 10 are shown in **Bold**

Table 2
Subsurface Sediment Sampling Results Above Screening Levels
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC45	2 - 4	PCBs (total calc'd)	5.70E-01		6.88	8.28E+00	130	1000	ug/kg dw	4.4	

DW - Dry weight
TOC - Total organic carbon
OC - Organic carbon normalized
SQS - Sediment Quality Standard
CSL - Cleanup Screening Level
PCB - polychlorinated biphenyl

Exceedance factors are the ratio of the detected concentration to the CSL or SQS; exceedance factors are shown only if they are greater than 1.

Table 3
Chemicals in Seep Sample
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
Filtered Samples										
			Metals	**(ug/L)**						
Windward, 2004	11/18/2004	Seep 12	Arsenic	0.771		36	69		370	
Windward, 2004	11/18/2004	Seep 12	Cadmium	0.107		9.3	42		3.4	
Windward, 2004	11/18/2004	Seep 12	Copper	12.5	J	3.1	4.8	4.0	120	
Windward, 2004	11/18/2004	Seep 12	Lead	0.129		8.1	210		13	
Windward, 2004	11/18/2004	Seep 12	Mercury	0.00074		NA	NA		0.0074	
Windward, 2004	11/18/2004	Seep 12	Nickel	4.24		8.2	74		NA	
Windward, 2004	11/18/2004	Seep 12	Silver	0.053		1.9	1.9		1.5	
Windward, 2004	11/18/2004	Seep 12	Zinc	14.1		81	90		76	
Unfiltered Samples										
			Conventionals	**(mg/L)**						
Windward, 2004	11/18/2004	Seep 12	Total Suspended Solids	15.6	J	NA	NA		NA	
			Metals	**(ug/L)**						
Windward, 2004	11/18/2004	Seep 12	Arsenic	1.13		NA	NA		370	
Windward, 2004	11/18/2004	Seep 12	Cadmium	0.133		NA	NA		3.4	
Windward, 2004	11/18/2004	Seep 12	Copper	15.8	J	NA	NA		120	
Windward, 2004	11/18/2004	Seep 12	Lead	0.823		NA	NA		13	
Windward, 2004	11/18/2004	Seep 12	Mercury	0.00518		0.025	1.8		0.0074	
Windward, 2004	11/18/2004	Seep 12	Nickel	8.03		NA	NA		NA	
Windward, 2004	11/18/2004	Seep 12	Silver	0.033		NA	NA		1.5	
Windward, 2004	11/18/2004	Seep 12	Zinc	16.1		NA	NA		76	

Exceedance factors are the ratio of the detected concentration to the screening level; exceedance factors are shown only if they are greater than or equal to 1.
Chemicals with exceedance factors greater than 10 are shown in **Bold**

WQS - Water Quality Standards
CSL - Sediment Management Standards Cleanup Screening Level

a - Groundwater to sediment screening level, based on sediment CSLs. From SAIC 2006

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB12	11.5	1,4-Dichlorobenzene	0.79	M	42	0.015	53
Landau 1990	1990	DB11	8	2-Methylnaphthalene	640		320	0.073	8,767
Landau 1990	1990	DB6	4.5	2-Methylnaphthalene	540		320	1.4	386
Hart Crowser 1990b	Aug-90	HC-103	9.8	2-Methylnaphthalene	200		320	0.073	2,740
Landau 1990	1990	DB11	9.5	2-Methylnaphthalene	120		320	0.073	1,644
Landau 1990	1990	DB6	7	2-Methylnaphthalene	51		320	0.073	699
Hart Crowser 1990b	Aug-90	HC-103	8.5	2-Methylnaphthalene	19		320	0.073	260
Hart Crowser 1990b	Aug-90	HC-106	5.3	2-Methylnaphthalene	11		320	1.4	7.9
Landau 1990	1990	DB6	13	2-Methylnaphthalene	6.4		320	0.073	88
Landau 1990	1990	DB2	7	2-Methylnaphthalene	4.6		320	0.073	63
Landau 1990	1990	DB6	2	2-Methylnaphthalene	3		320	1.4	2.1
Hart Crowser 1990b	Aug-90	HC-103	10.8	2-Methylnaphthalene	1.9		320	0.073	26
Landau 1990	1990	DB3	17	2-Methylnaphthalene	1.6		320	0.073	22
Landau 1990	1990	DB2	9.5	2-Methylnaphthalene	1.4		320	0.073	19
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	2-Methylnaphthalene	1.4		320	0.073	19
Landau 1990	1990	DB12	11.5	2-Methylnaphthalene	1.2	J	320	0.073	16
Landau 1990	1990	DB6	16	2-Methylnaphthalene	1		320	0.073	14
Landau 1990	1990	DB7	11.5	2-Methylnaphthalene	0.73		320	0.073	10
Landau 1990	1990	DB3	13.5	2-Methylnaphthalene	0.67		320	0.073	9.2
Landau 1990	1990	DB7	8.5	2-Methylnaphthalene	0.25		320	0.073	3.4
Landau 1990	1990	DB6	10	2-Methylnaphthalene	0.16		320	0.073	2.2
Hart Crowser 1990b	Aug-90	HC-110	8.9	2-Methylnaphthalene	0.15		320	0.073	2.1
Landau 1990	1990	DB6	4.5	2-Methylphenol	6			0.091	66
Landau 1990	1990	DB6	7	2-Methylphenol	0.86			0.0052	165
Landau 1990	1990	DB11	8	2-Methylphenol	0.44	M		0.0052	85
Landau 1990	1990	DB6	13	2-Methylphenol	0.099			0.0052	19
Landau 1990	1990	DB6	4.5	4-Methylphenol	15			0.98	15
Landau 1990	1990	DB6	7	4-Methylphenol	2.7			0.056	48
Landau 1990	1990	DB6	13	4-Methylphenol	0.33			0.056	5.9
Landau 1990	1990	DB11	8	Acenaphthene	860	B	4,800	0.060	14,333
Landau 1990	1990	DB6	4.5	Acenaphthene	570	B	4,800	1.2	475
Landau 1990	1990	DB11	9.5	Acenaphthene	190	B	4,800	0.060	3,167
Hart Crowser 1990b	Aug-90	HC-103	9.8	Acenaphthene	130		4,800	0.060	2,167
Landau 1990	1990	DB6	7	Acenaphthene	43	B	4,800	0.060	717
Hart Crowser 1990b	Aug-90	HC-103	8.5	Acenaphthene	30		4,800	0.060	500
Hart Crowser 1990b	Aug-90	HC-106	5.3	Acenaphthene	17		4,800	1.2	14
Landau 1990	1990	DB5	2	Acenaphthene	8.6	B	4,800	1.2	7.2
Landau 1990	1990	DB6	13	Acenaphthene	8.5		4,800	0.060	142
Landau 1990	1990	DB6	2	Acenaphthene	4.9	B	4,800	1.2	4.1

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB2**	**7**	**Acenaphthene**	**4**	**B**	**4,800**	**0.060**	**67**
Landau 1990	**1990**	**DB3**	**17**	**Acenaphthene**	**3.5**		**4,800**	**0.060**	**58**
Landau 1990	**1990**	**DB2**	**9.5**	**Acenaphthene**	**2.7**		**4,800**	**0.060**	**45**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Acenaphthene**	**1.5**		**4,800**	**0.060**	**25**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Acenaphthene**	**1.5**		**4,800**	**0.060**	**25**
Landau 1990	1990	DB4	6	Acenaphthene	1.4	B	4,800	1.2	1.2
Landau 1990	**1990**	**DB3**	**13.5**	**Acenaphthene**	**1.3**		**4,800**	**0.060**	**22**
Landau 1990	**1990**	**DB6**	**16**	**Acenaphthene**	**1.2**		**4,800**	**0.060**	**20**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Acenaphthene**	**1.1**		**4,800**	**0.060**	**18**
Landau 1990	**1990**	**DB7**	**11.5**	**Acenaphthene**	**0.96**	**B**	**4,800**	**0.060**	**16**
Landau 1990	1990	DB7	8.5	Acenaphthene	0.31	B	4,800	0.060	5.2
Landau 1990	1990	DB4	8.5	Acenaphthene	0.29	B	4,800	0.060	4.8
Landau 1990	1990	DB6	10	Acenaphthene	0.23		4,800	0.060	3.8
Landau 1990	1990	DB6	18.5	Acenaphthene	0.11		4,800	0.060	1.8
Landau 1990	**1990**	**DB11**	**8**	**Acenaphthylene**	**24**			**0.069**	**348**
Landau 1990	1990	DB6	4.5	Acenaphthylene	13			1.4	9.3
Landau 1990	**1990**	**DB11**	**9.5**	**Acenaphthylene**	**2.6**			**0.069**	**38**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Acenaphthylene**	**2.2**			**0.069**	**32**
Landau 1990	1990	DB3	3.5	Acenaphthylene	1.4			1.4	1.0
Landau 1990	**1990**	**DB6**	**7**	**Acenaphthylene**	**1.3**			**0.069**	**19**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Acenaphthylene**	**0.87**			**0.069**	**13**
Hart Crowser 1990b	Aug-90	HC-103	8.5	Acenaphthylene	0.5			0.069	7.2
Landau 1990	1990	DB2	7	Acenaphthylene	0.25			0.069	3.6
Landau 1990	1990	DB6	13	Acenaphthylene	0.19			0.069	2.8
Landau 1990	**1990**	**DB6**	**4.5**	**Anthracene**	**910**	**B**	**2,400**	**24**	**38**
Landau 1990	**1990**	**DB11**	**8**	**Anthracene**	**420**	**B**	**2,400**	**1.2**	**350**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Anthracene**	**360**		**2,400**	**1.2**	**300**
Landau 1990	**1990**	**DB6**	**7**	**Anthracene**	**110**	**B**	**2,400**	**1.2**	**92**
Landau 1990	**1990**	**DB11**	**9.5**	**Anthracene**	**97**	**B**	**2,400**	**1.2**	**81**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Anthracene	33		2,400	24	1.4
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Anthracene**	**28**		**2,400**	**1.2**	**23**
Landau 1990	1990	DB6	13	Anthracene	11		2,400	1.2	9.2
Landau 1990	1990	DB2	7	Anthracene	6.2	B	2,400	1.2	5.2
Hart Crowser 1990b	Aug-90	HC-110	8.9	Anthracene	4.8		2,400	1.2	4.0
Landau 1990	1990	DB6	16	Anthracene	2.5		2,400	1.2	2.1
Landau 1990	1990	DB7	11.5	Anthracene	2.1	B	2,400	1.2	1.8
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Anthracene	1.4		2,400	1.2	1.2
Landau 1990	1990	DB3	17	Anthracene	1.2		2,400	1.2	1.0
Landau 1990	1990	DB6	4.5	Aroclor 1254	2.5			1.3	1.9

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB7	11.5	Aroclor 1254	0.21			0.065	3.2
Landau 1990	1990	DB7	8.5	Aroclor 1254	0.076			0.065	1.2
Landau 1990	**1990**	**DB6**	**4.5**	**Arsenic**	**1,760**		**20**	**12,000**	**88**
Landau 1990	**1990**	**DB6**	**7**	**Arsenic**	**1,220**		**20**	**590**	**61**
Landau 1990	**1990**	**DB7**	**11.5**	**Arsenic**	**1,090**		**20**	**590**	**55**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**5.3**	**Arsenic**	**860**		**20**	**12,000**	**43**
Landau 1990	**1990**	**DB6**	**2**	**Arsenic**	**590**		**20**	**12,000**	**30**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**3.5**	**Arsenic**	**330**		**20**	**12,000**	**17**
Landau 1990	**1990**	**DB2**	**7**	**Arsenic**	**241**		**20**	**590**	**12**
Landau 1990	**1990**	**DB5**	**2**	**Arsenic**	**205**		**20**	**12,000**	**10**
Landau 1990	1990	DB2	4.5	Arsenic	144		20	12,000	7.2
Landau 1990	1990	DB10	5	Arsenic	133		20	12,000	6.7
Landau 1990	1990	DB7	8.5	Arsenic	107		20	590	5.4
Hart Crowser 1990b	Aug-90	HC-103	8.5	Arsenic	75		20	590	3.8
Hart Crowser 1990b	Aug-90	HC-107	3.1	Arsenic	74		20	12,000	3.7
Hart Crowser 1990b	Aug-90	HC-109	6.5	Arsenic	53		20	12,000	2.7
Landau 1990	1990	DB6	13	Arsenic	38		20	590	1.9
Hart Crowser 1990b	Aug-90	HC-104	5.2	Arsenic	26		20	12,000	1.3
Landau 1990	1990	DB2	3.5	Arsenic	25		20	12,000	1.3
Landau 1990	1990	DB3	3.5	Arsenic	21.0		20	12,000	1.1
Hart Crowser 1989b	**Feb-89**	**HC-14**	**3.4-4.0**	**Arsenic (total)**	**2,800**		**20**	**12,000**	**140**
Hart Crowser 1989b	**Jan-89**	**HC-13**	**3.7-4.1**	**Arsenic (total)**	**2,200**		**20**	**12,000**	**110**
Hart Crowser 1989b	**Nov-88**	**HC-1**	**2.5-3.75**	**Arsenic (total)**	**1,600**		**20**	**12,000**	**80**
Hart Crowser 1989b	**Feb-89**	**HC-16**	**3.5-3.7**	**Arsenic (total)**	**770**		**20**	**12,000**	**39**
Hart Crowser 1989b	Jan-89	HC-10	2.5-4.0	Arsenic (total)	82		20	12,000	4.1
Hart Crowser 1989b	Feb-89	HC-17	4.0-4.33	Arsenic (total)	68		20	12,000	3.4
Hart Crowser 1989b	Jan-89	HC-13	4.1-5.5	Arsenic (total)	35		20	12,000	1.8
Hart Crowser 1989b	Nov-88	HC-1A	15.0-16.5	Arsenic (total)	23		20	590	1.2
Hart Crowser 1989b	Jan-89	HC-11	2.5-4.0	Arsenic (total)	19		20	12,000	1.0
Landau 1990	**1990**	**DB11**	**8**	**Benzo(a)anthracene**	**280**			**0.27**	**1,037**
Landau 1990	**1990**	**DB6**	**4.5**	**Benzo(a)anthracene**	**120**			**5.4**	**22**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzo(a)anthracene**	**86**			**0.27**	**319**
Landau 1990	**1990**	**DB6**	**7**	**Benzo(a)anthracene**	**25**			**0.27**	**93**
Landau 1990	1990	DB3	3.5	Benzo(a)anthracene	19			5.4	3.5
Landau 1990	1990	DB5	2	Benzo(a)anthracene	18			5.4	3.3
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(a)anthracene	18			5.4	3.3
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(a)anthracene**	**14**			**0.27**	**52**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(a)anthracene	14			5.4	2.6
Landau 1990	1990	DB4	6	Benzo(a)anthracene	13			5.4	2.4

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Crowley Marine Services

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Hart Crowser 1990b	Aug-90	HC-103	8.5	Benzo(a)anthracene	11			0.27	41
Hart Crowser 1990b	Aug-90	HC-103	9.8	Benzo(a)anthracene	9.9			0.27	37
Landau 1990	1990	DB2	4.5	Benzo(a)anthracene	7.3			5.4	1.4
Landau 1990	1990	DB6	13	Benzo(a)anthracene	3.1			0.27	11
Landau 1990	1990	DB2	7	Benzo(a)anthracene	2.8			0.27	10
Landau 1990	1990	DB4	8.5	Benzo(a)anthracene	2.6			0.27	9.6
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(a)anthracene	1.7			0.27	6.3
Landau 1990	1990	DB7	11.5	Benzo(a)anthracene	1.3			0.27	4.8
Landau 1990	1990	DB2	9.5	Benzo(a)anthracene	0.92			0.27	3.4
Hart Crowser 1990b	Aug-90	HC-106	7.5	Benzo(a)anthracene	0.53			0.27	2.0
Landau 1990	1990	DB7	8.5	Benzo(a)anthracene	0.5			0.27	1.9
Landau 1990	1990	DB6	16	Benzo(a)anthracene	0.39			0.27	1.4
Landau 1990	1990	DB11	8	Benzo(a)pyrene	140		0.1	0.21	1,400
Landau 1990	1990	DB6	4.5	Benzo(a)pyrene	53		0.1	4.2	530
Landau 1990	1990	DB11	9.5	Benzo(a)pyrene	26		0.1	0.21	260
Landau 1990	1990	DB3	3.5	Benzo(a)pyrene	25		0.1	4.2	250
Landau 1990	1990	DB2	4.5	Benzo(a)pyrene	18		0.1	4.2	180
Landau 1990	1990	DB6	7	Benzo(a)pyrene	13		0.1	0.21	130
Hart Crowser 1990b	Aug-90	HC-110	8.9	Benzo(a)pyrene	12		0.1	0.21	120
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(a)pyrene	8.6		0.1	4.2	86
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(a)pyrene	8.6		0.1	4.2	86
Landau 1990	1990	DB5	2	Benzo(a)pyrene	7.7		0.1	4.2	77
Hart Crowser 1990b	Aug-90	HC-103	9.8	Benzo(a)pyrene	7.2		0.1	0.21	72
Landau 1990	1990	DB4	6	Benzo(a)pyrene	5.2		0.1	4.2	52
Landau 1990	1990	DB2	7	Benzo(a)pyrene	4.6		0.1	0.21	46
Landau 1990	1990	DB8	5	Benzo(a)pyrene	3.2		0.1	4.2	32
Landau 1990	1990	DB6	2	Benzo(a)pyrene	2.6		0.1	4.2	26
Hart Crowser 1990b	Aug-90	HC-103	8.5	Benzo(a)pyrene	2.5		0.1	0.21	25
Landau 1990	1990	DB6	13	Benzo(a)pyrene	1.8		0.1	0.21	18
Landau 1990	1990	DB10	5	Benzo(a)pyrene	1.2		0.1	4.2	12
Landau 1990	1990	DB7	8.5	Benzo(a)pyrene	1.2		0.1	0.21	12
Hart Crowser 1990b	Aug-90	HC-106	3.5	Benzo(a)pyrene	1.1		0.1	4.2	11
Landau 1990	1990	DB4	8.5	Benzo(a)pyrene	1.1		0.1	0.21	11
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(a)pyrene	1.1		0.1	0.21	11
Landau 1990	1990	DB9	5	Benzo(a)pyrene	0.99		0.1	4.2	9.9
Landau 1990	1990	DB2	9.5	Benzo(a)pyrene	0.74		0.1	0.21	7.4
Landau 1990	1990	DB7	11.5	Benzo(a)pyrene	0.71		0.1	0.21	7.1
Landau 1990	1990	DB12	5	Benzo(a)pyrene	0.54		0.1	4.2	5.4
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(a)pyrene	0.32		0.1	4.2	3.2

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Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(a)pyrene	0.26		0.1	4.2	2.6
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(a)pyrene	0.22		0.1	4.2	2.2
Landau 1990	1990	DB6	16	Benzo(a)pyrene	0.2		0.1	0.21	2.0
Landau 1990	1990	DB11	6.5	Benzo(a)pyrene	0.17		0.1	4.2	1.7
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(a)pyrene	0.16		0.1	4.2	1.6
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(b)fluoranthene**	**17**			**0.45**	**38**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(b)fluoranthene	17			9.0	1.9
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(b)fluoranthene	16			9.0	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(b)fluoranthene**	**14**			**0.45**	**31**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(b)fluoranthene**	**5.2**			**0.45**	**12**
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(b)fluoranthene	2			0.45	4.4
Landau 1990	**1990**	**DB11**	**8**	**Benzo(g,h,i)perylene**	**20**			**0.078**	**256**
Landau 1990	1990	DB6	4.5	Benzo(g,h,i)perylene	9.2			1.6	5.8
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(g,h,i)perylene**	**6.5**			**0.078**	**83**
Landau 1990	**1990**	**DB6**	**7**	**Benzo(g,h,i)perylene**	**6.3**			**0.078**	**81**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzo(g,h,i)perylene**	**5.3**			**0.078**	**68**
Landau 1990	1990	DB3	3.5	Benzo(g,h,i)perylene	4.1			1.6	2.6
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(g,h,i)perylene	3.5			1.6	2.2
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(g,h,i)perylene	3.4			1.6	2.1
Landau 1990	1990	DB2	4.5	Benzo(g,h,i)perylene	2.8			1.6	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(g,h,i)perylene**	**1.8**			**0.078**	**23**
Landau 1990	**1990**	**DB2**	**7**	**Benzo(g,h,i)perylene**	**0.88**			**0.078**	**11**
Landau 1990	1990	DB7	8.5	Benzo(g,h,i)perylene	0.76			0.078	9.7
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(g,h,i)perylene	0.59			0.078	7.6
Landau 1990	1990	DB6	13	Benzo(g,h,i)perylene	0.59			0.078	7.6
Hart Crowser 1990b	Aug-90	HC-103	8.5	Benzo(g,h,i)perylene	0.51			0.078	6.5
Landau 1990	1990	DB2	9.5	Benzo(g,h,i)perylene	0.25			0.078	3.2
Landau 1990	1990	DB4	8.5	Benzo(g,h,i)perylene	0.076	M		0.078	1.0
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(k)fluoranthene**	**18**			**0.45**	**40**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(k)fluoranthene	18			9.0	2.0
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(k)fluoranthene**	**17**			**0.45**	**38**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(k)fluoranthene	16			9.0	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(k)fluoranthene**	**6.5**			**0.45**	**14**
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(k)fluoranthene	2.5			0.45	5.6
Landau 1990	**1990**	**DB11**	**8**	**Benzofluoranthenes**	**510**			**0.45**	**1,133**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzofluoranthenes**	**159**			**0.45**	**353**
Landau 1990	1990	DB6	4.5	Benzofluoranthenes	65			9.0	7.2
Landau 1990	1990	DB3	3.5	Benzofluoranthenes	64			9.0	7.1
Landau 1990	1990	DB2	4.5	Benzofluoranthenes	36			9.0	4.0

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Landau 1990	1990	DB5	2	Benzofluoranthenes	19			9.0	2.1
Landau 1990	**1990**	**DB6**	**7**	**Benzofluoranthenes**	**16**			**0.45**	**36**
Landau 1990	1990	DB4	6	Benzofluoranthenes	16			9.0	1.8
Landau 1990	**1990**	**DB2**	**7**	**Benzofluoranthenes**	**9.3**			**0.45**	**21**
Landau 1990	1990	DB6	13	Benzofluoranthenes	3			0.45	6.7
Landau 1990	1990	DB4	8.5	Benzofluoranthenes	2.90			0.45	6.4
Landau 1990	1990	DB7	11.5	Benzofluoranthenes	2.3			0.45	5.1
Landau 1990	1990	DB7	8.5	Benzofluoranthenes	1.2			0.45	2.7
Landau 1990	1990	DB2	9.5	Benzofluoranthenes	1.2			0.45	2.7
Landau 1990	1990	DB6	4.5	Bis(2-Ethylhexyl)phthalate	3.2	MB	71	1.6	2.0
Landau 1990	**1990**	**DB11**	**8**	**Bis(2-Ethylhexyl)phthalate**	**2.6**	**B**	**71**	**0.078**	**33**
Landau 1990	**1990**	**DB11**	**9.5**	**Bis(2-Ethylhexyl)phthalate**	**0.87**	**B**	**71**	**0.078**	**11**
Landau 1990	1990	DB7	11.5	Bis(2-Ethylhexyl)phthalate	0.62	B	71	0.078	7.9
Landau 1990	1990	DB3	7.5	Bis(2-Ethylhexyl)phthalate	0.51	B	71	0.078	6.5
Landau 1990	1990	DB7	8.5	Bis(2-Ethylhexyl)phthalate	0.49	B	71	0.078	6.3
Landau 1990	1990	DB1	9.5	Bis(2-Ethylhexyl)phthalate	0.49	B	71	0.078	6.3
Landau 1990	1990	DB2	18	Bis(2-Ethylhexyl)phthalate	0.45		71	0.078	5.8
Landau 1990	1990	DB3	13.5	Bis(2-Ethylhexyl)phthalate	0.41	B	71	0.078	5.3
Landau 1990	1990	DB3	9	Bis(2-Ethylhexyl)phthalate	0.38	B	71	0.078	4.9
Landau 1990	1990	DB2	9.5	Bis(2-Ethylhexyl)phthalate	0.37	B	71	0.078	4.7
Landau 1990	1990	DB3	17	Bis(2-Ethylhexyl)phthalate	0.37	B	71	0.078	4.7
Landau 1990	1990	DB5	8	Bis(2-Ethylhexyl)phthalate	0.28	B	71	0.078	3.6
Landau 1990	1990	DB2	12	Bis(2-Ethylhexyl)phthalate	0.27	B	71	0.078	3.5
Landau 1990	1990	FB4	11	Bis(2-Ethylhexyl)phthalate	0.15		71	0.078	1.9
Landau 1990	1990	DB5	11	Bis(2-Ethylhexyl)phthalate	0.11	B	71	0.078	1.4
Landau 1990	1990	DB6	4.5	Cadmium	4.9		2	34	2.5
Landau 1990	1990	DB6	7	Cadmium	4.1		2	1.7	2.1
Landau 1990	1990	DB7	11.5	Cadmium	3.6		2	1.7	1.8
Landau 1990	1990	DB6	2	Cadmium	2.1		2	34	1.1
Landau 1990	1990	DB6	4.5	Chromium	109		19	5,400	5.7
Landau 1990	1990	DB5	2	Chromium	70.7		19	5,400	3.7
Landau 1990	1990	DB6	7	Chromium	58.3		19	270	3.1
Landau 1990	1990	DB11	8	Chromium	50.2		19	270	2.6
Landau 1990	1990	DB7	11.5	Chromium	48.3		19	270	2.5
Landau 1990	1990	DB6	2	Chromium	38.4		19	5,400	2.0
Landau 1990	1990	DB7	8.5	Chromium	29.7		19	270	1.6
Landau 1990	1990	DB7	6	Chromium	27.2		19	5,400	1.4
Landau 1990	1990	DB2	3.5	Chromium	25.3		19	5,400	1.3
Landau 1990	1990	DB3	2	Chromium	23.1		19	5,400	1.2

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	FB5	2	Chromium	21.4		19	5,400	1.1
Landau 1990	1990	DB8	5	Chromium	19.0		19	5,400	1.0
Landau 1990	1990	DB4	6	Chromium	18.5		19	5,400	1.0
Landau 1990	**1990**	**DB6**	**4.5**	**Chrysene**	**380**	**B**		**9.2**	**41**
Landau 1990	**1990**	**DB11**	**8**	**Chrysene**	**320**	**B**		**0.46**	**696**
Landau 1990	**1990**	**DB11**	**9.5**	**Chrysene**	**97**	**B**		**0.46**	**211**
Landau 1990	**1990**	**DB6**	**7**	**Chrysene**	**40**	**B**		**0.46**	**87**
Landau 1990	1990	DB3	3.5	Chrysene	37	B		9.2	4.0
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Chrysene**	**25**			**0.46**	**54**
Landau 1990	1990	DB5	2	Chrysene	20	B		9.2	2.2
Hart Crowser 1990b	Aug-90	HC-106	5.3	Chrysene	20			9.2	2.2
Landau 1990	1990	DB2	4.5	Chrysene	19	B		9.2	2.1
Landau 1990	1990	DB4	6	Chrysene	13	B		9.2	1.4
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Chrysene**	**12**			**0.46**	**26**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Chrysene	12			9.2	1.3
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Chrysene**	**11**			**0.46**	**24**
Landau 1990	1990	DB6	2	Chrysene	9.9	B		9.2	1.1
Landau 1990	**1990**	**DB2**	**7**	**Chrysene**	**7.3**	**B**		**0.46**	**16**
Landau 1990	**1990**	**DB6**	**13**	**Chrysene**	**6.7**			**0.46**	**15**
Landau 1990	1990	DB4	8.5	Chrysene	2.6	B		0.46	5.7
Landau 1990	1990	DB7	11.5	Chrysene	1.9	B		0.46	4.1
Hart Crowser 1990b	Aug-90	HC-102	8.5	Chrysene	1.7			0.46	3.7
Landau 1990	1990	DB6	16	Chrysene	0.92			0.46	2.0
Landau 1990	1990	DB7	8.5	Chrysene	0.85	B		0.46	1.8
Landau 1990	1990	DB2	9.5	Chrysene	0.75			0.46	1.6
Landau 1990	1990	DB12	11.5	Chrysene	0.53	M		0.46	1.2
Hart Crowser 1990b	Aug-90	HC-106	7.5	Chrysene	0.51			0.46	1.1
Landau 1990	1990	DB6	4.5	Copper	1,400		3,000	780	1.8
Landau 1990	**1990**	**DB6**	**7**	**Copper**	**946**		**3,000**	**39**	**24**
Landau 1990	**1990**	**DB7**	**11.5**	**Copper**	**782**		**3,000**	**39**	**20**
Landau 1990	1990	DB2	7	Copper	179		3,000	39	4.6
Landau 1990	1990	DB7	8.5	Copper	91.2		3,000	39	2.3
Landau 1990	1990	DB6	13	Copper	48.9		3,000	39	1.3
Landau 1990	**1990**	**DB11**	**8**	**Dibenz(a,h)anthracene**	**46**			**0.033**	**1,394**
Landau 1990	**1990**	**DB6**	**4.5**	**Dibenz(a,h)anthracene**	**23**			**0.66**	**35**
Landau 1990	**1990**	**DB3**	**3.5**	**Dibenz(a,h)anthracene**	**11**			**0.66**	**17**
Landau 1990	**1990**	**DB11**	**9.5**	**Dibenz(a,h)anthracene**	**8**			**0.033**	**242**
Landau 1990	**1990**	**DB2**	**4.5**	**Dibenz(a,h)anthracene**	**6.8**			**0.66**	**10**
Landau 1990	**1990**	**DB6**	**7**	**Dibenz(a,h)anthracene**	**3.5**			**0.033**	**106**

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB2**	**7**	**Dibenz(a,h)anthracene**	**1.8**			**0.033**	**55**
Landau 1990	1990	DB5	2	Dibenz(a,h)anthracene	1.8			0.66	2.7
Landau 1990	1990	DB8	5	Dibenz(a,h)anthracene	1.3			0.66	2.0
Landau 1990	1990	DB4	6	Dibenz(a,h)anthracene	1.3			0.66	2.0
Hart Crowser 1990b	Aug-90	HC-106	5.3	Dibenz(a,h)anthracene	1.1			0.66	1.7
Hart Crowser 1990b	Aug-90	HC-107	3.1	Dibenz(a,h)anthracene	1.0			0.66	1.5
Landau 1990	1990	DB6	2	Dibenz(a,h)anthracene	0.92			0.66	1.4
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Dibenz(a,h)anthracene**	**0.52**			**0.033**	**16**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Dibenz(a,h)anthracene**	**0.46**			**0.033**	**14**
Landau 1990	**1990**	**DB6**	**13**	**Dibenz(a,h)anthracene**	**0.36**			**0.033**	**11**
Landau 1990	**1990**	**DB4**	**8.5**	**Dibenz(a,h)anthracene**	**0.33**			**0.033**	**10**
Hart Crowser 1990b	Aug-90	HC-103	8.5	Dibenz(a,h)anthracene	0.23	J		0.033	7.0
Landau 1990	1990	DB7	11.5	Dibenz(a,h)anthracene	0.17	M		0.033	5.2
Landau 1990	1990	DB7	8.5	Dibenz(a,h)anthracene	0.13			0.033	3.9
Landau 1990	**1990**	**DB11**	**8**	**Dibenzofuran**	**390**		**160**	**0.059**	**6,610**
Landau 1990	**1990**	**DB6**	**4.5**	**Dibenzofuran**	**210**		**160**	**1.2**	**175**
Landau 1990	**1990**	**DB11**	**9.5**	**Dibenzofuran**	**29**		**160**	**0.059**	**492**
Landau 1990	**1990**	**DB6**	**7**	**Dibenzofuran**	**21**		**160**	**0.059**	**356**
Landau 1990	**1990**	**DB6**	**13**	**Dibenzofuran**	**4.1**		**160**	**0.059**	**69**
Landau 1990	1990	DB5	2	Dibenzofuran	3.2		160	1.2	2.7
Landau 1990	**1990**	**DB3**	**17**	**Dibenzofuran**	**2.5**		**160**	**0.059**	**42**
Landau 1990	1990	DB6	2	Dibenzofuran	2.2		160	1.2	1.8
Landau 1990	**1990**	**DB2**	**7**	**Dibenzofuran**	**2**		**160**	**0.059**	**34**
Landau 1990	**1990**	**DB2**	**9.5**	**Dibenzofuran**	**1.2**		**160**	**0.059**	**20**
Landau 1990	**1990**	**DB7**	**11.5**	**Dibenzofuran**	**0.6**		**160**	**0.059**	**10**
Landau 1990	1990	DB6	16	Dibenzofuran	0.51		160	0.059	8.6
Landau 1990	1990	DB3	13.5	Dibenzofuran	0.44		160	0.059	7.5
Landau 1990	1990	DB4	8.5	Dibenzofuran	0.11	J	160	0.059	1.9
Landau 1990	1990	DB6	10	Dibenzofuran	0.092		160	0.059	1.6
Landau 1990	**1990**	**DB11**	**8**	**Fluoranthene**	**1,200**	**B**	**3,200**	**1.2**	**1,000**
Landau 1990	**1990**	**DB6**	**4.5**	**Fluoranthene**	**640**	**B**	**3,200**	**24**	**27**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Fluoranthene**	**310**		**3,200**	**1.2**	**258**
Landau 1990	**1990**	**DB11**	**9.5**	**Fluoranthene**	**280**	**B**	**3,200**	**1.2**	**233**
Landau 1990	**1990**	**DB6**	**7**	**Fluoranthene**	**56**	**B**	**3,200**	**1.2**	**47**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Fluoranthene**	**55**		**3,200**	**1.2**	**46**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Fluoranthene	38		3,200	24	1.6
Landau 1990	1990	DB5	2	Fluoranthene	35	B	3,200	24	1.5
Hart Crowser 1990b	Aug-90	HC-107	3.1	Fluoranthene	29		3,200	24	1.2
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Fluoranthene**	**27**		**3,200**	**1.2**	**23**

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	13	Fluoranthene	9.3		3,200	1.2	7.8
Landau 1990	1990	DB4	8.5	Fluoranthene	5	B	3,200	1.2	4.2
Landau 1990	1990	DB7	11.5	Fluoranthene	3.8	B	3,200	1.2	3.2
Landau 1990	1990	DB2	9.5	Fluoranthene	3.3		3,200	1.2	2.8
Landau 1990	1990	DB2	7	Fluoranthene	3.2	B	3,200	1.2	2.7
Hart Crowser 1990b	Aug-90	HC-102	8.5	Fluoranthene	3.1		3,200	1.2	2.6
Landau 1990	1990	DB3	17	Fluoranthene	2.1		3,200	1.2	1.8
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Fluoranthene	1.5		3,200	1.2	1.3
Landau 1990	1990	DB6	16	Fluoranthene	1.5		3,200	1.2	1.3
Landau 1990	**1990**	**DB7**	**8.5**	**Fluoranthene**	**1.3**	**B**	**3,200**	**1.2**	**1.1**
Landau 1990	**1990**	**DB11**	**8**	**Fluorene**	**630**		**3,200**	**0.081**	**7,778**
Landau 1990	**1990**	**DB6**	**4.5**	**Fluorene**	**420**	**B**	**3,200**	**1.6**	**263**
Landau 1990	**1990**	**DB11**	**9.5**	**Fluorene**	**140**		**3,200**	**0.081**	**1728**
Landau 1990	**1990**	**DB6**	**7**	**Fluorene**	**32**	**B**	**3,200**	**0.081**	**395**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Fluorene**	**31**		**3,200**	**0.081**	**383**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Fluorene	15		3,200	1.6	9.4
Landau 1990	**1990**	**DB6**	**13**	**Fluorene**	**6.3**		**3,200**	**0.081**	**78**
Landau 1990	1990	DB5	2	Fluorene	5.9		3,200	1.6	3.7
Landau 1990	1990	DB6	2	Fluorene	4	B	3,200	1.6	2.5
Landau 1990	1990	FSS2	0-0.5	Fluorene	4	M	3,200	1.6	2.5
Landau 1990	**1990**	**DB3**	**17**	**Fluorene**	**2.9**		**3,200**	**0.081**	**36**
Landau 1990	**1990**	**DB2**	**7**	**Fluorene**	**2.6**		**3,200**	**0.081**	**32**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Fluorene**	**2.2**		**3,200**	**0.081**	**27**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Fluorene**	**1.8**		**3,200**	**0.081**	**22**
Landau 1990	**1990**	**DB2**	**9.5**	**Fluorene**	**1.7**		**3,200**	**0.081**	**21**
Hart Crowser 1990b	Aug-90	HC-106	3.5	Fluorene	1.7		3,200	1.6	1.1
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Fluorene**	**1.5**		**3,200**	**0.081**	**19**
Landau 1990	**1990**	**DB6**	**16**	**Fluorene**	**0.92**		**3,200**	**0.081**	**11**
Landau 1990	**1990**	**DB7**	**11.5**	**Fluorene**	**0.88**		**3,200**	**0.081**	**11**
Landau 1990	1990	DB3	13.5	Fluorene	0.53		3,200	0.081	6.5
Landau 1990	1990	DB4	8.5	Fluorene	0.27	B	3,200	0.081	3.3
Landau 1990	1990	DB7	8.5	Fluorene	0.27		3,200	0.081	3.3
Landau 1990	1990	DB6	10	Fluorene	0.19		3,200	0.081	2.3
Landau 1990	1990	DB6	18.5	Fluorene	0.1		3,200	0.081	1.2
Landau 1990	**1990**	**DB11**	**8**	**Indeno(1,2,3-cd)pyrene**	**100**			**0.088**	**1,136**
Landau 1990	**1990**	**DB6**	**4.5**	**Indeno(1,2,3-cd)pyrene**	**37**			**1.8**	**21**
Landau 1990	**1990**	**DB3**	**3.5**	**Indeno(1,2,3-cd)pyrene**	**26**			**1.8**	**14**
Landau 1990	**1990**	**DB11**	**9.5**	**Indeno(1,2,3-cd)pyrene**	**20**			**0.088**	**227**
Landau 1990	1990	DB2	4.5	Indeno(1,2,3-cd)pyrene	14			1.8	7.8

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Landau 1990	**1990**	**DB6**	**7**	**Indeno(1,2,3-cd)pyrene**	**7.2**			**0.088**	**82**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Indeno(1,2,3-cd)pyrene**	**6.0**			**0.088**	**68**
Landau 1990	**1990**	**DB2**	**7**	**Indeno(1,2,3-cd)pyrene**	**4.3**			**0.088**	**49**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Indeno(1,2,3-cd)pyrene	3.8			1.8	2.1
Hart Crowser 1990b	Aug-90	HC-106	5.3	Indeno(1,2,3-cd)pyrene	3.8			1.8	2.1
Landau 1990	1990	DB5	2	Indeno(1,2,3-cd)pyrene	3.4			1.8	1.9
Landau 1990	1990	DB8	5	Indeno(1,2,3-cd)pyrene	2.9			1.8	1.6
Landau 1990	1990	DB4	6	Indeno(1,2,3-cd)pyrene	2.3			1.8	1.3
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Indeno(1,2,3-cd)pyrene**	**2.0**			**0.088**	**23**
Landau 1990	**1990**	**DB7**	**8.5**	**Indeno(1,2,3-cd)pyrene**	**0.88**			**0.088**	**10**
Landau 1990	1990	DB6	13	Indeno(1,2,3-cd)pyrene	0.82			0.088	9.3
Hart Crowser 1990b	Aug-90	HC-103	8.5	Indeno(1,2,3-cd)pyrene	0.64			0.088	7.3
Hart Crowser 1990b	Aug-90	HC-102	8.5	Indeno(1,2,3-cd)pyrene	0.58			0.088	6.6
Landau 1990	1990	DB7	11.5	Indeno(1,2,3-cd)pyrene	0.55			0.088	6.3
Landau 1990	1990	DB4	8.5	Indeno(1,2,3-cd)pyrene	0.53			0.088	6.0
Landau 1990	1990	DB2	9.5	Indeno(1,2,3-cd)pyrene	0.26			0.088	3.0
Landau 1990	1990	DB6	4.5	Lead	1,250		250	1,300	5.0
Landau 1990	**1990**	**DB7**	**11.5**	**Lead**	**712**		**250**	**67**	**11**
Landau 1990	1990	DB6	2	Lead	434		250	1,300	1.7
Landau 1990	1990	DB4	6	Lead	319		250	1,300	1.3
Landau 1990	1990	DB11	8	Lead	311		250	67	4.6
Landau 1990	1990	DB2	7	Lead	226		250	67	3.4
Landau 1990	1990	DB7	8.5	Lead	116		250	67	1.7
Landau 1990	**1990**	**DB6**	**4.5**	**Methylene Chloride**	**2**	**B**	**0.02**		**100**
Landau 1990	**1990**	**DB6**	**7**	**Methylene Chloride**	**0.53**	**B**	**0.02**		**27**
Landau 1990	1990	DB11	8	Methylene Chloride	0.066	JB	0.02		3.3
Landau 1990	1990	DB6	2	Methylene Chloride	0.053	B	0.02		2.7
Landau 1990	1990	DB11	9.5	Methylene Chloride	0.041	B	0.02		2.1
Landau 1990	1990	DB6	16	Methylene Chloride	0.036	B	0.02		1.8
Landau 1990	1990	DB6	18.5	Methylene Chloride	0.035	B	0.02		1.8
Landau 1990	**1990**	**DB11**	**8**	**Naphthalene**	**2,100**		**5**	**0.20**	**10,500**
Landau 1990	**1990**	**DB6**	**4.5**	**Naphthalene**	**1,600**	**B**	**5**	**3.8**	**421**
Landau 1990	**1990**	**DB11**	**9.5**	**Naphthalene**	**450**		**5**	**0.20**	**2250**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Naphthalene**	**210**		**5**	**0.20**	**1050**
Landau 1990	**1990**	**DB6**	**7**	**Naphthalene**	**130**	**B**	**5**	**0.20**	**650**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Naphthalene**	**25**		**5**	**0.20**	**125**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Naphthalene	20		5	3.8	5
Landau 1990	**1990**	**DB6**	**13**	**Naphthalene**	**14**		**5**	**0.20**	**70**
Landau 1990	**1990**	**DB2**	**7**	**Naphthalene**	**9**		**5**	**0.20**	**45**

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Landau 1990	1990	DB6	2	Naphthalene	7.4		5	3.8	1.9
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Naphthalene**	**5.1**		**5**	**0.20**	**26**
Landau 1990	**1990**	**DB2**	**9.5**	**Naphthalene**	**4.2**		**5**	**0.20**	**21**
Landau 1990	**1990**	**DB6**	**16**	**Naphthalene**	**3.2**		**5**	**0.20**	**16**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Naphthalene**	**2.8**		**5**	**0.20**	**14**
Landau 1990	**1990**	**DB3**	**13.5**	**Naphthalene**	**2.7**		**5**	**0.20**	**14**
Landau 1990	1990	DB5	2	Naphthalene	2.4		5	3.8	0.6
Landau 1990	**1990**	**DB3**	**17**	**Naphthalene**	**2**		**5**	**0.20**	**10**
Landau 1990	1990	DB7	11.5	Naphthalene	2		5	0.20	9.0
Landau 1990	1990	DB6	10	Naphthalene	0.49		5	0.20	2.5
Landau 1990	1990	DB6	7	Pentachlorophenol	0.28		8.3	0.037	7.6
Landau 1990	1990	DB7	11.5	Pentachlorophenol	0.21		8.3	0.037	5.7
Landau 1990	1990	DB2	7	Pentachlorophenol	0.19	J	8.3	0.037	5.1
Landau 1990	1990	DB7	8.5	Pentachlorophenol	0.18		8.3	0.037	4.9
Landau 1990	1990	DB2	7	Pentachlorophenol	0.12		8.3	0.037	3.2
Landau 1990	1990	DB6	18.5	Pentachlorophenol	0.042	J	8.3	0.037	1.1
Landau 1990	**1990**	**DB11**	**8**	**Phenanthrene**	**2,200**	**B**		**0.49**	**4,490**
Landau 1990	**1990**	**DB6**	**4.5**	**Phenanthrene**	**1,400**	**B**		**9.7**	**144**
Landau 1990	**1990**	**DB11**	**9.5**	**Phenanthrene**	**460**	**B**		**0.49**	**939**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Phenanthrene**	**360**			**0.49**	**735**
Landau 1990	**1990**	**DB6**	**7**	**Phenanthrene**	**160**	**B**		**0.49**	**327**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Phenanthrene**	**88**			**0.49**	**180**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Phenanthrene	61			9.7	6.3
Landau 1990	1990	DB5	2	Phenanthrene	33	B		9.7	3.4
Landau 1990	**1990**	**DB6**	**13**	**Phenanthrene**	**27**			**0.49**	**55**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Phenanthrene**	**23**			**0.49**	**47**
Landau 1990	1990	DB6	2	Phenanthrene	17	B		9.7	1.8
Landau 1990	1990	FSS2	0-0.5	Phenanthrene	17			9.7	1.8
Landau 1990	1990	DB4	6	Phenanthrene	16	B		9.7	1.6
Hart Crowser 1990b	Aug-90	HC-107	3.1	Phenanthrene	14			9.7	1.4
Landau 1990	**1990**	**DB3**	**17**	**Phenanthrene**	**7.6**			**0.49**	**16**
Landau 1990	**1990**	**DB2**	**7**	**Phenanthrene**	**6.5**	**B**		**0.49**	**13**
Landau 1990	**1990**	**DB2**	**9.5**	**Phenanthrene**	**5.6**			**0.49**	**11**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Phenanthrene**	**4.9**			**0.49**	**10**
Landau 1990	1990	DB12	11.5	Phenanthrene	4.8			0.49	9.8
Landau 1990	1990	DB7	11.5	Phenanthrene	4.4	B		0.49	9.0
Landau 1990	1990	DB4	8.5	Phenanthrene	3.5	B		0.49	7.1
Hart Crowser 1990b	Aug-90	HC-103	10.8	Phenanthrene	3.5			0.49	7.1
Landau 1990	1990	DB12	5	Phenanthrene	3.5			9.7	0.4

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	16	Phenanthrene	3.3			0.49	6.7
Landau 1990	1990	DB7	8.5	Phenanthrene	1.6	B		0.49	3.3
Hart Crowser 1990b	Aug-90	HC-106	7.5	Phenanthrene	1.2			0.49	2.4
Hart Crowser 1990b	Aug-90	HC-102	8.5	Phenanthrene	1.1			0.49	2.2
Landau 1990	1990	DB6	10	Phenanthrene	0.91			0.49	1.9
Landau 1990	1990	DB3	13.5	Phenanthrene	0.86			0.49	1.8
Landau 1990	1990	DB6	18.5	Phenanthrene	0.59			0.49	1.2
Landau 1990	1990	DB6	4.5	Phenol	4.3		48,000	2.1	2.0
Landau 1990	1990	DB6	7	Phenol	0.88		48,000	0.12	7.3
Landau 1990	**1990**	**DB11**	**8**	**Pyrene**	**840**	**B**	**2,400**	**1.4**	**600**
Landau 1990	**1990**	**DB6**	**4.5**	**Pyrene**	**470**	**B**	**2,400**	**28**	**17**
Landau 1990	**1990**	**DB11**	**9.5**	**Pyrene**	**250**	**B**	**2,400**	**1.4**	**179**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Pyrene**	**86**		**2,400**	**1.4**	**61**
Landau 1990	**1990**	**DB6**	**7**	**Pyrene**	**48**	**B**	**2,400**	**1.4**	**34**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Pyrene**	**44**		**2,400**	**1.4**	**31**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Pyrene	41		2,400	28	1.5
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Pyrene**	**34**		**2,400**	**1.4**	**24**
Landau 1990	1990	DB5	2	Pyrene	32	B	2,400	28	1.1
Landau 1990	1990	DB6	13	Pyrene	8.7		2,400	1.4	6.2
Landau 1990	1990	DB2	7	Pyrene	4.8	B	2,400	1.4	3.4
Landau 1990	1990	DB4	8.5	Pyrene	4	B	2,400	1.4	2.9
Landau 1990	1990	DB2	9.5	Pyrene	3.4		2,400	1.4	2.4
Landau 1990	1990	DB7	11.5	Pyrene	3.2	B	2,400	1.4	2.3
Hart Crowser 1990b	Aug-90	HC-102	8.5	Pyrene	2.9		2,400	1.4	2.1
Landau 1990	1990	DB6	16	Pyrene	1.8		2,400	1.4	1.3
Landau 1990	1990	DB3	17	Pyrene	1.8		2,400	1.4	1.3
Landau 1990	1990	DB7	8.5	Pyrene	1.5	B	2,400	1.4	1.1
Landau 1990	**1990**	**FSS2**	**0-0.5**	**Total Petroleum Hydrocarbons**	**280,000**		**2,000**		**140**
Landau 1990	**1990**	**FSS3**	**0-0.5**	**Total Petroleum Hydrocarbons**	**130,000**		**2,000**		**65**
Landau 1990	**1990**	**DB11**	**8**	**Total Petroleum Hydrocarbons**	**29,000**		**2,000**		**15**
Landau 1990	1990	DB6	4.5	Total Petroleum Hydrocarbons	14,000		2,000		7.0
Landau 1990	1990	DB5	2	Total Petroleum Hydrocarbons	2,600		2,000		1.3
Landau 1990	1990	DB11	9.5	Total Petroleum Hydrocarbons	2,600		2,000		1.3
Landau 1990	1990	DB6	4.5	Zinc	4,180		24,000	770	5.4
Landau 1990	**1990**	**DB6**	**7**	**Zinc**	**3,220**		**24,000**	**38**	**85**
Landau 1990	**1990**	**DB7**	**11.5**	**Zinc**	**2,600**		**24,000**	**38**	**68**
Landau 1990	1990	DB6	2	Zinc	1,640		24,000	770	2.1
Landau 1990	**1990**	**DB2**	**7**	**Zinc**	**716**		**24,000**	**38**	**19**
Landau 1990	1990	DB7	8.5	Zinc	332		24,000	38	8.7

Table 4
Chemicals Above Screening Levels in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	13	Zinc	132		24,000	38	3.5
Landau 1990	1990	DB4	8.5	Zinc	61.4		24,000	38	1.6
Landau 1990	1990	DB11	8	Zinc	50.3		24,000	38	1.3
Landau 1990	1990	DB6	16	Zinc	44.8		24,000	38	1.2
Landau 1990	1990	DB2	18	Zinc	42.2		24,000	38	1.1
Landau 1990	1990	DB1	9.5	Zinc	42.1		24,000	38	1.1
Landau 1990	1990	DB2	12	Zinc	40.9		24,000	38	1.1

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 5
Chemicals Above Screening Levels in Groundwater
Crowley Marine Services

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Landau 1990	1990	DMW-3	2-Methylnaphthalene	55		32	31	1.8
Landau 1990	**1990**	**DMW-3**	**Acenaphthene**	**120**		**960**	**9.3**	**13**
Landau 1990	1990	DMW-2	Acenaphthene	24		960	9.3	2.6
Hart Crowser 1989a	Nov-88	MW-1	Antimony	10		6.4		1.6
Hart Crowser 1989b	Nov-88	HC-1	Antimony	10		6.4		1.6
Hart Crowser 1989b	**Nov-88**	**HC-1**	**Arsenic**	**98**		**5**	**370**	**20**
Landau 1990	1990	DMW-6	Arsenic	9		5	370	1.8
Hart Crowser 1989b	Jun-89	HC-19	Arsenic	7		5	370	1.4
Landau 1990	1990	DMW-2	Arsenic	7		5	370	1.4
Landau 1990	1990	DMW-3	Arsenic	7		5	370	1.4
Hart Crowser 1989a	Nov-88	MW-1	Arsenic	6		5	370	1.2
Hart Crowser 1990b	9/4/1990	HC-1	Arsenic (dissolved)	25		5	370	5.0
Hart Crowser 1990b	9/4/1990	DMW-3	Arsenic (dissolved)	11		5	370	2.2
Hart Crowser 1990b	9/4/1990	DMW-6	Arsenic (dissolved)	10		5	370	2.0
Hart Crowser 1990b	9/4/1990	DMW-2	Arsenic (dissolved)	6		5	370	1.2
Hart Crowser 1990b	**9/4/1990**	**HC-1**	**Arsenic (total)**	**100**		**5**	**370**	**20**
Hart Crowser 1990b	9/4/1990	DMW-6	Arsenic (total)	18		5	370	3.6
Hart Crowser 1990b	9/4/1990	FMW-2	Arsenic (total)	7		5	370	1.4
Hart Crowser 1989a	**Nov-88**	**MW-1**	**Bis(2-ethylhexyl)phthalate**	**47**	**B**	**6.3**	**0.47**	**100**
Landau 1990	**1990**	**FMW-1**	**Bis(2-ethylhexyl)phthalate**	**29**	**B**	**6.3**	**0.47**	**62**
Landau 1990	**1990**	**DMW-3**	**Bis(2-ethylhexyl)phthalate**	**20**	**B**	**6.3**	**0.47**	**43**
Landau 1990	**1990**	**DMW-6**	**Bis(2-ethylhexyl)phthalate**	**19**	**B**	**6.3**	**0.47**	**40**
Landau 1990	**1990**	**FMW-3**	**Bis(2-ethylhexyl)phthalate**	**17**	**B**	**6.3**	**0.47**	**36**
Landau 1990	**1990**	**DMW-2**	**Bis(2-ethylhexyl)phthalate**	**12**	**B**	**6.3**	**0.47**	**26**
Landau 1990	**1990**	**FMW-2**	**Bis(2-ethylhexyl)phthalate**	**6.7**	**B**	**6.3**	**0.47**	**14**
Hart Crowser 1989a	**Nov-88**	**HC-2**	**Bis(2-ethylhexyl)phthalate**	**5**	**B**	**6.3**	**0.47**	**11**
Landau 1990	1990	DMW-3	Dibenzofuran	50		32	5.1	9.8
Landau 1990	1990	DMW-2	Dibenzofuran	6.7		32	5.1	1.3
Landau 1990	1990	DMW-3	Fluorene	58		640	7.0	8.3
Landau 1990	1990	DMW-2	Fluorene	10		640	7.0	1.4
Hart Crowser 1990b	9/4/1990	DMW-3	Naphthalene	250		160	92	2.7
Landau 1990	1990	DMW-3	Naphthalene	140		160	92	1.5
Landau 1990	1990	FMW-2	Pentachlorophenol	1.1	J	0.73	10	1.5
Landau 1990	1990	DMW-3	Phenanthrene	44			23	1.9

Table 5
Chemicals Above Screening Levels in Groundwater
Crowley Marine Services

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**1,1,1-TCA**	**160**		**2**		**80**
Hart Crowser 1990b	**1990**	**PT-3**		**1,1,1-TCA**	**130**		**2**		**65**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**1,1,1-TCA**	**120**		**2**		**60**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**1,1,1-TCA**	**97**		**2**		**49**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,1,1-TCA**	**42**		**2**		**21**
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	1,1,1-TCA	15		2		7.5
Hart Crowser 1993a	Jul-93	B-47	6	1,1,1-TCA	3		2		1.5
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,1,1-TCA	2		2		1.0
Hart Crowser 1993a	Jun-93	B-43 (DUP)	12	1,1,1-TCA	2		2		1.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	1,1-DCE	8.9		1.7		5.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,2-Dichlorobenzene**	**18**		**15**	**0.0038**	**4,737**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**1,2-Dichlorobenzene**	**1.7**		**15**	**0.0038**	**447**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**1,2-Dichlorobenzene**	**0.41**	**J**	**15**	**0.0038**	**108**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,2-Dichlorobenzene**	**0.14**		**15**	**0.0038**	**37**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,2-Dichlorobenzene**	**0.12**	**J**	**15**	**0.0038**	**32**
Ecology 1993d	**Jul-93**	**B-52**	**12**	**1,2-Dichlorobenzene**	**0.1**	**J**	**15**	**0.0038**	**26**
Hart Crowser 1992a	Jan-91	SB-11	13	1,2-Dichlorobenzene	0.035	J	15	0.0038	9.2
Ecology 1993d	Jul-93	B-52	12	1,2-Dichlorobenzene	0.032	J	15	0.0038	8.4
Ecology 1993b	Jun-93	278089		1,2-Dichlorobenzene	0.025	J	15	0.0038	6.6
Ecology 1993a	Jul-93	B-49	15	1,2-Dichlorobenzene	0.012	J	15	0.0038	3.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,4-Dichlorobenzene**	**5.9**		**42**	**0.015**	**393**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**1,4-Dichlorobenzene**	**0.71**		**42**	**0.015**	**47**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**1,4-Dichlorobenzene**	**0.16**	**J**	**42**	**0.015**	**11**
Ecology 1993a	Jul-93	B-47	12	1,4-Dichlorobenzene	0.036	J	42	0.015	2.4
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,4-Dimethylbenzene**	**0.5**	**J**	**42**	**0.015**	**33**
Hart Crowser 1992b	**Apr-92**	**B-29 (surface fines)**	**0**	**2,4-Dimethylphenol**	**0.52**		**1,600**	**0.037**	**14**
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**2-Methylnaphthalene**	**2.8**		**320**	**0.073**	**38**
Hart Crowser 1992a	Jan-91	SB-10	2.5	2-Methylnaphthalene	1.9		320	1.4	1.4
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**2-Methylnaphthalene**	**1.7**		**320**	**0.073**	**23**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**2-Methylnaphthalene**	**0.95**		**320**	**0.073**	**13**
Hart Crowser 1995	Jul-95	HC-GW-1		2-Methylnaphthalene	0.42		320	0.073	5.8
Hart Crowser 1992a	Jan-91	SB-10	12.5	2-Methylnaphthalene	0.3		320	0.073	4.1
Ecology 1993a	Jul-93	B-49	15	2-Methylnaphthalene	0.15	J	320	0.073	2.1
Ecology 1993a	Jul-93	B-50	10	2-Methylnaphthalene	0.13	J	320	0.073	1.8
Hart Crowser 1992a	Jan-91	SB-11	7.5	2-Methylnaphthalene	0.12		320	0.073	1.6
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	4-Methylphenol	1.3			0.98	1.3
Hart Crowser 1992a	Jan-91	B-15	17	4-Methylphenol	0.3			0.056	5.4
Ecology 1993a	Jul-93	B-47	12	4-Methylphenol	0.11	J		0.056	2.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Acenaphthalene	0.14			0.069	2.0

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Arsenic	51		20	12,000	2.6
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Arsenic	43		20	12,000	2.2
Hart Crowser 1990b	**1990**	**25-S**		**Benzene**	**12**		**0.03**		**400**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Benzene**	**12**		**0.03**		**400**
Hart Crowser 1990b	**1990**	**PT-2**		**Benzene**	**3.6**		**0.03**		**120**
Hart Crowser 1990b	**1990**	**PT-3**		**Benzene**	**3**		**0.03**		**100**
Hart Crowser 1990a	May-90	B2-S3	10	Benzene	0.17		0.03		5.7
Hart Crowser 1992a	Jan-91	SB-12	13	Benzene	0.15		0.03		5.0
TV-F&S 2000a	Jul-99	TW-1	11.0	Benzene	0.14		0.03		4.7
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Benzene	0.068		0.03		2.3
Hart Crowser 1992b	**Mar-92**	**B-22**	**1.5-3**	**Benzo(a)pyrene**	**1**		**0.1**	**4.2**	**10**
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(a)pyrene	0.59		0.1	4.2	5.9
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Benzo(a)pyrene	0.51		0.1	4.2	5.1
Hart Crowser 1992a	Oct-91	Comp F	0-1	Benzo(a)pyrene	0.13	J	0.1	4.2	1.3
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Bis(2-Ethylhexyl)Phthalate**	**140**	**B**	**71**	**1.6**	**88**
Hart Crowser 1992b	**Mar-92**	**B-24**	**7.5-9**	**Bis(2-Ethylhexyl)Phthalate**	**110**		**71**	**0.078**	**1,410**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Bis(2-Ethylhexyl)Phthalate**	**71**	**B**	**71**	**0.078**	**910**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Bis(2-Ethylhexyl)Phthalate**	**25**	**B**	**71**	**0.078**	**321**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**Bis(2-Ethylhexyl)Phthalate**	**13**		**71**	**0.078**	**167**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**7.5**	**Bis(2-Ethylhexyl)Phthalate**	**11**	**B**	**71**	**0.078**	**141**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Bis(2-Ethylhexyl)Phthalate**	**10**		**71**	**0.078**	**128**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Bis(2-Ethylhexyl)Phthalate**	**6.6**		**71**	**0.078**	**85**
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Bis(2-Ethylhexyl)Phthalate	6.4		71	1.6	4.0
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Bis(2-Ethylhexyl)Phthalate**	**6.2**		**71**	**0.078**	**79**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Bis(2-Ethylhexyl)Phthalate	2.5		71	1.6	1.6
Ecology 1993a	**Jul-93**	**B-50**	**10**	**Bis(2-Ethylhexyl)Phthalate**	**1.3**		**71**	**0.078**	**17**
Ecology 1993b	Jun-93	278086		Bis(2-Ethylhexyl)Phthalate	0.54		71	0.078	6.9
ATI 1991a	Aug-91	B-16/S2	10	Bis(2-Ethylhexyl)Phthalate	0.35		71	0.078	4.5
Ecology 1993b	Jun-93	278087		Bis(2-Ethylhexyl)Phthalate	0.34	J	71	0.078	4.4
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Bis(2-Ethylhexyl)Phthalate	0.31		71	0.078	4.0
Hart Crowser 1992a	Jan-91	SB-12	13	Bis(2-Ethylhexyl)Phthalate	0.2	B	71	0.078	2.6
Hart Crowser 1992a	Oct-91	G-3	7.5	Bis(2-Ethylhexyl)Phthalate	0.18		71	0.078	2.3
Ecology 1993b	Jun-93	278088		Bis(2-Ethylhexyl)Phthalate	0.15	J	71	0.078	1.9
Ecology 1993a	Jul-93	B-49	15	Bis(2-Ethylhexyl)Phthalate	0.12	J	71	0.078	1.5
Hart Crowser 1993a	Aug-92	B-37	2-4	Butylbenzylphthalate	6.9		16,000	1.3	5.3
Hart Crowser 1992a	Jan-91	SB-10	2.5	Butylbenzylphthalate	4.1		16,000	1.3	3.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Butylbenzylphthalate**	**1.3**		**16,000**	**0.066**	**20**
Hart Crowser 1992a	Jan-91	SB-10	12.5	Butylbenzylphthalate	0.42		16,000	0.066	6.4
Hart Crowser 1992a	Jan-91	SB-10	2.5	Cadmium	4.3		2	34	2.2

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	Jan-91	B-15	17	Cadmium	3.2		2	1.7	1.9
Hart Crowser 1992a	Jan-91	B-15	2.5	Cadmium	2.6		2	34	1.3
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Cadmium	2.3		2	34	1.2
Hart Crowser 1992a	Jan-91	SB-12	13	Cadmium	2.3		2	1.7	1.4
Hart Crowser 1992a	Jan-91	SB-11	13	Cadmium	2		2	1.7	1.2
Ecology 1991a	Aug-91	B-16	13.5	Chromium	57.7		19	270	3.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Chromium	42		19	5,400	2.2
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Chromium	25		19	5,400	1.3
Ecology 1991a	Aug-91	B-16	15	Chromium	21.0		19	270	1.1
Hart Crowser 1992a	Jan-91	B-15	17	Chromium	20		19	270	1.1
Hart Crowser 1995	Jul-95	HC-GW-1		Dibenzofuran	0.22		160	0.059	3.7
Ecology 1993a	Jul-93	B-50	6	Dibenzofuran	0.19	J	160	0.059	3.2
Ecology 1993a	Jul-93	B-50	10	Dibenzofuran	0.17	J	160	0.059	2.9
Ecology 1993a	Jul-93	B-49	15	Dibenzofuran	0.14	J	160	0.059	2.4
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Diesel-Range Hydrocarbons	2,400		2,000		1.2
Hart Crowser 1992a	Jan-91	SB-10	2.5	Di-n-butyl phthalate	200	B	8,000	39	5.1
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Di-n-butyl phthalate**	**110**	**B**	**8,000**	**2.0**	**55**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Di-n-butyl phthalate**	**40**	**B**	**8,000**	**2.0**	**20**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Di-n-butyl phthalate**	**22**		**8,000**	**2.0**	**11**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Di-n-butyl phthalate**	**22**		**8,000**	**2.0**	**11**
Hart Crowser 1992a	Jan-91	SB-11	7.5	Di-n-butyl phthalate	16	B	8,000	2.0	8.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Di-n-butyl phthalate	15		8,000	2.0	7.5
Hart Crowser 1995	Jul-95	HC-GW-1		Di-n-butyl phthalate	7.8		8,000	2.0	3.9
Ecology 1993a	Jul-93	B-50	10	Di-n-butyl phthalate	5.9		8,000	2.0	3.0
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Ethylbenzene**	**470**		**6**		**78**
Hart Crowser 1990b	**1990**	**PT-3**		**Ethylbenzene**	**180**		**6**		**30**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Ethylbenzene**	**140**		**6**		**23**
Hart Crowser 1990b	**1990**	**25-S**		**Ethylbenzene**	**100**		**6**		**17**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Ethylbenzene**	**100**		**6**		**17**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Ethylbenzene**	**90**		**6**		**15**
Hart Crowser 1990b	**1990**	**25-S**		**Ethylbenzene**	**71**		**6**		**12**
Hart Crowser 1990b	1990	PT-1		Ethylbenzene	41		6		6.8
Hart Crowser 1990b	1990	PT-5		Ethylbenzene	39		6		6.5
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Ethylbenzene	34		6		5.7
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Ethylbenzene	28		6		4.7
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	Ethylbenzene	26		6		4.3
Hart Crowser 1990a	May-90	B2-S3	10	Ethylbenzene	25		6		4.2
Hart Crowser 1990b	1990	PT-4		Ethylbenzene	25		6		4.2
Hart Crowser 1990a	May-90	B2-S3	10	Ethylbenzene	23		6		3.8

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Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	1990	21-C		Ethylbenzene	14		6		2.3
Hart Crowser 1990b	1990	PT-2		Ethylbenzene	13		6		2.2
Hart Crowser 1995	Jul-95	HC-GW-1		Fluorene	0.36		3,200	0.081	4.4
Ecology 1993a	Jul-93	B-49	15	Fluorene	0.23	J	3,200	0.081	2.8
Ecology 1993a	Jul-93	B-50	10	Fluorene	0.18	J	3,200	0.081	2.2
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Gasoline-Range Hydrocarbons**	**6,500**		**30**		**217**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Gasoline-Range Hydrocarbons**	**4,200**		**30**		**140**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Gasoline-Range Hydrocarbons**	**3,200**		**30**		**107**
Hart Crowser 1992b	**Apr-92**	**B-30 (surface total)**	**0**	**Gasoline-Range Hydrocarbons**	**2,600**		**30**		**87**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**Gasoline-Range Hydrocarbons**	**2,600**		**30**		**87**
Hart Crowser 1992b	**Apr-92**	**B-30 (surface fines)**	**0**	**Gasoline-Range Hydrocarbons**	**1,600**		**30**		**53**
Hart Crowser 1993a	**Aug-92**	**B-37**	**2-4**	**Gasoline-Range Hydrocarbons**	**1,429**		**30**		**48**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Gasoline-Range Hydrocarbons**	**1,400**		**30**		**47**
Hart Crowser 1992b	**Apr-92**	**B-31 (surface total)**	**0**	**Gasoline-Range Hydrocarbons**	**490**		**30**		**16**
ATI 1991a	Aug-91	B-16/S2	10	Gasoline-Range Hydrocarbons	150		30		5.0
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Gasoline-Range Hydrocarbons	46		30		1.5
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Gasoline-Range Hydrocarbons	32		30		1.1
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Gasoline-Range Hydrocarbons	30		30		1.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Heavy Oil-Range Hydrocarbons	11,000		2,000		5.5
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Heavy Oil-Range Hydrocarbons	4,000		2,000		2.0
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Heavy Oil-Range Hydrocarbons	3,400		2,000		1.7
Hart Crowser 1993a	Aug-92	B-32	0-3	Heavy Oil-Range Hydrocarbons	2,894		2,000		1.4
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Heavy Oil-Range Hydrocarbons	2,600		2,000		1.3
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Lead	500		250	1,300	2.0
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Lead	320		250	1,300	1.3
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Mercury**	**8.8**		**2**	**0.030**	**293**
Hart Crowser 1992a	Jan-91	SB-10	2.5	Mercury	0.9		2	0.59	1.5
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Mercury	0.62		2	0.59	1.1
Hart Crowser 1992a	Jan-91	SB-11	13	Mercury	0.2		2	0.030	6.7
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Mercury	0.14		2	0.030	4.7
Hart Crowser 1992a	Jan-91	B-15	12.5	Mercury	0.1		2	0.030	3.3
Hart Crowser 1992a	Jan-91	B-15	17	Mercury	0.1		2	0.030	3.3
Hart Crowser 1992a	Jan-91	SB-10	12.5	Mercury	0.1		2	0.030	3.3
Ecology 1991a	Aug-91	B-16	15	Mercury	0.0391		2	0.030	1.3
Hart Crowser 1990b	**1990**	**SB3/S2**		**Methylene Chloride**	**780**	**B**	**0.02**		**39,000**
Hart Crowser 1990b	**Oct-90**	**SB5/S3**	**12.5**	**Methylene Chloride**	**270**		**0.02**		**13,500**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Methylene Chloride**	**80**	**B**	**0.02**		**4,000**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**Methylene Chloride**	**38**	**B**	**0.02**		**1,900**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Methylene Chloride**	**34**	**B**	**0.02**		**1,700**

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	Jan-91	SB-10	17	Methylene Chloride	22		0.02		1,100
Hart Crowser 1990b	1990	25-S		Methylene Chloride	13		0.02		650
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Methylene Chloride	11	B	0.02		550
Hart Crowser 1990b	1990	PT-3		Methylene Chloride	5.6		0.02		280
Hart Crowser 1992a	Jan-91	B-15	2.5	Methylene Chloride	4.2	B	0.02		210
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Methylene Chloride	2.8	JB	0.02		140
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Methylene Chloride	2.4	JB	0.02		120
ATI 1991a	Aug-91	B-16/S7	16	Methylene Chloride	2.3	B	0.02		115
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Methylene Chloride	2.3	B	0.02		115
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Methylene Chloride	2.3	B	0.02		115
ATI 1991a	Aug-91	B-16/S7	16	Methylene Chloride	2.2	B	0.02		110
Hart Crowser 1993a	Jun-93	B-43 (DUP)	12	Methylene Chloride	1.7		0.02		85
Hart Crowser 1992a	Oct-91	Comp E	0-1	Methylene Chloride	1.7	B	0.02		85
Hart Crowser 1993a	Jun-93	B-43	12	Methylene Chloride	1.6		0.02		80
ATI 1991a	Aug-91	B-16/S2	10	Methylene Chloride	1.4	B	0.02		70
ATI 1991a	Aug-91	B-17/S12	46	Methylene Chloride	1.4	B	0.02		70
Hart Crowser 1992a	Oct-91	Comp F	0-1	Methylene Chloride	1.3	B	0.02		65
ATI 1991a	Aug-91	B-17/S1	18	Methylene Chloride	1.2	B	0.02		60
ATI 1991a	Aug-91	B-17/S7	39	Methylene Chloride	1.2	B	0.02		60
Hart Crowser 1990b	1990	PT-4		Methylene Chloride	1.2		0.02		60
Hart Crowser 1992a	Oct-91	Comp B	0-1	Methylene Chloride	1.1	B	0.02		55
Hart Crowser 1992a	Oct-91	Comp D	0-1	Methylene Chloride	1.1	B	0.02		55
Hart Crowser 1993a	Jun-93	B-44	14	Methylene Chloride	1		0.02		50
Hart Crowser 1992a	Oct-91	Comp A	0-1	Methylene Chloride	1.0	B	0.02		50
Hart Crowser 1992a	Oct-91	Comp C	0-1	Methylene Chloride	1.0	B	0.02		50
Hart Crowser 1992b	Mar-92	B-24 (DUP)	10.5-12	Methylene Chloride	0.96	B	0.02		48
Hart Crowser 1990b	1990	PT-5		Methylene Chloride	0.960		0.02		48
Hart Crowser 1992a	Jan-91	SB-11	13	Methylene Chloride	0.96		0.02		48
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Methylene Chloride	0.93	B	0.02		47
ATI 1991a	Aug-91	B-17/S6	37	Methylene Chloride	0.91	B	0.02		46
ATI 1991a	Aug-91	B-17/S2	22	Methylene Chloride	0.89	B	0.02		45
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Methylene Chloride	0.82	B	0.02		41
Hart Crowser 1992a	Oct-91	G-3	7.5	Methylene Chloride	0.81	B	0.02		41
Hart Crowser 1992a	Oct-91	H-1	2.5	Methylene Chloride	0.80	B	0.02		40
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Methylene Chloride	0.71	B	0.02		36
Hart Crowser 1992a	Oct-91	G-2	5	Methylene Chloride	0.71	B	0.02		36
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Methylene Chloride	0.66	B	0.02		33
Hart Crowser 1992a	Oct-91	G-1	2.5	Methylene Chloride	0.66	B	0.02		33
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Methylene Chloride	0.61	B	0.02		31

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	**Oct-91**	**H-2**	**5**	**Methylene Chloride**	**0.55**	**B**	**0.02**		**28**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**Methylene Chloride**	**0.5**		**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-22**	**6-7.5**	**Methylene Chloride**	**0.49**	**B**	**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-26**	**3-4.5**	**Methylene Chloride**	**0.49**	**B**	**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-26 (DUP)**	**12-13.5**	**Methylene Chloride**	**0.47**	**B**	**0.02**		**24**
Hart Crowser 1992b	**Mar-92**	**B-18**	**15-16.5**	**Methylene Chloride**	**0.46**	**B**	**0.02**		**23**
Hart Crowser 1992b	**Mar-92**	**B-20**	**12-13.5**	**Methylene Chloride**	**0.45**	**B**	**0.02**		**23**
Hart Crowser 1992b	**Mar-92**	**B-22**	**1.5-3**	**Methylene Chloride**	**0.43**	**B**	**0.02**		**22**
Hart Crowser 1992b	**Mar-92**	**B-22 (DUP)**	**10.5-12**	**Methylene Chloride**	**0.42**	**B**	**0.02**		**21**
Hart Crowser 1992a	**Oct-91**	**H-3**	**7.5**	**Methylene Chloride**	**0.39**	**B**	**0.02**		**20**
Hart Crowser 1992b	**Mar-92**	**B-18**	**7.5-9**	**Methylene Chloride**	**0.38**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-20**	**7.5-9**	**Methylene Chloride**	**0.38**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-26**	**6-7.5**	**Methylene Chloride**	**0.37**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-26 (DUP)**	**6-7.5**	**Methylene Chloride**	**0.37**	**B**	**0.02**		**19**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**2.5**	**Methylene Chloride**	**0.35**		**0.02**		**18**
Hart Crowser 1992b	**Apr-92**	**B-31**	**1.5-3**	**Methylene Chloride**	**0.31**	**JB**	**0.02**		**16**
Hart Crowser 1992b	**Apr-92**	**B-21 (DUP)**	**48-49.5**	**Methylene Chloride**	**0.29**	**JB**	**0.02**		**15**
Hart Crowser 1992b	**Apr-92**	**B-29**	**13.5-15**	**Methylene Chloride**	**0.29**	**JB**	**0.02**		**15**
Hart Crowser 1992b	**Mar-92**	**B-25**	**28-29.5**	**Methylene Chloride**	**0.28**	**JB**	**0.02**		**14**
Hart Crowser 1992b	**Apr-92**	**B-21**	**48-49.5**	**Methylene Chloride**	**0.27**	**JB**	**0.02**		**14**
Hart Crowser 1992b	**Apr-92**	**B-29**	**9-10.5**	**Methylene Chloride**	**0.26**	**JB**	**0.02**		**13**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**Methylene Chloride**	**0.25**		**0.02**		**13**
Hart Crowser 1992b	**Apr-92**	**B-31**	**7.5-9**	**Methylene Chloride**	**0.24**	**JB**	**0.02**		**12**
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Methylene Chloride	0.19	JB	0.02		9.5
Hart Crowser 1990a	May-90	B2-S3	10	Methylene Chloride	0.19	B	0.02		9.5
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Methylene Chloride	0.17	JB	0.02		8.5
Ecology 1993a	Jul-93	B-47	12	Methylene Chloride	0.16		0.02		8.0
Hart Crowser 1992a	Jan-91	SB-12	13	Methylene Chloride	0.13		0.02		6.5
Ecology 1993a	Jul-93	B-49	15	Methylene Chloride	0.11		0.02		5.5
Hart Crowser 1990b	Sep-90	B-8/S-7	18	Methylene Chloride	0.11		0.02		5.5
Ecology 1993b	Jun-93	278089		Methylene Chloride	0.085		0.02		4.3
Hart Crowser 1992a	Jan-91	SB-12	2.5	Methylene Chloride	0.055		0.02		2.8
Hart Crowser 1992a	Jan-91	SB-10	2.5	Naphthalene	5.9		5	3.8	1.6
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Naphthalene**	**4.6**		**5**	**0.20**	**23**
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Naphthalene**	**2.4**		**5**	**0.20**	**12**
Hart Crowser 1995	Jul-95	HC-GW-1		Naphthalene	1.3		5	0.20	6.5
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Naphthalene	1.1		5	0.20	5.5
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Naphthalene	0.97		5	0.20	4.9
Hart Crowser 1992a	Jan-91	SB-10	12.5	Naphthalene	0.86		5	0.20	4.3

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Ecology 1993a	Jul-93	B-49	15	Naphthalene	0.6		5	0.20	3.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Naphthalene	0.24		5	0.20	1.2
Hart Crowser 1990b	**1990**	**PT-1**		**PCE**	**19,000**		**0.05**		**380,000**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**PCE**	**18,000**		**0.05**		**360,000**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**PCE**	**15,000**		**0.05**		**300,000**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**PCE**	**13,000**		**0.05**		**260,000**
Hart Crowser 1990b	**1990**	**25-S**		**PCE**	**11,000**		**0.05**		**220,000**
Hart Crowser 1990b	**1990**	**25-S**		**PCE**	**6,000**		**0.05**		**120,000**
Hart Crowser 1990b	**1990**	**PT-3**		**PCE**	**5,900**		**0.05**		**118,000**
Hart Crowser 1990b	**1990**	**PT-2**		**PCE**	**4,400**		**0.05**		**88,000**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**PCE**	**3,000**		**0.05**		**60,000**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**PCE**	**2,700**		**0.05**		**54,000**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**PCE**	**2,600**		**0.05**		**52,000**
Hart Crowser 1990b	**1990**	**PT-1**		**PCE**	**2,500**		**0.05**		**50,000**
Hart Crowser 1990b	**1990**	**PT-4**		**PCE**	**2,300**		**0.05**		**46,000**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**PCE**	**1,900**		**0.05**		**38,000**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**PCE**	**1,500**		**0.05**		**30,000**
Hart Crowser 1990b	**1990**	**SP-2**		**PCE**	**1,200**		**0.05**		**24,000**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**PCE**	**1,100**		**0.05**		**22,000**
Hart Crowser 1990b	**1990**	**PT-5**		**PCE**	**930**		**0.05**		**18,600**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**PCE**	**900**		**0.05**		**18,000**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**PCE**	**900**		**0.05**		**18,000**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**PCE**	**320**		**0.05**		**6,400**
Ecology 1993a	**Jul-93**	**B-50**	**6**	**PCE**	**310**		**0.05**		**6,200**
Hart Crowser 1992a	**Jan-91**	**B-15**	**2.5**	**PCE**	**300**		**0.05**		**6,000**
Hart Crowser 1990b	**Oct-90**	**SB7/S3**	**12.5**	**PCE**	**220**		**0.05**		**4,400**
Hart Crowser 1995	**Jul-95**	**HC-GW-1 (DUP)**		**PCE**	**210**		**0.05**		**4,200**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**PCE**	**200**		**0.05**		**4,000**
Hart Crowser 1990b	**1990**	**21-C**		**PCE**	**170**		**0.05**		**3,400**
Hart Crowser 1990b	**Oct-90**	**B-12/S-1**	**2.5**	**PCE**	**160**		**0.05**		**3,200**
Hart Crowser 1990b	**Oct-90**	**B-7/S-7B**		**PCE**	**110**		**0.05**		**2,200**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**PCE**	**71**		**0.05**		**1,420**
Hart Crowser 1990b	**Oct-90**	**B-11/S-4**	**10**	**PCE**	**50**		**0.05**		**1,000**
Hart Crowser 1990b	**Oct-90**	**SB5/S3**	**12.5**	**PCE**	**44**		**0.05**		**880**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**PCE**	**32**		**0.05**		**640**
Hart Crowser 1993a	**Jun-93**	**B-43**	**12**	**PCE**	**23**		**0.05**		**460**
Hart Crowser 1993a	**Jun-93**	**B-43 (DUP)**	**12**	**PCE**	**23**		**0.05**		**460**
Hart Crowser 1992b	**Apr-92**	**B-30**	**4-5.5**	**PCE**	**21**		**0.05**		**420**
Hart Crowser 1990b	**1990**	**SB1/S3**		**PCE**	**19.2**		**0.05**		**384**

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Jul-93	B-52	6	PCE	19		0.05		380
TV-F&S 2000a	Feb-99	B-56	8.5	PCE	18.00		0.05		360
Hart Crowser 1993a	Jun-93	B-43	10	PCE	17		0.05		340
Hart Crowser 1993a	Aug-92	B-32	0-3	PCE	16		0.05		320
Hart Crowser 1990b	1990	17/18-C		PCE	13		0.05		260
Hart Crowser 1990b	Sep-90	B-9/S-6	15	PCE	8.4		0.05		168
TV-F&S 2000a	Jul-99	TW-6	12.0	PCE	8.40		0.05		168
Hart Crowser 1992a	Jan-91	SB-11	13	PCE	7.7		0.05		154
Hart Crowser 1993a	Jun-93	B-44	14	PCE	6.9		0.05		138
Ecology 1993a	Jul-93	B-49	15	PCE	5.3		0.05		106
Hart Crowser 1993a	Jul-93	B-51	12	PCE	5.2		0.05		104
TV-F&S 2000a	Feb-99	B-56	6.0	PCE	5.20		0.05		104
Hart Crowser 1992a	Jan-91	SB-11	2.5	PCE	5		0.05		100
ATI 1991a	Aug-91	B-16/S2	10	PCE	4.5		0.05		90
Hart Crowser 1993a	Jun-93	B-46	10	PCE	4.5		0.05		90
Ecology 1993a	Jul-93	B-49 (DUP)	15	PCE	4.1		0.05		82
Hart Crowser 1990b	1990	SP-4		PCE	4.1		0.05		82
Hart Crowser 1993a	Jul-93	B-49	12	PCE	3.8		0.05		76
Hart Crowser 1993a	Jul-93	B-52	12	PCE	3.8		0.05		76
Hart Crowser 1993a	Jul-93	B-52 (DUP)	12	PCE	3.6		0.05		72
Ecology 1993a	Jul-93	B-50	10	PCE	3.2	J	0.05		64
Hart Crowser 1993a	Jul-93	B-50	11	PCE	2.5		0.05		50
Hart Crowser 1993a	Jul-93	B-50	12	PCE	2.5		0.05		50
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	PCE	1.9		0.05		38
Hart Crowser 1993a	Aug-92	B-32	7-9	PCE	1.7		0.05		34
Hart Crowser 1992a	Jan-91	SB-11	7.5	PCE	1.7		0.05		34
TV-F&S 2001a	Jul-00	NW-11	6.5	PCE	1.60	J	0.05		32
Hart Crowser 1993a	Jun-93	B-45	14	PCE	1.5		0.05		30
Hart Crowser 1993a	Jun-93	B-45 (DUP)	14	PCE	1.5		0.05		30
Hart Crowser 1990b	Oct-90	B-10A/S-1	7.5	PCE	1.4		0.05		28
Hart Crowser 1993a	Jul-93	B-48	12	PCE	1.4		0.05		28
Hart Crowser 1993a	Jul-93	B-48 (DUP)	12	PCE	1.4		0.05		28
TV-F&S 2000a	Feb-99	B-56	14.0	PCE	1.40		0.05		28
TV-F&S 2000a	Feb-99	B-55	10.0	PCE	1.30		0.05		26
TV-F&S 2000a	Jul-99	TW-3	13.0	PCE	1.30		0.05		26
Hart Crowser 1990b	Oct-90	B-13/S-2	5	PCE	1.0		0.05		20
TV-F&S 2000a	Feb-99	B-54	14.0	PCE	1.00		0.05		20
TV-F&S 2001a	Jul-00	NW-9	6.5	PCE	0.99	J	0.05		20
TV-F&S 2000a	Feb-99	B-53	8.5	PCE	0.97		0.05		19

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	**Apr-92**	**B-31**	**1.5-3**	**PCE**	**0.94**		**0.05**		**19**
TV-F&S 2000a	**Jul-99**	**TW-6**	**9.0**	**PCE**	**0.81**		**0.05**		**16**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**PCE**	**0.75**		**0.05**		**15**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**PCE**	**0.73**		**0.05**		**15**
TV-F&S 2001a	**Jul-00**	**NW-10**	**6.5**	**PCE**	**0.68**	**J**	**0.05**		**14**
Ecology 1993b	**Jun-93**	**278089**		**PCE**	**0.67**		**0.05**		**13**
Hart Crowser 1990b	**Oct-90**	**B-14/S-3**	**11.5**	**PCE**	**0.640**		**0.05**		**13**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**PCE**	**0.61**	**J**	**0.05**		**12**
TV-F&S 2000a	**Jul-99**	**B-64**	**10.0**	**PCE**	**0.59**		**0.05**		**12**
TV-F&S 2000a	**Feb-99**	**B-56**	**11.0**	**PCE**	**0.58**		**0.05**		**12**
Hart Crowser 1990b	**1990**	**SP-6**		**PCE**	**0.550**		**0.05**		**11**
Hart Crowser 1993a	**Jun-93**	**B-45**	**44**	**PCE**	**0.54**		**0.05**		**11**
TV-F&S 2000a	**Jul-99**	**B-64**	**12.5**	**PCE**	**0.54**		**0.05**		**11**
Ecology 1993d	**Jul-93**	**B-51**	**12**	**PCE**	**0.51**		**0.05**		**10**
Hart Crowser 1990b	**Oct-90**	**SB8/S3**	**12.5**	**PCE**	**0.500**		**0.05**		**10**
TV-F&S 2000a	Feb-99	B-57	8.5	PCE	0.46		0.05		9.2
Hart Crowser 1992b	Apr-92	B-31	7.5-9	PCE	0.44		0.05		8.8
Hart Crowser 1992a	Oct-91	Comp D	0-1	PCE	0.42		0.05		8.4
Hart Crowser 1992a	Oct-91	H-1	2.5	PCE	0.40		0.05		8.0
TV-F&S 2000a	Sep-99	B-20A	12.5	PCE	0.38		0.05		7.6
Hart Crowser 1992a	Oct-91	Comp C	0-1	PCE	0.36		0.05		7.2
Hart Crowser 1992a	Oct-91	Comp B	0-1	PCE	0.34		0.05		6.8
TV-F&S 2001a	Jul-00	NW-2	6.5	PCE	0.34	J	0.05		6.8
Hart Crowser 1992a	Oct-91	Comp A	0-1	PCE	0.32		0.05		6.4
TV-F&S 2001a	Jul-00	NW-6	7.5	PCE	0.30	J	0.05		6.0
Hart Crowser 1990b	1990	SW-19E		PCE	0.300		0.05		6.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	PCE	0.27		0.05		5.4
TV-F&S 2001a	Jul-00	NW-1	8.0	PCE	0.27	J	0.05		5.4
Hart Crowser 1990b	1990	19/20-S		PCE	0.240		0.05		4.8
TV-F&S 2001a	Jul-00	NW-8	7.5	PCE	0.22	J	0.05		4.4
Hart Crowser 1993a	Jun-93	B-46	12	PCE	0.21		0.05		4.2
TV-F&S 2001a	Jul-00	NW-12	5.5	PCE	0.21	J	0.05		4.2
TV-F&S 2001a	Jul-00	NW-7	10.5	PCE	0.20	J	0.05		4.0
TV-F&S 2000a	Jul-99	TW-7	12.0	PCE	0.20		0.05		4.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	PCE	0.19		0.05		3.8
TV-F&S 2000a	Jul-99	B-60	10.0	PCE	0.19		0.05		3.8
Hart Crowser 1990b	Oct-90	SB6-2	7.5	PCE	0.19		0.05		3.8
Ecology 1993b	Jun-93	278090		PCE	0.18		0.05		3.6
TV-F&S 2000a	Jul-99	B-58	10.0	PCE	0.17		0.05		3.4

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Ecology 1993b	Jun-93	278090 (DUP)		PCE	0.16		0.05		3.2
TV-F&S 2001a	Jul-00	NW-5	6.5	PCE	0.16	J	0.05		3.2
TV-F&S 2001a	Jul-00	NW-9	10.5	PCE	0.14	J	0.05		2.8
TV-F&S 2000a	Jul-99	B-61	24.5	PCE	0.13		0.05		2.6
Hart Crowser 1990b	1990	SW-13		PCE	0.130		0.05		2.6
TV-F&S 2000a	Jul-99	TW-7	9.0	PCE	0.13		0.05		2.6
Ecology 1993b	Jun-93	278088		PCE	0.12		0.05		2.4
Hart Crowser 1992b	Apr-92	B-21	48-49.5	PCE	0.12		0.05		2.4
TV-F&S 2001a	Jul-00	NW-12	10.0	PCE	0.12	J	0.05		2.4
Hart Crowser 1992b	Mar-92	B-26 (DUP)	12-13.5	PCE	0.11		0.05		2.2
Ecology 1993d	Jul-93	B-52	12	PCE	0.1		0.05		2.0
TV-F&S 2001a	Jul-00	NW-4	6.5	PCE	0.10	J	0.05		2.0
Hart Crowser 1992a	Jan-91	SB-12	13	PCE	0.098		0.05		2.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	PCE	0.096		0.05		1.9
TV-F&S 2001a	Jul-00	NW-2	10.5	PCE	0.093	J	0.05		1.9
Hart Crowser 1990b	Sep-90	B-6/S-11	27	PCE	0.092		0.05		1.8
TV-F&S 2001a	Jul-00	NW-7	6.5	PCE	0.086	J	0.05		1.7
TV-F&S 2000a	Jul-99	B-62	16.0	PCE	0.076		0.05		1.5
TV-F&S 2001a	Jul-00	NW-3	10.5	PCE	0.074	J	0.05		1.5
Hart Crowser 1992b	Apr-92	B-23	47.5-49	PCE	0.073		0.05		1.5
Hart Crowser 1992a	Oct-91	G-3	7.5	PCE	0.073		0.05		1.5
Hart Crowser 1992b	Apr-92	B-27	44.5-46	PCE	0.072		0.05		1.4
TV-F&S 2000a	Jul-99	B-61	13.5	PCE	0.072		0.05		1.4
TV-F&S 2000a	Jul-99	B-61	43.5	PCE	0.071		0.05		1.4
TV-F&S 2000a	Feb-99	B-54	9.0	PCE	0.07		0.05		1.4
TV-F&S 2000a	Feb-99	B-57	14.5	PCE	0.067		0.05		1.3
TV-F&S 2001a	Jul-00	NW-3	6.5	PCE	0.061	J	0.05		1.2
Hart Crowser 1990a	May-89	B-1		PCE	0.058		0.05		1.2
Hart Crowser 1990b	Sep-90	B-8/S-7	18	PCE	0.058		0.05		1.2
Ecology 1993b	Jun-93	278087		PCE	0.055	J	0.05		1.1
Hart Crowser 1992a	Jan-91	SB-12	2.5	PCE	0.05		0.05		1.0
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Pentachlorophenol**	**490**	**D**	**8.3**	**0.037**	**13,243**
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Pentachlorophenol**	**71**		**8.3**	**0.037**	**1,919**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Pentachlorophenol**	**29**		**8.3**	**0.73**	**40**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Pentachlorophenol**	**22**		**8.3**	**0.037**	**595**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**13**	**Pentachlorophenol**	**22**		**8.3**	**0.037**	**595**
Ecology 1993a	**Jul-93**	**B-50**	**6**	**Pentachlorophenol**	**19**	**J**	**8.3**	**0.73**	**26**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Pentachlorophenol**	**13**		**8.3**	**0.037**	**351**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Pentachlorophenol**	**12**		**8.3**	**0.037**	**324**

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Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Pentachlorophenol**	**11**		**8.3**	**0.037**	**297**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**Pentachlorophenol**	**9.4**	**J**	**8.3**	**0.037**	**254**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**Pentachlorophenol**	**7.7**	**J**	**8.3**	**0.037**	**208**
Hart Crowser 1992b	**Apr-92**	**B-30 (surface fines)**	**0**	**Pentachlorophenol**	**7.6**		**8.3**	**0.73**	**10**
Hart Crowser 1992a	**Jan-91**	**B-15**	**17**	**Pentachlorophenol**	**7.5**		**8.3**	**0.037**	**203**
Hart Crowser 1992a	Jan-91	B-15	2.5	Pentachlorophenol	6.3		8.3	0.73	8.6
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Pentachlorophenol	5.5		8.3	0.73	7.5
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Pentachlorophenol**	**5**		**8.3**	**0.037**	**135**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Pentachlorophenol**	**4.7**		**8.3**	**0.037**	**127**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**Pentachlorophenol**	**4.4**		**8.3**	**0.037**	**119**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**Pentachlorophenol**	**4.4**		**8.3**	**0.037**	**119**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Pentachlorophenol	4.2		8.3	0.73	5.8
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Pentachlorophenol**	**4**		**8.3**	**0.037**	**108**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Pentachlorophenol	3.4		8.3	0.73	4.7
Ecology 1993a	**Jul-93**	**B-49**	**15**	**Pentachlorophenol**	**2.9**		**8.3**	**0.037**	**78**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**Pentachlorophenol**	**2.7**		**8.3**	**0.037**	**73**
Hart Crowser 1993a	Aug-92	B-37	2-4	Pentachlorophenol	2.7		8.3	0.73	3.7
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Pentachlorophenol**	**2.7**		**8.3**	**0.037**	**73**
ATI 1991a	**Aug-91**	**B-17/S1**	**18**	**Pentachlorophenol**	**2.2**		**8.3**	**0.037**	**59**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**Pentachlorophenol**	**2**		**8.3**	**0.037**	**54**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**7.5**	**Pentachlorophenol**	**1.5**		**8.3**	**0.037**	**41**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Pentachlorophenol**	**1**		**8.3**	**0.037**	**27**
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Pentachlorophenol**	**0.97**		**8.3**	**0.037**	**26**
Ecology 1993b	**Jun-93**	**278086**		**Pentachlorophenol**	**0.89**		**8.3**	**0.037**	**24**
Hart Crowser 1992a	Oct-91	Comp A	0-1	Pentachlorophenol	0.89	J	8.3	0.73	1.2
Ecology 1993b	**Jun-93**	**278089**		**Pentachlorophenol**	**0.68**		**8.3**	**0.037**	**18**
Ecology 1993b	**Jun-93**	**278087**		**Pentachlorophenol**	**0.46**	**J**	**8.3**	**0.037**	**12**
Ecology 1993b	**Jun-93**	**278088**		**Pentachlorophenol**	**0.45**		**8.3**	**0.037**	**12**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**Pentachlorophenol**	**0.42**		**8.3**	**0.037**	**11**
Hart Crowser 1992a	Jan-91	SB-12	7.5	Pentachlorophenol	0.14	J	8.3	0.037	3.8
Ecology 1993b	Jun-93	278090		Pentachlorophenol	0.13	J	8.3	0.037	3.5
Ecology 1993d	Jul-93	B-51	12	Pentachlorophenol	0.13	J	8.3	0.037	3.5
Hart Crowser 1993a	Aug-92	B-35	28-30	Pentachlorophenol	0.075		8.3	0.037	2.0
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Pentachlorophenol	0.055		8.3	0.037	1.5
Ecology 1993a	Jul-93	B-49	15	Phenanthrene	1.1			0.49	2.2
Hart Crowser 1995	Jul-95	HC-GW-1		Phenanthrene	1.1			0.49	2.2
Ecology 1993a	Jul-93	B-50	10	Phenanthrene	0.89			0.49	1.8
Hart Crowser 1992a	Jan-91	SB-10	2.5	Styrene	200		33		6.1
Hart Crowser 1992a	Jan-91	SB-10	17	Styrene	100		33		3.0

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Styrene	40		33		1.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**TCE**	**1,100**		**0.03**		**36,667**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**TCE**	**980**		**0.03**		**32,667**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**TCE**	**940**		**0.03**		**31,333**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**TCE**	**820**		**0.03**		**27,333**
Hart Crowser 1990b	**1990**	**PT-3**		**TCE**	**550**		**0.03**		**18,333**
Hart Crowser 1990b	**1990**	**PT-2**		**TCE**	**230**		**0.03**		**7,667**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**TCE**	**220**		**0.03**		**7,333**
Hart Crowser 1990b	**1990**	**25-S**		**TCE**	**210**		**0.03**		**7,000**
Hart Crowser 1990b	**1990**	**25-S**		**TCE**	**180**		**0.03**		**6,000**
Hart Crowser 1990b	**1990**	**PT-1**		**TCE**	**150**		**0.03**		**5,000**
Hart Crowser 1990b	**1990**	**PT-5**		**TCE**	**78**		**0.03**		**2,600**
Hart Crowser 1990b	**1990**	**PT-4**		**TCE**	**59**		**0.03**		**1,967**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**TCE**	**38**		**0.03**		**1,267**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**TCE**	**29**		**0.03**		**967**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**TCE**	**17**		**0.03**		**567**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**TCE**	**11**		**0.03**		**367**
Hart Crowser 1993a	**Jun-93**	**B-43 (DUP)**	**12**	**TCE**	**10**		**0.03**		**333**
Hart Crowser 1993a	**Jun-93**	**B-43**	**12**	**TCE**	**9.7**		**0.03**		**323**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**TCE**	**9**		**0.03**		**300**
Hart Crowser 1995	**Jul-95**	**HC-GW-1 (DUP)**		**TCE**	**8.6**		**0.03**		**287**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**TCE**	**7.7**		**0.03**		**257**
Hart Crowser 1990b	**1990**	**21-C**		**TCE**	**4.9**		**0.03**		**163**
Hart Crowser 1990b	**Oct-90**	**SB7/S3**	**12.5**	**TCE**	**4.8**		**0.03**		**160**
Hart Crowser 1993a	**Jul-93**	**B-48 (DUP)**	**12**	**TCE**	**4.7**		**0.03**		**157**
Hart Crowser 1993a	**Jun-93**	**B-44**	**14**	**TCE**	**4.3**		**0.03**		**143**
Hart Crowser 1993a	**Jun-93**	**B-45**	**44**	**TCE**	**4.3**		**0.03**		**143**
Hart Crowser 1993a	**Jul-93**	**B-48**	**12**	**TCE**	**4.2**		**0.03**		**140**
Hart Crowser 1990b	**Oct-90**	**B-11/S-4**	**10**	**TCE**	**3.4**		**0.03**		**113**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**TCE**	**3.3**		**0.03**		**110**
TV-F&S 2000a	**Feb-99**	**B-54**	**9.0**	**TCE**	**3.00**		**0.03**		**100**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**TCE**	**2.6**		**0.03**		**87**
Hart Crowser 1993a	**Jun-93**	**B-43**	**10**	**TCE**	**1.8**		**0.03**		**60**
Hart Crowser 1992b	**Apr-92**	**B-21**	**48-49.5**	**TCE**	**1.2**		**0.03**		**40**
Hart Crowser 1993a	**Jul-93**	**B-49**	**12**	**TCE**	**1.2**		**0.03**		**40**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**2.5**	**TCE**	**0.92**		**0.03**		**31**
Hart Crowser 1992b	**Apr-92**	**B-30**	**4-5.5**	**TCE**	**0.87**		**0.03**		**29**
TV-F&S 2000a	**Jul-99**	**TW-6**	**12.0**	**TCE**	**0.79**		**0.03**		**26**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**TCE**	**0.75**		**0.03**		**25**

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
TV-F&S 2000a	**Jul-99**	**TW-3**	**13.0**	**TCE**	**0.69**		**0.03**		**23**
Hart Crowser 1993a	**Aug-92**	**B-32**	**0-3**	**TCE**	**0.66**		**0.03**		**22**
Ecology 1993a	**Jul-93**	**B-49**	**15**	**TCE**	**0.66**		**0.03**		**22**
Ecology 1993a	**Jul-93**	**B-49 (DUP)**	**15**	**TCE**	**0.64**	**J**	**0.03**		**21**
Hart Crowser 1992b	**Apr-92**	**B-21 (DUP)**	**48-49.5**	**TCE**	**0.57**		**0.03**		**19**
Hart Crowser 1993a	**Jun-93**	**B-46**	**10**	**TCE**	**0.48**		**0.03**		**16**
Hart Crowser 1992a	**Jan-91**	**SB-12**	**2.5**	**TCE**	**0.47**		**0.03**		**16**
Hart Crowser 1993a	**Jul-93**	**B-50**	**11**	**TCE**	**0.46**		**0.03**		**15**
Hart Crowser 1993a	**Jul-93**	**B-50**	**12**	**TCE**	**0.46**		**0.03**		**15**
Hart Crowser 1992b	**Mar-92**	**B-22 (DUP)**	**10.5-12**	**TCE**	**0.39**		**0.03**		**13**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**13**	**TCE**	**0.37**		**0.03**		**12**
Hart Crowser 1990b	**Sep-90**	**B-9/S-6**	**15**	**TCE**	**0.3**		**0.03**		**10**
Hart Crowser 1993a	Jun-93	B-45	14	TCE	0.28		0.03		9.3
Hart Crowser 1993a	Jun-93	B-45 (DUP)	14	TCE	0.28		0.03		9.3
TV-F&S 2000a	Jul-99	B-61	43.5	TCE	0.26		0.03		8.7
Hart Crowser 1992b	Apr-92	B-21	22.5-24	TCE	0.22		0.03		7.3
Ecology 1993d	Jul-93	B-51	12	TCE	0.22		0.03		7.3
TV-F&S 2000a	Jul-99	B-64	10.0	TCE	0.14		0.03		4.7
TV-F&S 2000a	Feb-99	B-54	14.0	TCE	0.13		0.03		4.3
TV-F&S 2000a	Jul-99	TW-1	11.0	TCE	0.12		0.03		4.0
Ecology 1993b	Jun-93	278089		TCE	0.11		0.03		3.7
Ecology 1993b	Jun-93	278090 (DUP)		TCE	0.1		0.03		3.3
Hart Crowser 1992a	Oct-91	Comp A	0-1	TCE	0.094		0.03		3.1
Ecology 1993b	Jun-93	278090		TCE	0.091		0.03		3.0
Hart Crowser 1990a	May-89	B-1		TCE	0.071		0.03		2.4
Hart Crowser 1992b	Mar-92	B-26 (DUP)	12-13.5	TCE	0.07		0.03		2.3
Hart Crowser 1990b	**1990**	**PT-3**		**Toluene**	**1,800**	**J**	**7**		**257**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Toluene**	**1,500**		**7**		**214**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Toluene**	**1,100**		**7**		**157**
Hart Crowser 1990b	**1990**	**PT-1**		**Toluene**	**800**	**J**	**7**		**114**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Toluene**	**630**		**7**		**90**
Hart Crowser 1990b	**1990**	**PT-1**		**Toluene**	**250**		**7**		**36**
Hart Crowser 1990b	**1990**	**PT-2**		**Toluene**	**230**		**7**		**33**
Hart Crowser 1990b	**1990**	**PT-5**		**Toluene**	**180**		**7**		**26**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Toluene**	**160**		**7**		**23**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Toluene**	**140**		**7**		**20**
Hart Crowser 1990b	**1990**	**PT-4**		**Toluene**	**140**		**7**		**20**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Toluene**	**110**		**7**		**16**
Hart Crowser 1992a	Jan-91	SB-10	12.5	Toluene	46		7		6.6

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990a	May-90	B2-S3	10	Toluene	40		7		5.7
Hart Crowser 1990b	1990	25-S		Toluene	37		7		5.3
Hart Crowser 1990b	1990	25-S		Toluene	30		7		4.3
Hart Crowser 1990a	May-90	B2-S3	10	Toluene	30	K	7		4.3
Hart Crowser 1990b	1990	21-C		Toluene	28		7		4.0
Hart Crowser 1995	Jul-95	HC-GW-1		Toluene	28		7		4.0
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Toluene	27		7		3.9
Hart Crowser 1990b	Oct-90	B-7/S-7B		Toluene	21		7		3.0
Hart Crowser 1990b	1990	SP-2		Toluene	21		7		3.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Toluene	10		7		1.4
Hart Crowser 1990b	**1990**	**PT-3**		**Total Hydrocarbons (Light)**	**20,000**		**30**		**667**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Total Hydrocarbons (Light)**	**14,000**		**30**		**467**
Hart Crowser 1990b	**1990**	**PT-5**		**Total Hydrocarbons (Light)**	**13,000**		**30**		**433**
Hart Crowser 1990b	**1990**	**PT-4**		**Total Hydrocarbons (Light)**	**6,400**		**30**		**213**
Hart Crowser 1990b	**1990**	**SB3/S2**		**Total Hydrocarbons (Light)**	**6,400**		**30**		**213**
Hart Crowser 1990b	**1990**	**PT-2**		**Total Hydrocarbons (Light)**	**4,200**		**30**		**140**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Total Hydrocarbons (Light)**	**2,100**		**30**		**70**
Hart Crowser 1990b	**Oct-90**	**SB5/S3**	**12.5**	**Total Hydrocarbons (Light)**	**700**		**30**		**23**
Hart Crowser 1990b	**1990**	**SB1/S3**		**Total Hydrocarbons (Light)**	**400**		**30**		**13**
Hart Crowser 1990b	**Oct-90**	**B-7/S-7B**		**Total Hydrocarbons (Light)**	**310**		**30**		**10**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Xylenes (total)**	**1,200**		**9**		**133**
Hart Crowser 1990b	**1990**	**PT-1**		**Xylenes (total)**	**960**		**9**		**107**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Xylenes (total)**	**880**		**9**		**98**
Hart Crowser 1990b	**1990**	**PT-3**		**Xylenes (total)**	**840**		**9**		**93**
Hart Crowser 1990b	**1990**	**25-S**		**Xylenes (total)**	**820**		**9**		**91**
Hart Crowser 1990b	**1990**	**25-S**		**Xylenes (total)**	**680**		**9**		**76**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Xylenes (total)**	**570**		**9**		**63**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Xylenes (total)**	**410**		**9**		**46**
Hart Crowser 1990b	**1990**	**PT-5**		**Xylenes (total)**	**370**		**9**		**41**
Hart Crowser 1990b	**1990**	**PT-1**		**Xylenes (total)**	**340**		**9**		**38**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Xylenes (total)**	**270**		**9**		**30**
Hart Crowser 1990b	**1990**	**PT-4**		**Xylenes (total)**	**180**		**9**		**20**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Xylenes (total)**	**150**		**9**		**17**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Xylenes (total)**	**140**		**9**		**16**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Xylenes (total)**	**130**		**9**		**14**
Hart Crowser 1990b	1990	21-C		Xylenes (total)	61		9		6.8
Hart Crowser 1990b	1990	PT-2		Xylenes (total)	50		9		5.6
Hart Crowser 1992a	Jan-91	SB-10	12.5	Xylenes (total)	47		9		5.2
Hart Crowser 1990b	1990	17/18-C		Xylenes (total)	27		9		3.0

Table 6
Chemicals Above Screening Levels in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Xylenes (total)	27		9		3.0
Hart Crowser 1995	Jul-95	HC-GW-1		Xylenes (total)	25		9		2.8
Hart Crowser 1990b	Oct-90	B-7/S-7B		Xylenes (total)	20		9		2.2
Hart Crowser 1990a	May-90	B3-S3	10	Xylenes (total)	13	M	9		1.4
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Zinc	1,100		24,000	770	1.4
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Zinc	880		24,000	770	1.1
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Zinc	220		24,000	38	5.8
Hart Crowser 1993a	Aug-92	B-36	9-11	Zinc	180		24,000	38	4.7
Hart Crowser 1993a	Aug-92	B-35	8-10	Zinc	150		24,000	38	3.9
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Zinc	130		24,000	38	3.4
Hart Crowser 1993a	Aug-92	B-38	9-11	Zinc	69		24,000	38	1.8
ATI 1991a	Aug-91	B-16/S2	10	Zinc	51		24,000	38	1.3
Hart Crowser 1992a	Jan-91	B-15	17	Zinc	49		24,000	38	1.3

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	**Jun-93**	**B-43**	**1,1,1-TCA**	**16,000**		**200**		**80**
Ecology 1993b	**Jun-93**	**278091**	**1,1,1-TCA**	**16,000**		**200**		**80**
Hart Crowser 1992b	**May-92**	**B-31**	**1,1,1-TCA**	**14,000**		**200**		**70**
Hart Crowser 1993a	**Jul-93**	**B-49**	**1,1,1-TCA**	**11,000**		**200**		**55**
Ecology 1993c	**Jul-93**	**B-49**	**1,1,1-TCA**	**11,000**		**200**		**55**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,1,1-TCA**	**10,000**		**200**		**50**
Hart Crowser 1993a	**Aug-93**	**B-51**	**1,1,1-TCA**	**9,600**		**200**		**48**
Ecology 1993c	**Jul-93**	**B-27**	**1,1,1-TCA**	**9,300**		**200**		**47**
Hart Crowser 1992b	**May-92**	**B-30**	**1,1,1-TCA**	**9,300**		**200**		**47**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**1,1,1-TCA**	**8,900**		**200**		**45**
Hart Crowser 1993a	**Jul-93**	**B-47**	**1,1,1-TCA**	**8,700**		**200**		**44**
Hart Crowser 1993a	**Jun-93**	**B-44**	**1,1,1-TCA**	**8,100**		**200**		**41**
Ecology 1993b	**Jun-93**	**278092**	**1,1,1-TCA**	**6,300**		**200**		**32**
Ecology 1993c	**Jul-93**	**B-48**	**1,1,1-TCA**	**6,200**		**200**		**31**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**1,1,1-TCA**	**6,000**		**200**		**30**
Hart Crowser 1993a	**Jul-93**	**B-48**	**1,1,1-TCA**	**5,600**		**200**		**28**
Hart Crowser 1992b	**May-92**	**B-11**	**1,1,1-TCA**	**3,400**		**200**		**17**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,1,1-TCA**	**2,600**		**200**		**13**
Hart Crowser 1993a	**Jun-93**	**B-46**	**1,1,1-TCA**	**2,500**		**200**		**13**
Hart Crowser 1992b	**May-92**	**B-15**	**1,1,1-TCA**	**2,500**		**200**		**13**
Hart Crowser 1997	**Dec-96**	**B-31**	**1,1,1-TCA**	**2,400**		**200**		**12**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,1,1-TCA**	**2,200**		**200**		**11**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**1,1,1-TCA**	**2,100**	**J**	**200**		**11**
Hart Crowser 1997	Dec-96	B-20	1,1,1-TCA	960		200		4.8
TV-F&S 2000a	Nov-98	B-12	1,1,1-TCA	890		200		4.5
TV-F&S 2000a	Nov-98	B-42	1,1,1-TCA	880		200		4.4
TV-F&S 2000a	Oct-98	B-44	1,1,1-TCA	760		200		3.8
Hart Crowser 1993a	Aug-93	B-52 (DUP)	1,1,1-TCA	570		200		2.9
TV-F&S 2000a	Oct-98	B-20	1,1,1-TCA	470		200		2.4
Hart Crowser 1993a	Aug-93	B-52	1,1,1-TCA	460		200		2.3
Hart Crowser 1992b	May-92	B-16	1,1,1-TCA	360		200		1.8
ATI 1991b	Sep-91	B-16	1,1,1-TCA	290		200		1.5
TV-F&S 2000a	Nov-98	B-46 BAL	1,1,1-TCA	290		200		1.5
TV-F&S 2000a	Nov-99	B-31	1,1,1-TCA	210		200		1.1
TV-F&S 2000a	Nov-98	B-46	1,1,1-TCA	200		200		1.0

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	**Jun-93**	**278091**	**1,1,2-TCA**	**68**	**J**	**0.77**		**88**
Hart Crowser 1992b	**May-92**	**B-30**	**1,1,2-TCA**	**48**		**0.77**		**62**
Ecology 1993b	**Jun-93**	**278092**	**1,1,2-TCA**	**45**	**J**	**0.77**		**58**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,1,2-TCA**	**19**		**0.77**		**25**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,1,2-TCA**	**18**		**0.77**		**23**
Hart Crowser 1993a	Sep-92	B-30	1,1-DCA	1,900		800		2.4
Hart Crowser 1993a	Sep-92	B-31	1,1-DCA	1,500		800		1.9
Hart Crowser 1993a	Aug-93	B-31	1,1-DCA	1,500		800		1.9
Hart Crowser 1993a	Aug-93	B-30	1,1-DCA	1,400		800		1.8
Hart Crowser 1992b	May-92	B-31	1,1-DCA	1,300		800		1.6
Hart Crowser 1992b	May-92	B-30	1,1-DCA	1,200		800		1.5
Hart Crowser 1992b	May-92	B-15	1,1-DCA	1,100		800		1.4
Ecology 1993b	Jun-93	278091	1,1-DCA	1,000		800		1.3
Hart Crowser 1993a	Jun-93	B-43	1,1-DCA	810		800		1.0
Hart Crowser 1993a	Jun-93	B-43	1,1-DCE	810		400		2.0
TV-F&S 2000a	**Oct-99**	**B-49**	**1,2,4-Trimethylbenzene**	**11,000**		**400**		**28**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,2,4-Trimethylbenzene**	**6,400**		**400**		**16**
TV-F&S 2000a	Oct-99	B-39	1,2,4-Trimethylbenzene	2,300	J	400		5.8
TV-F&S 2000a	Oct-99	B-47	1,2,4-Trimethylbenzene	2,100		400		5.3
TV-F&S 2000a	Oct-99	B-47 (DUP)	1,2,4-Trimethylbenzene	1,500		400		3.8
TV-F&S 2000a	Oct-99	B-42	1,2,4-Trimethylbenzene	1,400		400		3.5
TV-F&S 2000a	Oct-99	B-38	1,2,4-Trimethylbenzene	1,000	J	400		2.5
TV-F&S 2000a	Nov-98	B-42	1,2,4-Trimethylbenzene	810		400		2.0
TV-F&S 2000a	Oct-98	B-21	1,2,4-Trimethylbenzene	540		400		1.4
TV-F&S 2000a	Oct-99	B-10A	1,2,4-Trimethylbenzene	490		400		1.2
TV-F&S 2000a	Nov-98	B-12	1,2,4-Trimethylbenzene	450		400		1.1
TV-F&S 2000a	Nov-98	B-49	1,2,4-Trimethylbenzene	410		400		1.0
Ecology 1993b	**Jun-93**	**278092**	**1,2-DCA**	**200**		**5**		**40**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCA**	**140**	**J**	**5**		**28**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,2-DCA**	**97**		**5**		**19**
Hart Crowser 1993a	**Sep-92**	**B-31**	**1,2-DCA**	**76**		**5**		**15**
Hart Crowser 1997	**Oct-95**	**B-10A**	**1,2-DCA**	**76**		**5**		**15**
Hart Crowser 1993a	**Sep-92**	**B-10A**	**1,2-DCA**	**71**		**5**		**14**
Hart Crowser 1997	**Oct-95**	**B-31**	**1,2-DCA**	**69**		**5**		**14**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,2-DCA**	**60**		**5**		**12**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-DCA**	**50**	**J**	**5**		**10**
TV-F&S 2000a	**Oct-99**	**B-9**	**1,2-DCA**	**50**		**5**		**10**
Hart Crowser 1993a	Aug-93	B-9	1,2-DCA	48		5		9.6
TV-F&S 2000a	Nov-98	B-9	1,2-DCA	45		5		9.0
Hart Crowser 1997	Oct-95	B-9	1,2-DCA	44		5		8.8
Hart Crowser 1997	Dec-96	B-9	1,2-DCA	44		5		8.8
Hart Crowser 1993a	Sep-92	B-9	1,2-DCA	42		5		8.4
Hart Crowser 1992b	May-92	B-9	1,2-DCA	18		5		3.6
Hart Crowser 1993a	Sept 1992	B-20	1,2-DCA	16		5		3.2
Hart Crowser 1997	Oct-95	B-20	1,2-DCA	13		5		2.6
Ecology 1993c	**Jul-93**	**B-27**	**1,2-DCE (total)**	**73,000**		**72**		**1,014**
Ecology 1993c	**Jul-93**	**B-50**	**1,2-DCE (total)**	**67,000**		**72**		**931**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**1,2-DCE (total)**	**54,000**		**72**		**750**
Ecology 1993b	**Jun-93**	**278094**	**1,2-DCE (total)**	**47,000**		**72**		**653**
Hart Crowser 1997	**Dec-96**	**B-21**	**1,2-DCE (total)**	**47,000**		**72**		**653**
Ecology 1993b	**Jun-93**	**278092**	**1,2-DCE (total)**	**46,000**		**72**		**639**
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-DCE (total)**	**45,000**		**72**		**625**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCE (total)**	**44,000**		**72**		**611**
ATI 1991b	**Sep-91**	**B-16**	**1,2-DCE (total)**	**42,000**		**72**		**583**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCE (total)**	**40,000**		**72**		**556**
Hart Crowser 1992b	**May-92**	**B-30**	**1,2-DCE (total)**	**38,000**		**72**		**528**
Hart Crowser 1992b	**May-92**	**B-21**	**1,2-DCE (total)**	**37,000**		**72**		**514**
Hart Crowser 1997	**Dec-96**	**B-33A**	**1,2-DCE (total)**	**36,000**		**72**		**500**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,2-DCE (total)**	**35,000**		**72**		**486**
Ecology 1993c	**Jul-93**	**B-49**	**1,2-DCE (total)**	**32,000**		**72**		**444**
Hart Crowser 1992b	**May-92**	**B-16**	**1,2-DCE (total)**	**30,000**		**72**		**417**
Hart Crowser 1992b	**May-92**	**B-15**	**1,2-DCE (total)**	**26,000**		**72**		**361**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,2-DCE (total)**	**23,000**		**72**		**319**
Hart Crowser 1997	**Dec-96**	**B-45**	**1,2-DCE (total)**	**20,000**		**72**		**278**
Hart Crowser 1992b	**May-92**	**B-31**	**1,2-DCE (total)**	**20,000**		**72**		**278**
Hart Crowser 1997	**Dec-96**	**B-20**	**1,2-DCE (total)**	**19,000**		**72**		**264**
Hart Crowser 1992b	**May-92**	**B-11**	**1,2-DCE (total)**	**16,000**		**72**		**222**
Hart Crowser 1992b	**May-92**	**B-29**	**1,2-DCE (total)**	**16,000**		**72**		**222**
Ecology 1993c	**Jul-93**	**B-48**	**1,2-DCE (total)**	**14,000**		**72**		**194**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**1,2-DCE (total)**	**13,000**		**72**		**181**

Table 7
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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	**Dec-96**	**B-8**	**1,2-DCE (total)**	**9,000**		**72**		**125**
Hart Crowser 1997	**Dec-96**	**B-35**	**1,2-DCE (total)**	**8,000**		**72**		**111**
Hart Crowser 1992b	**May-92**	**B-10A**	**1,2-DCE (total)**	**6,300**		**72**		**88**
Ecology 1993b	**Jun-93**	**278093**	**1,2-DCE (total)**	**5,200**		**72**		**72**
Hart Crowser 1992b	**May-92**	**B-18**	**1,2-DCE (total)**	**1,400**		**72**		**19**
Hart Crowser 1992b	**May-92**	**B-8**	**1,2-DCE (total)**	**1,300**		**72**		**18**
Hart Crowser 1992b	**May-92**	**B-1**	**1,2-DCE (total)**	**1,200**		**72**		**17**
Hart Crowser 1997	**Dec-96**	**B-31**	**1,2-DCE (total)**	**1,100**		**72**		**15**
Hart Crowser 1992b	May-92	B-14	1,2-DCE (total)	600		72		8.3
Hart Crowser 1992b	May-92	B-22	1,2-DCE (total)	440		72		6.1
Hart Crowser 1992b	May-92	B-13	1,2-DCE (total)	260		72		3.6
Hart Crowser 1997	Dec-96	B-26	1,2-DCE (total)	96		72		1.3
Hart Crowser 1992b	May-92	B-9	1,2-DCE (total)	93		72		1.3
TV-F&S 2000a	**Nov-98**	**B-42**	**1,2-Dichlorobenzene**	**1,000**		**720**	**5.2**	**192**
Hart Crowser 1992b	**May-92**	**B-29**	**1,2-Dichlorobenzene**	**510**		**720**	**5.2**	**98**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**1,2-Dichlorobenzene**	**440**		**720**	**5.2**	**85**
TV-F&S 2000a	**Oct-98**	**B-44**	**1,2-Dichlorobenzene**	**380**		**720**	**5.2**	**73**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,2-Dichlorobenzene**	**360**		**720**	**5.2**	**69**
TV-F&S 2000a	**Oct-99**	**B-47**	**1,2-Dichlorobenzene**	**350**		**720**	**5.2**	**67**
TV-F&S 2000a	**Oct-99**	**B-42**	**1,2-Dichlorobenzene**	**340**		**720**	**5.2**	**65**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,2-Dichlorobenzene**	**320**		**720**	**5.2**	**62**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichlorobenzene**	**250**		**720**	**5.2**	**48**
TV-F&S 2000a	**Nov-98**	**B-42**	**1,2-Dichlorobenzene**	**230**	**J**	**720**	**5.2**	**44**
TV-F&S 2000a	**Nov-98**	**B-46 BAL**	**1,2-Dichlorobenzene**	**220**		**720**	**5.2**	**42**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,2-Dichlorobenzene**	**190**		**720**	**5.2**	**37**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,2-Dichlorobenzene**	**180**		**720**	**5.2**	**35**
Ecology 1993b	**Jun-93**	**278092**	**1,2-Dichlorobenzene**	**170**		**720**	**5.2**	**33**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,2-Dichlorobenzene**	**170**		**720**	**5.2**	**33**
TV-F&S 2000a	**Oct-99**	**B-44**	**1,2-Dichlorobenzene**	**160**		**720**	**5.2**	**31**
Ecology 1993c	**Jul-93**	**B-27**	**1,2-Dichlorobenzene**	**150**		**720**	**5.2**	**29**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,2-Dichlorobenzene**	**150**		**720**	**5.2**	**29**
TV-F&S 2000a	**Nov-98**	**B-39**	**1,2-Dichlorobenzene**	**130**		**720**	**5.2**	**25**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,2-Dichlorobenzene**	**130**		**720**	**5.2**	**25**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**
TV-F&S 2000a	**Oct-99**	**B-49**	**1,2-Dichlorobenzene**	**110**		**720**	**5.2**	**21**
TV-F&S 2000a	**Nov-99**	**B-12**	**1,2-Dichlorobenzene**	**110**		**720**	**5.2**	**21**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,2-Dichlorobenzene**	**100**		**720**	**5.2**	**19**
TV-F&S 2000a	**Oct-99**	**B-44**	**1,2-Dichlorobenzene**	**88**		**720**	**5.2**	**17**
TV-F&S 2000a	**Oct-99**	**B-39**	**1,2-Dichlorobenzene**	**81**	**J**	**720**	**5.2**	**16**
TV-F&S 2000a	**Oct-98**	**B-44**	**1,2-Dichlorobenzene**	**80**		**720**	**5.2**	**15**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,2-Dichlorobenzene**	**55**		**720**	**5.2**	**11**
Ecology 1993c	**Jul-93**	**B-50**	**1,2-Dichlorobenzene**	**53**		**720**	**5.2**	**10**
TV-F&S 2000a	Jul-99	B-58	1,2-Dichlorobenzene	35		720	5.2	6.7
Ecology 1993b	Jun-93	278092	1,2-Dichlorobenzene	26		720	5.2	5.0
ATI 1991b	Sep-91	B-16	1,2-Dichlorobenzene	22		720	5.2	4.2
Hart Crowser 1992b	May-92	B-21	1,2-Dichlorobenzene	21		720	5.2	4.0
TV-F&S 2000a	Oct-99	B-21	1,2-Dichlorobenzene	19		720	5.2	3.7
Hart Crowser 1992b	May-92	B-16	1,2-Dichlorobenzene	17		720	5.2	3.3
Ecology 1993b	Jun-93	278094	1,2-Dichlorobenzene	16	J	720	5.2	3.1
TV-F&S 2000a	Oct-98	B-21	1,2-Dichlorobenzene	16	J	720	5.2	3.1
TV-F&S 2000a	Jul-99	B-58	1,2-Dichlorobenzene	14		720	5.2	2.7
TV-F&S 2000a	Oct-98	B-20	1,2-Dichlorobenzene	12		720	5.2	2.3
TV-F&S 2000a	Oct-99	B-58 (DUP)	1,2-Dichlorobenzene	8.3		720	5.2	1.6
TV-F&S 2000a	Oct-99	B-58	1,2-Dichlorobenzene	7		720	5.2	1.3
TV-F&S 2000a	Oct-98	B-8	1,2-Dichlorobenzene	5.1		720	5.2	1.0
Hart Crowser 1997	Dec-96	B-8	1,2-Dichlorobenzene	5	J	720	5.2	1.0
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-Dichloropropane**	**82**	**J**	**0.64**		**128**
Ecology 1993b	**Jun-93**	**278092**	**1,2-Dichloropropane**	**40**	**J**	**0.64**		**63**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichloropropane**	**11**		**0.64**		**17**
TV-F&S 2000a	**Oct-99**	**B-49**	**1,3,5-Trimethylbenzene**	**9,600**		**400**		**24**
TV-F&S 2000a	Oct-99	B-46	1,3,5-Trimethylbenzene	1,700		400		4.3
TV-F&S 2000a	**Nov-98**	**B-42**	**1,4-Dichlorobenzene**	**290**		**1.8**	**21**	**161**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,4-Dichlorobenzene**	**140**		**1.8**	**21**	**78**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**1,4-Dichlorobenzene**	**140**		**1.8**	**21**	**78**
TV-F&S 2000a	**Oct-99**	**B-42**	**1,4-Dichlorobenzene**	**120**		**1.8**	**21**	**67**
TV-F&S 2000a	**Nov-98**	**B-42**	**1,4-Dichlorobenzene**	**110**		**1.8**	**21**	**61**
TV-F&S 2000a	**Oct-99**	**B-47**	**1,4-Dichlorobenzene**	**100**		**1.8**	**21**	**56**
Hart Crowser 1992b	**May-92**	**B-29**	**1,4-Dichlorobenzene**	**70**		**1.8**	**21**	**39**

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Nov-98**	**B-52**	**1,4-Dichlorobenzene**	**67**		**1.8**	**21**	**37**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,4-Dichlorobenzene**	**63**		**1.8**	**21**	**35**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,4-Dichlorobenzene**	**54**		**1.8**	**21**	**30**
Ecology 1993b	**Jun-93**	**278092**	**1,4-Dichlorobenzene**	**49**	**J**	**1.8**	**21**	**27**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,4-Dichlorobenzene**	**39**		**1.8**	**21**	**22**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,4-Dichlorobenzene**	**37**		**1.8**	**21**	**21**
Ecology 1993c	**Jul-93**	**B-27**	**1,4-Dichlorobenzene**	**36**	**J**	**1.8**	**21**	**20**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,4-Dichlorobenzene**	**36**		**1.8**	**21**	**20**
TV-F&S 2000a	**Nov-99**	**B-12**	**1,4-Dichlorobenzene**	**36**		**1.8**	**21**	**20**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,4-Dichlorobenzene**	**33**		**1.8**	**21**	**18**
TV-F&S 2000a	**Oct-99**	**B-49**	**1,4-Dichlorobenzene**	**28**		**1.8**	**21**	**16**
TV-F&S 2000a	**Oct-99**	**B-44**	**1,4-Dichlorobenzene**	**23**		**1.8**	**21**	**13**
TV-F&S 2000a	**Oct-99**	**B-39**	**1,4-Dichlorobenzene**	**22**	**J**	**1.8**	**21**	**12**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,4-Dichlorobenzene**	**20**		**1.8**	**21**	**11**
Ecology 1993c	Jul-93	B-50	1,4-Dichlorobenzene	17	J	1.8	21	9.4
TV-F&S 2000a	Jul-99	B-58	1,4-Dichlorobenzene	7.4		1.8	21	4.1
Ecology 1993b	Jun-93	278092	1,4-Dichlorobenzene	5	J	1.8	21	2.8
TV-F&S 2000a	Oct-99	B-21	1,4-Dichlorobenzene	4.4		1.8	21	2.4
TV-F&S 2000a	Jul-99	B-58	1,4-Dichlorobenzene	3.3		1.8	21	1.8
Ecology 1993b	Jun-93	278094	1,4-Dichlorobenzene	3	J	1.8	21	1.7
TV-F&S 2000a	Oct-99	B-58 (DUP)	1,4-Dichlorobenzene	2		1.8	21	1.1
TV-F&S 2000a	Oct-99	B-58	1,4-Dichlorobenzene	1.8		1.8	21	1.0
Hart Crowser 1992b	May-92	B-29	2,4-Dimethylphenol	500		160		3.1
Hart Crowser 1992b	May-92	B-15	2,4-Dimethylphenol	480		160		3.0
Hart Crowser 1992b	**May-92**	**B-15**	**2-Butanone**	**170,000**		**4,800**		**35**
Hart Crowser 1992b	May-92	B-11	2-Butanone	6,700		4,800		1.4
Ecology 1993b	Jun-93	278092	2-Butanone	5,500		4,800		1.1
Ecology 1993c	Jul-93	B-27	2-Butanone	4,800	J	4,800		1.0
Hart Crowser 1992b	May-92	B-10A	2-Methylnaphthalene	91		32	31	2.9
Hart Crowser 1992b	**May-92**	**B-29**	**2-Methylphenol**	**750**		**400**	**7.1**	**106**
Hart Crowser 1992b	**May-92**	**B-11**	**2-Methylphenol**	**630**		**400**	**7.1**	**89**
Hart Crowser 1992b	**May-92**	**B-15**	**2-Methylphenol**	**440**		**400**	**7.1**	**62**
Ecology 1993b	**Jun-93**	**278092**	**2-Methylphenol**	**270**		**400**	**7.1**	**38**
Ecology 1993b	**Jun-93**	**278091**	**2-Methylphenol**	**210**	**J**	**400**	**7.1**	**30**
Ecology 1993c	**Jul-93**	**B-27**	**2-Methylphenol**	**210**		**400**	**7.1**	**30**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993c	**Jul-93**	**B-49**	**2-Methylphenol**	**140**		**400**	**7.1**	**20**
Hart Crowser 1992b	**May-92**	**B-30**	**2-Methylphenol**	**110**		**400**	**7.1**	**15**
TV-F&S 2000a	Oct-99	B-49	2-Methylphenol	67		400	7.1	9.4
Ecology 1993b	Jun-93	278094	2-Methylphenol	66		400	7.1	9.3
TV-F&S 2000a	Nov-99	B-31	2-Methylphenol	60		400	7.1	8.5
TV-F&S 2000a	Nov-98	B-49	2-Methylphenol	52		400	7.1	7.3
TV-F&S 2000a	Oct-99	B-47 (DUP)	2-Methylphenol	52		400	7.1	7.3
Ecology 1993c	Jul-93	B-50	2-Methylphenol	47		400	7.1	6.6
TV-F&S 2000a	Oct-99	B-47	2-Methylphenol	39		400	7.1	5.5
Hart Crowser 1992b	May-92	B-16	2-Methylphenol	34		400	7.1	4.8
TV-F&S 2000a	Nov-98	B-39	2-Methylphenol	31		400	7.1	4.4
TV-F&S 2000a	Nov-98	B-42	2-Methylphenol	29		400	7.1	4.1
TV-F&S 2000a	Oct-99	B-42	2-Methylphenol	28		400	7.1	3.9
ATI 1991b	Sep-91	B-16	2-Methylphenol	27		400	7.1	3.8
TV-F&S 2000a	Oct-98	B-20	2-Methylphenol	27		400	7.1	3.8
TV-F&S 2000a	Oct-98	B-44	2-Methylphenol	20		400	7.1	2.8
TV-F&S 2000a	Nov-99	B-12	2-Methylphenol	19		400	7.1	2.7
TV-F&S 2000a	Oct-99	B-44	2-Methylphenol	18		400	7.1	2.5
TV-F&S 2000a	Nov-98	B-46	2-Methylphenol	14		400	7.1	2.0
TV-F&S 2000a	Oct-99	B-52	2-Methylphenol	11		400	7.1	1.5
TV-F&S 2000a	Oct-99	B-39	2-Methylphenol	11	J	400	7.1	1.5
TV-F&S 2000a	Oct-99	B-46	2-Methylphenol	9.1		400	7.1	1.3
Ecology 1993c	Jul-93	B-48	2-Methylphenol	9	J	400	7.1	1.3
Ecology 1993c	Jul-93	B-48 (DUP)	2-Methylphenol	8	J	400	7.1	1.1
TV-F&S 2000a	Nov-98	B-12	2-Methylphenol	7.5		400	7.1	1.1
Ecology 1993b	**Jun-93**	**278091**	**4-Methyl-2-Pentanone**	**14,000**		**640**		**22**
Ecology 1993c	**Jul-93**	**B-27**	**4-Methyl-2-Pentanone**	**7,700**		**640**		**12**
Ecology 1993c	**Jul-93**	**B-49**	**4-Methyl-2-Pentanone**	**7,000**		**640**		**11**
Ecology 1993b	**Jun-93**	**278092**	**4-Methyl-2-Pentanone**	**6,800**		**640**		**11**
Hart Crowser 1992b	May-92	B-30	4-Methyl-2-Pentanone	5,800		640		9.1
Hart Crowser 1992b	May-92	B-15	4-Methyl-2-Pentanone	4,500		640		7.0
Hart Crowser 1997	Dec-96	B-44	4-Methyl-2-Pentanone	1,500		640		2.3
Ecology 1993b	Jun-93	278094	4-Methyl-2-Pentanone	1,300	J	640		2.0
Hart Crowser 1997	Dec-96	B-39	4-Methyl-2-Pentanone	1,000		640		1.6
Hart Crowser 1992b	May-92	B-16	4-Methyl-2-Pentanone	870	J	640		1.4

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	**May-92**	**B-15**	**Acetone**	**18,000**		**800**		**23**
Ecology 1993b	**Jun-93**	**278091**	**Acetone**	**17,000**		**800**		**21**
Ecology 1993b	**Jun-93**	**278092**	**Acetone**	**13,000**		**800**		**16**
Hart Crowser 1992b	**May-92**	**B-11**	**Acetone**	**11,000**	**B**	**800**		**14**
Ecology 1993c	**Jul-93**	**B-27**	**Acetone**	**10,000**	**J**	**800**		**13**
Hart Crowser 1992b	**May-92**	**B-31**	**Acetone**	**10,000**	**B**	**800**		**13**
Hart Crowser 1992b	May-92	B-16	Acetone	7,200	B	800		9.0
Ecology 1993c	Jul-93	B-49	Acetone	5,700	J	800		7.1
Ecology 1993b	Jun-93	278094	Acetone	3,300		800		4.1
Ecology 1993b	Jun-93	278094 (DUP)	Acetone	3,000	J	800		3.8
Hart Crowser 1992b	May-92	B-8	Acetone	1,200	B	800		1.5
Hart Crowser 1992b	May-92	B-20	Acetone	820	B	800		1.0
Hart Crowser 1992b	May-92	B-30	Arsenic (dissolved)	22		5	370	4.4
Hart Crowser 1992b	May-92	B-16	Arsenic (dissolved)	19		5	370	3.8
Hart Crowser 1992b	May-92	B-31	Arsenic (dissolved)	18		5	370	3.6
Hart Crowser 1992b	May-92	B-18	Arsenic (dissolved)	7.1		5	370	1.4
Hart Crowser 1992b	May-92	B-20	Arsenic (dissolved)	7		5	370	1.4
Hart Crowser 1992b	May-92	B-15	Arsenic (dissolved)	6.6		5	370	1.3
Hart Crowser 1992b	May-92	B-1	Arsenic (dissolved)	6.2		5	370	1.2
Hart Crowser 1992b	**May-92**	**B-15**	**Arsenic (total)**	**140**		**5**	**370**	**28**
Hart Crowser 1992b	May-92	B-24	Arsenic (total)	49		5	370	9.8
Hart Crowser 1992b	May-92	B-23	Arsenic (total)	42		5	370	8.4
Hart Crowser 1992b	May-92	B-31	Arsenic (total)	39		5	370	7.8
Hart Crowser 1992b	May-92	B-16	Arsenic (total)	24		5	370	4.8
Hart Crowser 1992b	May-92	B-22	Arsenic (total)	22		5	370	4.4
Hart Crowser 1992b	May-92	B-30	Arsenic (total)	20		5	370	4.0
Hart Crowser 1992b	May-92	B-1	Arsenic (total)	17		5	370	3.4
Hart Crowser 1992b	May-92	B-26	Arsenic (total)	13		5	370	2.6
Hart Crowser 1992b	May-92	B-18	Arsenic (total)	11		5	370	2.2
Hart Crowser 1992b	May-92	B-14	Arsenic (total)	10		5	370	2.0
Hart Crowser 1992b	May-92	B-11	Arsenic (total)	9.7		5	370	1.9
Hart Crowser 1992b	May-92	B-20	Arsenic (total)	8		5	370	1.6
Hart Crowser 1992b	May-92	B-29	Arsenic (total)	5.3		5	370	1.1
Hart Crowser 1992b	May-92	B-27	Arsenic (total)	5.2		5	370	1.0
Hart Crowser 1992b	**May-92**	**B-30**	**Benzene**	**1,300**		**0.8**		**1,625**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	**Jun-93**	**278092**	**Benzene**	**710**		**0.8**		**888**
Hart Crowser 1992b	**May-92**	**B-31**	**Benzene**	**630**		**0.8**		**788**
Ecology 1993b	**Jun-93**	**278091**	**Benzene**	**600**		**0.8**		**750**
TV-F&S 2000a	**Nov-98**	**B-49**	**Benzene**	**440**		**0.8**		**550**
Hart Crowser 1997	**Dec-96**	**B-44**	**Benzene**	**310**		**0.8**		**388**
TV-F&S 2000a	**Oct-98**	**B-20**	**Benzene**	**300**		**0.8**		**375**
Hart Crowser 1997	**Dec-96**	**B-39**	**Benzene**	**210**		**0.8**		**263**
Hart Crowser 1992b	**May-92**	**B-29**	**Benzene**	**190**		**0.8**		**238**
TV-F&S 2000a	**Oct-98**	**B-44**	**Benzene**	**170**		**0.8**		**213**
TV-F&S 2000a	**Oct-98**	**B-21**	**Benzene**	**130**		**0.8**		**163**
TV-F&S 2000a	**Nov-98**	**B-12**	**Benzene**	**120**		**0.8**		**150**
Hart Crowser 1992b	**May-92**	**B-15**	**Benzene**	**120**		**0.8**		**150**
Hart Crowser 1997	**Dec-96**	**B-10A**	**Benzene**	**88**	**J**	**0.8**		**110**
Hart Crowser 1997	**Dec-96**	**B-20**	**Benzene**	**88**		**0.8**		**110**
TV-F&S 2000a	**Oct-98**	**B-35**	**Benzene**	**64**		**0.8**		**80**
Hart Crowser 1997	**Dec-96**	**B-35**	**Benzene**	**56**		**0.8**		**70**
Hart Crowser 1997	**Dec-96**	**B-31**	**Benzene**	**43**		**0.8**		**54**
Hart Crowser 1997	**Dec-96**	**B-21**	**Benzene**	**29**		**0.8**		**36**
TV-F&S 2000a	**Nov-98**	**B-52**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-5**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-5 (DUP)**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-20**	**Benzene**	**20**		**0.8**		**25**
Hart Crowser 1997	**Dec-96**	**B-33A**	**Benzene**	**18**	**J**	**0.8**		**23**
ATI 1991b	**Sep-91**	**B-16**	**Benzene**	**17**		**0.8**		**21**
Hart Crowser 1997	**Dec-96**	**B-45**	**Benzene**	**15**		**0.8**		**19**
Hart Crowser 1992b	**May-92**	**B-21**	**Benzene**	**15**		**0.8**		**19**
TV-F&S 2000a	**Jul-99**	**B-65**	**Benzene**	**8.7**		**0.8**		**11**
TV-F&S 2000a	**Jul-99**	**B-63**	**Benzene**	**8.1**		**0.8**		**10**
ATI 1991b	**Sep-91**	**B-17**	**Benzene**	**8**		**0.8**		**10**
TV-F&S 2000a	Jul-99	B-63 (DUP)	Benzene	7.5		0.8		9.4
TV-F&S 2000a	Jul-99	B-61	Benzene	6.2		0.8		7.8
Hart Crowser 1992b	May-92	B-27	Benzene	5		0.8		6.3
TV-F&S 2000a	Oct-99	B-26	Benzene	3.7		0.8		4.6
TV-F&S 2000a	Jul-99	TW-2	Benzene	3.1		0.8		3.9
TV-F&S 2000a	Oct-98	B-8	Benzene	3		0.8		3.8

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-17	Benzene	3		0.8		3.8
Hart Crowser 1992b	May-92	B-6	Benzene	3		0.8		3.8
TV-F&S 2000a	Oct-99	B-36	Benzene	2.7		0.8		3.4
Hart Crowser 1997	Dec-96	B-36	Benzene	2		0.8		2.5
Hart Crowser 1997	Dec-96	B-24	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-19	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-24	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-25	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-72	Benzene	2		0.8		2.5
TV-F&S 2000a	Oct-98	B-36	Benzene	1.3		0.8		1.6
TV-F&S 2000a	Oct-98	B-36 (DUP)	Benzene	1.3		0.8		1.6
TV-F&S 2000a	Nov-98	B-18	Benzene	1.2		0.8		1.5
Hart Crowser 1990b	1990	B-8	Benzene	0.89		0.8		1.1
Ecology 1993b	Jun-93	278092	Benzo(a)anthracene	2	J		0.63	3.2
Hart Crowser 1997	**Dec-96**	**B-31**	**Bis(2-Ethylhexyl)Phthalate**	**76**		**6.3**	**0.47**	**162**
Hart Crowser 1992b	**May-92**	**B-72**	**Bis(2-Ethylhexyl)Phthalate**	**60**		**6.3**	**0.47**	**128**
Hart Crowser 1992b	**May-92**	**B-25**	**Bis(2-Ethylhexyl)Phthalate**	**36**		**6.3**	**0.47**	**77**
Hart Crowser 1992b	**May-92**	**B-8**	**Bis(2-Ethylhexyl)Phthalate**	**25**		**6.3**	**0.47**	**53**
Hart Crowser 1992b	**May-92**	**B-5 (DUP)**	**Bis(2-Ethylhexyl)Phthalate**	**20**		**6.3**	**0.47**	**43**
Hart Crowser 1992b	**May-92**	**B-17**	**Bis(2-Ethylhexyl)Phthalate**	**18**		**6.3**	**0.47**	**38**
Hart Crowser 1992b	**May-92**	**B-20**	**Bis(2-Ethylhexyl)Phthalate**	**17**		**6.3**	**0.47**	**36**
Hart Crowser 1992b	**May-92**	**B-27**	**Bis(2-Ethylhexyl)Phthalate**	**17**		**6.3**	**0.47**	**36**
Hart Crowser 1992b	**May-92**	**B-23 (DUP)**	**Bis(2-Ethylhexyl)Phthalate**	**12**		**6.3**	**0.47**	**26**
Hart Crowser 1997	**Dec-96**	**B-8**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-21**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-23**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-19**	**Bis(2-Ethylhexyl)Phthalate**	**10**		**6.3**	**0.47**	**21**
TV-F&S 2000a	**Jul-99**	**B-58**	**Bis(2-Ethylhexyl)Phthalate**	**8.8**		**6.3**	**0.47**	**19**
ATI 1991b	**Sep-91**	**B-17**	**Bis(2-Ethylhexyl)Phthalate**	**8.5**	**J**	**6.3**	**0.47**	**18**
Ecology 1993b	Jun-93	278093	Bis(2-Ethylhexyl)Phthalate	3	J	6.3	0.47	6.4
TV-F&S 2000a	Feb-99	B-53	Bis(2-Ethylhexyl)Phthalate	2.1		6.3	0.47	4.5
TV-F&S 2000a	Jul-99	B-59	Bis(2-Ethylhexyl)Phthalate	1.6		6.3	0.47	3.4
TV-F&S 2000a	Feb-99	B-57	Bis(2-Ethylhexyl)Phthalate	1.6		6.3	0.47	3.4
TV-F&S 2000a	Jul-99	B-61	Bis(2-Ethylhexyl)Phthalate	1.5		6.3	0.47	3.2
TV-F&S 2000a	Oct-98	B-36 (DUP)	bis(2-Ethylhexyl)phthalate	1.1		6.3	0.47	2.3

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Feb-99	B-28	Bis(2-Ethylhexyl)Phthalate	1.1		6.3	0.47	2.3
TV-F&S 2000a	Nov-98	B-42	bis(2-Ethylhexyl)phthalate	1		6.3	0.47	2.1
TV-F&S 2000a	Feb-99	B-56	Bis(2-Ethylhexyl)Phthalate	1		6.3	0.47	2.1
Hart Crowser 1992b	May-92	B-25	Cadmium (dissolved)	5.8		5	3.4	1.7
Hart Crowser 1992b	May-92	B-9	Cadmium (total)	16		5	3.4	4.7
Hart Crowser 1992b	May-92	B-15	Cadmium (total)	7.9		5	3.4	2.3
Hart Crowser 1992b	May-92	B-72	Cadmium (total)	7		5	3.4	2.1
Hart Crowser 1992b	May-92	B-19	Cadmium (total)	6.6		5	3.4	1.9
Hart Crowser 1992b	May-92	B-8	Cadmium (total)	4.1		5	3.4	1.2
Ecology 1993c	Jul-93	B-49	Carbazole	23	J	4.4		5.2
Ecology 1993b	Jun-93	278092	Carbazole	13	J	4.4		3.0
Ecology 1993b	Jun-93	278091	Chloroform	66	J	7.2		9.2
Hart Crowser 1992b	May-92	B-30	Chloroform	61		7.2		8.5
Ecology 1993b	Jun-93	278092	Chloroform	52	J	7.2		7.2
Hart Crowser 1997	Dec-96	B-44	Chloroform	26		7.2		3.6
Hart Crowser 1992b	May-92	B-27	Chloroform	20		7.2		2.8
Hart Crowser 1997	Dec-96	B-39	Chloroform	19		7.2		2.6
TV-F&S 2000a	Jul-99	B-63 (DUP)	Chloroform	14		7.2		1.9
Hart Crowser 1990b	Jun-05	B-7	Chloroform	13		7.2		1.8
TV-F&S 2000a	Jul-99	B-63	Chloroform	13		7.2		1.8
Hart Crowser 1992b	May-92	B-72	Chloroform	13		7.2		1.8
Hart Crowser 1997	Dec-96	B-31	Chloroform	12		7.2		1.7
Hart Crowser 1992b	May-92	B-19	Chloroform	12		7.2		1.7
Hart Crowser 1992b	**May-92**	**B-15**	**Chromium (total)**	**16,000**		**50**	**320**	**320**
Hart Crowser 1992b	May-92	B-11	Chromium (total)	140		50	320	2.8
Hart Crowser 1992b	May-92	B-31	Chromium (total)	140		50	320	2.8
Hart Crowser 1992b	May-92	B-16	Chromium (total)	110		50	320	2.2
Hart Crowser 1992b	May-92	B-22	Chromium (total)	94		50	320	1.9
Hart Crowser 1992b	May-92	B-30	Chromium (total)	94		50	320	1.9
Hart Crowser 1992b	May-92	B-23	Chromium (total)	92		50	320	1.8
Hart Crowser 1992b	May-92	B-14	Chromium (total)	69		50	320	1.4
Hart Crowser 1992b	May-92	B-24	Chromium (total)	68		50	320	1.4
Hart Crowser 1992b	May-92	B-1	Chromium (total)	61		50	320	1.2
Hart Crowser 1992b	May-92	B-26	Chromium (total)	59		50	320	1.2
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**cis-1,2-DCE**	**75,000**		**80**		**938**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Jul-93	B-50	cis-1,2-DCE	74,000		80		925
Hart Crowser 1993a	Jul-93	B-47	cis-1,2-DCE	72,000		80		900
Hart Crowser 1993a	Jun-93	B-46	cis-1,2-DCE	61,000		80		763
Hart Crowser 1993a	Jun-93	B-44	cis-1,2-DCE	58,000		80		725
TV-F&S 2000a	Jul-99	B-65	cis-1,2-DCE	47,000		80		588
TV-F&S 2000a	Oct-99	B-65	cis-1,2-DCE	40,000	J	80		500
Hart Crowser 1993a	Jun-93	B-43	cis-1,2-DCE	38,000		80		475
Hart Crowser 1993a	Jul-93	B-49	cis-1,2-DCE	34,000		80		425
TV-F&S 2000a	Oct-99	B-47	cis-1,2-DCE	33,000		80		413
TV-F&S 2000a	Oct-99	B-47 (DUP)	cis-1,2-DCE	29,000		80		363
TV-F&S 2000a	Oct-99	B-21	cis-1,2-DCE	28,000		80		350
TV-F&S 2000a	Oct-99	B-42	cis-1,2-DCE	28,000		80		350
Hart Crowser 1993a	Aug-93	B-52 (DUP)	cis-1,2-DCE	27,000		80		338
TV-F&S 2000a	Jul-99	B-61	cis-1,2-DCE	27,000	J	80		338
TV-F&S 2000a	Oct-98	B-33A	cis-1,2-DCE	26,000		80		325
TV-F&S 2000a	Nov-98	B-46 BAL	cis-1,2-DCE	26,000		80		325
Hart Crowser 1993a	Aug-93	B-52	cis-1,2-DCE	25,000		80		313
TV-F&S 2000a	Oct-99	B-49	cis-1,2-DCE	25,000		80		313
Hart Crowser 1993a	Aug-93	B-51	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-98	B-20	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-98	B-21	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-99	B-58	cis-1,2-DCE	22,000		80		275
TV-F&S 2000a	Oct-99	B-61	cis-1,2-DCE	22,000		80		275
TV-F&S 2000a	Nov-98	B-46	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Jul-99	B-58	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-45	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-33A	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-45 (DUP)	cis-1,2-DCE	20,000		80		250
TV-F&S 2000a	Oct-99	B-58 (DUP)	cis-1,2-DCE	18,000	J	80		225
TV-F&S 2000a	Nov-98	B-12	cis-1,2-DCE	16,000		80		200
TV-F&S 2000a	Oct-98	B-44	cis-1,2-DCE	15,000		80		188
TV-F&S 2000a	Nov-98	B-42	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-45	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-45 BAL	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-49	cis-1,2-DCE	14,000		80		175

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**cis-1,2-DCE**	**14,000**		**80**		**175**
TV-F&S 2000a	**Nov-99**	**B-11**	**cis-1,2-DCE**	**14,000**		**80**		**175**
Hart Crowser 1993a	**Jul-93**	**B-48**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-52**	**cis-1,2-DCE**	**13,000**	**J**	**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-10A**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-46**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Nov-98**	**B-39**	**cis-1,2-DCE**	**12,000**		**80**		**150**
TV-F&S 2000a	**Oct-99**	**B-39**	**cis-1,2-DCE**	**11,000**	**J**	**80**		**138**
TV-F&S 2000a	**Oct-99**	**B-44**	**cis-1,2-DCE**	**10,000**		**80**		**125**
TV-F&S 2000a	**Nov-98**	**B-52**	**cis-1,2-DCE**	**8,300**		**80**		**104**
TV-F&S 2000a	**Nov-98**	**B-10A**	**cis-1,2-DCE**	**6,400**		**80**		**80**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**cis-1,2-DCE**	**6,200**		**80**		**78**
TV-F&S 2000a	**Oct-99**	**B-18**	**cis-1,2-DCE**	**6,000**		**80**		**75**
TV-F&S 2000a	**Oct-99**	**B-63**	**cis-1,2-DCE**	**5,400**		**80**		**68**
TV-F&S 2000a	**Nov-99**	**B-12**	**cis-1,2-DCE**	**4,500**		**80**		**56**
Hart Crowser 1993a	**Jun-93**	**B-45**	**cis-1,2-DCE**	**4,400**		**80**		**55**
Hart Crowser 1993a	**Jun-93**	**B-45 (DUP)**	**cis-1,2-DCE**	**4,200**		**80**		**53**
TV-F&S 2000a	**Jul-99**	**B-63**	**cis-1,2-DCE**	**3,700**		**80**		**46**
TV-F&S 2000a	**Jul-99**	**B-63 (DUP)**	**cis-1,2-DCE**	**3,500**		**80**		**44**
TV-F&S 2000a	**Oct-99**	**B-15**	**cis-1,2-DCE**	**2,100**		**80**		**26**
TV-F&S 2000a	**Oct-98**	**B-8**	**cis-1,2-DCE**	**1,500**		**80**		**19**
TV-F&S 2000a	**Oct-99**	**B-60**	**cis-1,2-DCE**	**960**		**80**		**12**
TV-F&S 2000a	**Oct-99**	**B-62**	**cis-1,2-DCE**	**930**		**80**		**12**
TV-F&S 2000a	Jul-99	TW-3 (DUP)	cis-1,2-DCE	780		80		9.8
TV-F&S 2000a	Jul-99	TW-3	cis-1,2-DCE	780		80		9.8
TV-F&S 2000a	Oct-99	B-8	cis-1,2-DCE	660		80		8.3
TV-F&S 2000a	Jul-99	TW-2	cis-1,2-DCE	640		80		8.0
TV-F&S 2000a	Jul-99	TW-5	cis-1,2-DCE	550		80		6.9
TV-F&S 2000a	Oct-99	B-16	cis-1,2-DCE	460		80		5.8
TV-F&S 2000a	Oct-99	B-35	cis-1,2-DCE	450		80		5.6
TV-F&S 2000a	Nov-99	B-31	cis-1,2-DCE	450		80		5.6
TV-F&S 2000a	Dec-98	B-22	cis-1,2-DCE	403		80		5.0
TV-F&S 2000a	Nov-98	B-18	cis-1,2-DCE	360		80		4.5
TV-F&S 2000a	Jul-99	B-59	cis-1,2-DCE	350		80		4.4
TV-F&S 2000a	Feb-99	B-22	cis-1,2-DCE	320		80		4.0

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-36	cis-1,2-DCE	290		80		3.6
TV-F&S 2000a	Oct-99	B-59	cis-1,2-DCE	280		80		3.5
TV-F&S 2000a	Jul-99	B-60	cis-1,2-DCE	220		80		2.8
TV-F&S 2000a	Oct-99	B-22	cis-1,2-DCE	190		80		2.4
TV-F&S 2000a	Oct-99	B-54	cis-1,2-DCE	150		80		1.9
TV-F&S 2000a	Jul-99	B-13	cis-1,2-DCE	120		80		1.5
TV-F&S 2000a	Apr-99	B-13	cis-1,2-DCE	100		80		1.3
TV-F&S 2000a	Jul-99	TW-1	cis-1,2-DCE	95		80		1.2
TV-F&S 2000a	Jul-99	TW-6	cis-1,2-DCE	86		80		1.1
Ecology 1993b	Jun-93	278092	Chrysene	2	J		1.9	1.1
Hart Crowser 1992b	May-92	B-15	Copper (total)	1,100		590	120	9.2
Hart Crowser 1992b	May-92	B-31	Copper (total)	290		590	120	2.4
Hart Crowser 1992b	May-92	B-22	Copper (total)	130		590	120	1.1
Hart Crowser 1992b	May-92	B-24	Copper (total)	130		590	120	1.1
Hart Crowser 1992b	May-92	B-11	Copper (total)	120		590	120	1.0
Hart Crowser 1992b	May-92	B-23	Copper (total)	120		590	120	1.0
Ecology 1993c	Jul-93	B-49	Dibenzofuran	24	J	32	5.1	4.7
Hart Crowser 1992b	**May-92**	**B-31**	**Diesel-Range Hydrocarbons**	**19,000**		**500**		**38**
Hart Crowser 1992b	**May-92**	**B-24**	**Diesel-Range Hydrocarbons**	**7,000**		**500**		**14**
Hart Crowser 1992b	May-92	B-10A (DUP)	Diesel-Range Hydrocarbons	4,000		500		8.0
TV-F&S 2001a	Jul-00	AGI-2	Diesel-Range Hydrocarbons	3,400		500		6.8
Hart Crowser 1992b	May-92	B-10A	Diesel-Range Hydrocarbons	2,000		500		4.0
Hart Crowser 1992b	May-92	B-29	Diesel-Range Hydrocarbons	2,000		500		4.0
Hart Crowser 1992b	May-92	B-11	Diesel-Range Hydrocarbons	1,000		500		2.0
TV-F&S 2001a	Jul-00	NW-6	Diesel-Range Hydrocarbons	660		500		1.3
TV-F&S 2000a	Nov-98	B-49	Ethylbenzene	2,200		700		3.1
Ecology 1993c	Jul-93	B-27	Ethylbenzene	2,000	J	700		2.9
TV-F&S 2000a	Nov-98	B-42	Ethylbenzene	1,800		700		2.6
Hart Crowser 1997	Dec-96	B-10A	Ethylbenzene	1,700		700		2.4
TV-F&S 2000a	Oct-99	B-47	Ethylbenzene	1,700		700		2.4
TV-F&S 2000a	Oct-99	B-47 (DUP)	Ethylbenzene	1,700		700		2.4
Ecology 1993b	Jun-93	278091	Ethylbenzene	1,500		700		2.1
Ecology 1993b	Jun-93	278092	Ethylbenzene	1,400		700		2.0
TV-F&S 2000a	Oct-98	B-21	Ethylbenzene	1,400		700		2.0
TV-F&S 2000a	Oct-98	B-44	Ethylbenzene	1,300		700		1.9

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-30	Ethylbenzene	1,200		700		1.7
TV-F&S 2000a	Nov-98	B-12	Ethylbenzene	1,100		700		1.6
Hart Crowser 1992b	May-92	B-16	Ethylbenzene	1,100		700		1.6
TV-F&S 2000a	Nov-98	B-39	Ethylbenzene	1,000		700		1.4
TV-F&S 2000a	Oct-99	B-42	Ethylbenzene	1,000		700		1.4
ATI 1991b	Sep-91	B-16	Ethylbenzene	970		700		1.4
Hart Crowser 1992b	May-92	B-10A	Ethylbenzene	940		700		1.3
Ecology 1993c	Jul-93	B-49	Ethylbenzene	910	J	700		1.3
Hart Crowser 1997	Dec-96	B-21	Ethylbenzene	900		700		1.3
Hart Crowser 1992b	May-92	B-21	Ethylbenzene	800		700		1.1
Hart Crowser 1997	Dec-96	B-31	Ethylbenzene	790		700		1.1
TV-F&S 2000a	Oct-98	B-20	Ethylbenzene	740		700		1.1
Hart Crowser 1997	Dec-96	B-44	Ethylbenzene	700		700		1.0
Hart Crowser 1992b	May-92	B-15	Ethylene Glycol	22,000		16,000		1.4
Ecology 1993c	Jul-93	B-49	Fluorene	32	J	640	7.0	4.6
Hart Crowser 1992b	**May-92**	**B-30**	**Gasoline-Range Hydrocarbons**	**120,000**		**800**		**150**
Hart Crowser 1992b	**May-92**	**B-31**	**Gasoline-Range Hydrocarbons**	**90,000**		**800**		**113**
Hart Crowser 1992b	**May-92**	**B-15**	**Gasoline-Range Hydrocarbons**	**64,000**		**800**		**80**
Hart Crowser 1992b	**May-92**	**B-11**	**Gasoline-Range Hydrocarbons**	**48,000**		**800**		**60**
Hart Crowser 1992b	**May-92**	**B-10A**	**Gasoline-Range Hydrocarbons**	**15,000**		**800**		**19**
Hart Crowser 1992b	**May-92**	**B-10A (DUP)**	**Gasoline-Range Hydrocarbons**	**9,000**		**800**		**11**
Hart Crowser 1992b	**May-92**	**B-29**	**Gasoline-Range Hydrocarbons**	**9,000**		**800**		**11**
Hart Crowser 1992b	**May-92**	**B-13**	**Gasoline-Range Hydrocarbons**	**8,000**		**800**		**10**
Hart Crowser 1992b	**May-92**	**B-21**	**Gasoline-Range Hydrocarbons**	**8,000**		**800**		**10**
Hart Crowser 1992b	May-92	B-16	Gasoline-Range Hydrocarbons	7,000		800		8.8
Hart Crowser 1992b	May-92	B-8	Gasoline-Range Hydrocarbons	3,000		800		3.8
TV-F&S 2001a	Jul-00	B-54	Gasoline-Range Hydrocarbons	1,600		800		2.0
TV-F&S 2001a	Jul-00	B-13	Gasoline-Range Hydrocarbons	1,500		800		1.9
Hart Crowser 1992b	May-92	B-20	Gasoline-Range Hydrocarbons	1,000		800		1.3
Hart Crowser 1992b	**May-92**	**B-15**	**Lead (total)**	**140**		**15**	**13**	**11**
Hart Crowser 1992b	May-92	B-24	Lead (total)	33		15	13	2.5
Hart Crowser 1992b	May-92	B-31	Lead (total)	33		15	13	2.5
Hart Crowser 1992b	May-92	B-14	Lead (total)	27		15	13	2.1
Hart Crowser 1992b	May-92	B-11	Lead (total)	26		15	13	2.0
Hart Crowser 1992b	May-92	B-23	Lead (total)	25		15	13	1.9

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-22	Lead (total)	24		15	13	1.8
Hart Crowser 1992b	May-92	B-16	Lead (total)	21		15	13	1.6
Hart Crowser 1992b	May-92	B-26	Lead (total)	18		15	13	1.4
Hart Crowser 1992b	**May-92**	**B-15**	**Mercury (total)**	**6.2**		**2**	**0.0074**	**838**
Hart Crowser 1992b	**May-92**	**B-16**	**Mercury (total)**	**1.2**		**2**	**0.0074**	**162**
Hart Crowser 1992b	**May-92**	**B-31**	**Mercury (total)**	**0.5**		**2**	**0.0074**	**68**
Hart Crowser 1992b	**May-92**	**B-22**	**Mercury (total)**	**0.22**		**2**	**0.0074**	**30**
Hart Crowser 1992b	**May-92**	**B-23**	**Mercury (total)**	**0.22**		**2**	**0.0074**	**30**
Hart Crowser 1992b	**May-92**	**B-30**	**Methanol**	**40,000**		**4,000**		**10**
Hart Crowser 1992b	May-92	B-31	Methanol	8,000		4,000		2.0
Hart Crowser 1992b	May-92	B-11	Methanol	7,900		4,000		2.0
Hart Crowser 1992b	May-92	B-31 (DUP)	Methanol	7,300		4,000		1.8
Hart Crowser 1992b	May-92	B-16	Methanol	4,600		4,000		1.2
Hart Crowser 1993a	**Sep-92**	**B-30**	**Methylene Chloride**	**23,000**		**5**		**4,600**
Hart Crowser 1993a	**Aug-93**	**B-30**	**Methylene Chloride**	**16,000**		**5**		**3,200**
Hart Crowser 1993a	**Sep-92**	**B-31**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Ecology 1993b	**Jun-93**	**278091**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Ecology 1993c	**Jul-93**	**B-27**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**Methylene Chloride**	**13,000**		**5**		**2,600**
Hart Crowser 1993a	**Jun-93**	**B-43**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1993a	**Jul-93**	**B-47**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1992b	**May-92**	**B-30**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1993a	**Aug-93**	**B-31**	**Methylene Chloride**	**11,000**		**5**		**2,200**
Hart Crowser 1992b	**May-92**	**B-31**	**Methylene Chloride**	**11,000**	**B**	**5**		**2,200**
Ecology 1993b	**Jun-93**	**278092**	**Methylene Chloride**	**10,000**		**5**		**2,000**
Hart Crowser 1993a	**Jun-93**	**B-44**	**Methylene Chloride**	**9,700**		**5**		**1,940**
Ecology 1993c	**Jul-93**	**B-49**	**Methylene Chloride**	**9,600**		**5**		**1,920**
Hart Crowser 1993a	**Jul-93**	**B-49**	**Methylene Chloride**	**8,400**		**5**		**1,680**
Hart Crowser 1992b	**May-92**	**B-15**	**Methylene Chloride**	**7,500**	**B**	**5**		**1,500**
Hart Crowser 1997	**Oct-95**	**B-31**	**Methylene Chloride**	**6,900**	**J**	**5**		**1,380**
Hart Crowser 1993a	**Sep-92**	**B-15**	**Methylene Chloride**	**6,700**		**5**		**1,340**
Hart Crowser 1993a	**Aug-93**	**B-51**	**Methylene Chloride**	**3,800**		**5**		**760**
Hart Crowser 1997	**Oct-95**	**B-21**	**Methylene Chloride**	**2,000**	**JB**	**5**		**400**
Hart Crowser 1993a	**Aug-93**	**B-15**	**Methylene Chloride**	**1,500**		**5**		**300**
Ecology 1993b	**Jun-93**	**278094**	**Methylene Chloride**	**1,400**	**J**	**5**		**280**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**Methylene Chloride**	**1,400**	**J**	**5**		**280**
Hart Crowser 1997	**Dec-96**	**B-44**	**Methylene Chloride**	**1,400**		**5**		**280**
Hart Crowser 1993a	**Jun-93**	**B-46**	**Methylene Chloride**	**1,300**		**5**		**260**
Ecology 1993c	**Jul-93**	**B-48**	**Methylene Chloride**	**1,200**	**J**	**5**		**240**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**Methylene Chloride**	**1,200**	**J**	**5**		**240**
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**Methylene Chloride**	**1,200**		**5**		**240**
Hart Crowser 1997	**Oct-95**	**B-44**	**Methylene Chloride**	**1,100**	**B**	**5**		**220**
Hart Crowser 1993a	**Jul-93**	**B-48**	**Methylene Chloride**	**880**		**5**		**176**
Hart Crowser 1997	**Dec-96**	**B-39**	**Methylene Chloride**	**710**		**5**		**142**
TV-F&S 2000a	**Oct-99**	**B-58 (DUP)**	**Methylene Chloride**	**690**		**5**		**138**
Hart Crowser 1992b	**May-92**	**B-29**	**Methylene Chloride**	**270**	**JB**	**5**		**54**
Hart Crowser 1992b	**May-92**	**B-8**	**Methylene Chloride**	**210**	**JB**	**5**		**42**
Hart Crowser 1992b	**May-92**	**B-10A**	**Methylene Chloride**	**140**	**JB**	**5**		**28**
TV-F&S 2000a	**Oct-99**	**B-20A**	**Methylene Chloride**	**120**		**5**		**24**
Hart Crowser 1993a	**Aug-93**	**B-20**	**Methylene Chloride**	**92**		**5**		**18**
Hart Crowser 1997	**Oct-95**	**B-9**	**Methylene Chloride**	**62**	**JB**	**5**		**12**
Hart Crowser 1992b	**May-92**	**B-20**	**Methylene Chloride**	**59**	**B**	**5**		**12**
Hart Crowser 1997	**Oct-95**	**B-33A**	**Methylene Chloride**	**57**	**JB**	**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-8**	**Methylene Chloride**	**55**	**JB**	**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-10A**	**Methylene Chloride**	**54**	**JB**	**5**		**11**
TV-F&S 2000a	**Oct-99**	**B-59**	**Methylene Chloride**	**53**		**5**		**11**
Hart Crowser 1997	Oct-95	B-20	Methylene Chloride	44	JB	5		8.8
Hart Crowser 1990b	1990	B-8	Methylene Chloride	43		5		8.6
Hart Crowser 1997	Oct-95	B-45	Methylene Chloride	40	JB	5		8.0
Hart Crowser 1992b	May-92	B-18	Methylene Chloride	27	JB	5		5.4
Hart Crowser 1992b	May-92	B-1	Methylene Chloride	26	JB	5		5.2
TV-F&S 2000a	Oct-99	B-36	Methylene Chloride	20		5		4.0
Hart Crowser 1992b	May-92	B-9	Methylene Chloride	14	JB	5		2.8
TV-F&S 2000a	Oct-99	B-25	Methylene Chloride	7.8		5		1.6
TV-F&S 2000a	Oct-99	B-28	Methylene Chloride	7.2		5		1.4
ATI 1991b	Sep-91	B-16	Methylene Chloride	7	B	5		1.4
ATI 1991b	Sep-91	B-17	Methylene Chloride	6	B	5		1.2
TV-F&S 2000a	Nov-98	B-52	Methylene Chloride	5.3		5		1.1
Ecology 1993c	Jul-93	B-49	Naphthalene	430		160	92	4.7
Hart Crowser 1992b	May-92	B-10A	Naphthalene	160		160	92	1.7

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-38	Naphthalene	120		160	92	1.3
Ecology 1993c	**Jul-93**	**B-50**	**PCE**	**160,000**		**5**		**32,000**
Hart Crowser 1997	**Oct-95**	**B-31**	**PCE**	**160,000**	**J**	**5**		**32,000**
Hart Crowser 1993a	**Jun-93**	**B-43**	**PCE**	**140,000**		**5**		**28,000**
Ecology 1993b	**Jun-93**	**278091**	**PCE**	**140,000**		**5**		**28,000**
Hart Crowser 1993a	**Jul-93**	**B-50**	**PCE**	**140,000**		**5**		**28,000**
Hart Crowser 1993a	**Sep-92**	**B-31**	**PCE**	**130,000**		**5**		**26,000**
Hart Crowser 1993a	**Jun-93**	**B-44**	**PCE**	**120,000**		**5**		**24,000**
Ecology 1993c	**Jul-93**	**B-27**	**PCE**	**120,000**		**5**		**24,000**
Hart Crowser 1993a	**Aug-93**	**B-31**	**PCE**	**120,000**		**5**		**24,000**
Hart Crowser 1993a	**Sep-92**	**B-15**	**PCE**	**110,000**		**5**		**22,000**
Hart Crowser 1993a	**Sep-92**	**B-30**	**PCE**	**110,000**		**5**		**22,000**
Ecology 1993b	**Jun-93**	**278092**	**PCE**	**110,000**		**5**		**22,000**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**PCE**	**110,000**		**5**		**22,000**
Ecology 1993c	**Jul-93**	**B-49**	**PCE**	**110,000**		**5**		**22,000**
Hart Crowser 1993a	**Aug-93**	**B-30**	**PCE**	**110,000**		**5**		**22,000**
Hart Crowser 1993a	**Jul-93**	**B-49**	**PCE**	**103,000**		**5**		**20,600**
Hart Crowser 1993a	**Jul-93**	**B-47**	**PCE**	**100,000**		**5**		**20,000**
Hart Crowser 1992b	**May-92**	**B-30**	**PCE**	**100,000**		**5**		**20,000**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**PCE**	**88,000**		**5**		**17,600**
TV-F&S 2000a	**Nov-98**	**B-49**	**PCE**	**85,000**		**5**		**17,000**
Hart Crowser 1992b	**May-92**	**B-15**	**PCE**	**85,000**		**5**		**17,000**
Hart Crowser 1997	**Oct-95**	**B-44**	**PCE**	**81,000**	**J**	**5**		**16,200**
Hart Crowser 1993a	**Jun-93**	**B-46**	**PCE**	**80,000**		**5**		**16,000**
Hart Crowser 1992b	**May-92**	**B-11**	**PCE**	**80,000**		**5**		**16,000**
Hart Crowser 1997	**Dec-96**	**B-31**	**PCE**	**79,000**		**5**		**15,800**
Hart Crowser 1992b	**May-92**	**B-31**	**PCE**	**76,000**		**5**		**15,200**
TV-F&S 2000a	**Oct-99**	**B-49**	**PCE**	**69,000**		**5**		**13,800**
Hart Crowser 1997	**Dec-96**	**B-39**	**PCE**	**63,000**		**5**		**12,600**
Ecology 1993b	**Jun-93**	**278094**	**PCE**	**62,000**		**5**		**12,400**
Hart Crowser 1993a	**Aug-93**	**B-51**	**PCE**	**58,000**		**5**		**11,600**
TV-F&S 2000a	**Oct-99**	**B-44**	**PCE**	**57,000**	**J**	**5**		**11,400**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**PCE**	**56,000**		**5**		**11,200**
Hart Crowser 1993a	**Aug-93**	**B-15**	**PCE**	**55,000**		**5**		**11,000**
TV-F&S 2000a	**Oct-99**	**B-47**	**PCE**	**54,000**		**5**		**10,800**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-44	PCE	53,000		5		10,600
Hart Crowser 1993a	Aug-93	B-52 (DUP)	PCE	52,000		5		10,400
Hart Crowser 1993a	Aug-93	B-52	PCE	49,000		5		9,800
TV-F&S 2000a	Nov-98	B-12	PCE	47,000		5		9,400
TV-F&S 2000a	Nov-98	B-46	PCE	47,000		5		9,400
TV-F&S 2000a	Nov-98	B-39	PCE	40,000		5		8,000
TV-F&S 2000a	Oct-99	B-39	PCE	40,000	J	5		8,000
TV-F&S 2000a	Nov-98	B-46 BAL	PCE	37,000		5		7,400
TV-F&S 2000a	Nov-98	B-42	PCE	36,000		5		7,200
TV-F&S 2000a	Oct-99	B-42	PCE	36,000		5		7,200
TV-F&S 2000a	Oct-99	B-46	PCE	31,000		5		6,200
Ecology 1993c	Jul-93	B-48	PCE	30,000		5		6,000
Ecology 1993c	Jul-93	B-48 (DUP)	PCE	30,000		5		6,000
Hart Crowser 1993a	Jul-93	B-48	PCE	25,000		5		5,000
Hart Crowser 1997	Oct-95	B-10A	PCE	25,000	J	5		5,000
TV-F&S 2000a	Oct-99	B-15	PCE	20,000		5		4,000
TV-F&S 2000a	Nov-99	B-12	PCE	19,000		5		3,800
TV-F&S 2000a	Jul-99	B-58	PCE	18,000		5		3,600
TV-F&S 2000a	Oct-98	B-44	PCE	14,000		5		2,800
TV-F&S 2000a	Nov-98	B-52	PCE	12,000		5		2,400
TV-F&S 2000a	Oct-99	B-54	PCE	9,800		5		1,960
TV-F&S 2000a	Oct-99	B-60	PCE	9,400		5		1,880
TV-F&S 2000a	Nov-98	B-52 (DUP)	PCE	9,000		5		1,800
Hart Crowser 1993a	Sep-92	B-13	PCE	8,500		5		1,700
Ecology 1993b	Jun-93	278093	PCE	8,000		5		1,600
Hart Crowser 1993a	Sep-92	B-8	PCE	7,600		5		1,520
Hart Crowser 1993a	Aug-93	B-13	PCE	7,300		5		1,460
TV-F&S 2000a	Jul-99	B-13	PCE	7,300		5		1,460
TV-F&S 2000a	Nov-99	B-31	PCE	7,300		5		1,460
Hart Crowser 1992b	May-92	B-13	PCE	6,500		5		1,300
TV-F&S 2000a	Oct-99	B-58	PCE	6,200		5		1,240
TV-F&S 2000a	Jul-99	B-60	PCE	5,600		5		1,120
Hart Crowser 1992b	May-92	B-8	PCE	4,800		5		960
TV-F&S 2000a	Oct-99	B-13	PCE	4,700		5		940
Hart Crowser 1993a	Aug-93	B-8	PCE	4,600		5		920

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-58 (DUP)	PCE	4,600		5		920
TV-F&S 2000a	Jan-99	TB-1	PCE	4,300		5		860
TV-F&S 2000a	Feb-99	B-13	PCE	4,300		5		860
TV-F&S 2000a	Apr-99	B-54	PCE	4,100		5		820
TV-F&S 2000a	Nov-98	B-13	PCE	4,000		5		800
TV-F&S 2000a	Jul-99	TW-5	PCE	3,900		5		780
Hart Crowser 1992b	May-92	B-10A	PCE	3,900		5		780
TV-F&S 2000a	Dec-98	B-13	PCE	3,660		5		732
ATI 1991b	Sep-91	B-16	PCE	3,400		5		680
TV-F&S 2000a	Feb-99	B-54	PCE	3,400		5		680
TV-F&S 2000a	Jul-99	TW-6	PCE	3,300		5		660
TV-F&S 2000a	Oct-99	B-52	PCE	3,300		5		660
TV-F&S 2000a	Oct-98	B-8	PCE	3,100		5		620
TV-F&S 2000a	Oct-99	B-62	PCE	3,000		5		600
TV-F&S 2000a	Nov-99	B-11	PCE	3,000		5		600
TV-F&S 2000a	Jan-99	TB-2	PCE	2,700		5		540
TV-F&S 2000a	Jan-99	TB-4	PCE	2,400		5		480
Hart Crowser 1993a	Jun-93	B-45	PCE	2,300		5		460
Ecology 1993c	Jul-93	B-49	PCE	2,300		5		460
TV-F&S 2000a	Nov-98	B-45 BAL	PCE	2,300		5		460
TV-F&S 2001a	Jul-00	B-13	PCE	2,300	J	5		460
Hart Crowser 1992b	May-92	B-22	PCE	2,300		5		460
TV-F&S 2000a	Jan-99	TB-3	PCE	2,100		5		420
TV-F&S 2000a	Oct-99	B-22	PCE	2,100		5		420
Hart Crowser 1993a	Aug-93	B-20	PCE	2,000		5		400
TV-F&S 2001a	Jul-00	B-54	PCE	2,000	J	5		400
Hart Crowser 1990b	1990	B-12	PCE	1,900		5		380
TV-F&S 2000a	Feb-99	B-22	PCE	1,900		5		380
TV-F&S 2000a	Dec-98	B-22	PCE	1,850		5		370
Hart Crowser 1993a	Jun-93	B-45 (DUP)	PCE	1,700		5		340
Hart Crowser 1997	Oct-95	B-9	PCE	1,700		5		340
TV-F&S 2000a	Feb-99	B-56	PCE	1,700		5		340
Hart Crowser 1997	Dec-96	B-45	PCE	1,600		5		320
TV-F&S 2000a	Apr-99	B-56	PCE	1,600		5		320
Hart Crowser 1997	Oct-95	B-45	PCE	1,500		5		300

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-45	PCE	1,400		5		280
Hart Crowser 1993a	Aug-93	B-10A	PCE	1,300		5		260
TV-F&S 2000a	Nov-98	B-45	PCE	1,300		5		260
Hart Crowser 1992b	May-92	B-14	PCE	1,300		5		260
TV-F&S 2000a	Feb-99	B-53	PCE	1,200		5		240
Hart Crowser 1997	Dec-96	B-8	PCE	1,100		5		220
TV-F&S 2000a	Feb-99	B-55	PCE	1,100		5		220
TV-F&S 2000a	Oct-99	B-45 (DUP)	PCE	1,000		5		200
Hart Crowser 1997	Dec-96	B-20	PCE	930		5		186
TV-F&S 2000a	Apr-99	B-53	PCE	930		5		186
TV-F&S 2000a	Oct-99	B-20A	PCE	920		5		184
Hart Crowser 1993a	Sep-92	B-10A	PCE	860		5		172
Hart Crowser 1997	Dec-96	B-10A	PCE	850		5		170
TV-F&S 2000a	Apr-99	B-55	PCE	780		5		156
Hart Crowser 1997	Oct-95	B-21	PCE	740		5		148
Hart Crowser 1992b	May-92	B-9	PCE	710		5		142
TV-F&S 2000a	Oct-99	B-53	PCE	620		5		124
Hart Crowser 1992b	May-92	B-20	PCE	540		5		108
TV-F&S 2000a	Jul-99	TW-2	PCE	500		5		100
TV-F&S 2000a	Oct-99	B-57	PCE	490	J	5		98
TV-F&S 2000a	Jul-99	B-62	PCE	470		5		94
TV-F&S 2000a	Oct-99	B-16	PCE	470		5		94
TV-F&S 2000a	Oct-99	B-56	PCE	460	J	5		92
TV-F&S 2000a	Jul-99	TW-1	PCE	430		5		86
TV-F&S 2000a	Jul-99	B-62 (DUP)	PCE	410		5		82
TV-F&S 2000a	Oct-99	B-8	PCE	410		5		82
TV-F&S 2000a	Apr-99	B-57	PCE	400		5		80
TV-F&S 2001a	Jul-00	B-56	PCE	380	J	5		76
TV-F&S 2000a	Oct-98	B-20	PCE	360		5		72
Hart Crowser 1992b	May-92	B-16	PCE	360		5		72
TV-F&S 2000a	Oct-98	B-19	PCE	350		5		70
TV-F&S 2000a	Feb-99	B-57	PCE	350		5		70
TV-F&S 2001a	Jul-00	B-55	PCE	350	J	5		70
Hart Crowser 1993a	Sep-92	B-36	PCE	330		5		66
TV-F&S 2001a	Jul-00	B-57	PCE	300	J	5		60

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	**Oct-95**	**B-8**	**PCE**	**290**		**5**		**58**
Hart Crowser 1997	**Dec-96**	**B-36**	**PCE**	**270**		**5**		**54**
TV-F&S 2000a	**Oct-99**	**B-55**	**PCE**	**230**	**J**	**5**		**46**
TV-F&S 2001a	**Jul-00**	**B-53**	**PCE**	**220**	**J**	**5**		**44**
TV-F&S 2000a	**Oct-99**	**B-36**	**PCE**	**180**		**5**		**36**
TV-F&S 2000a	**Oct-99**	**B-14**	**PCE**	**170**		**5**		**34**
Hart Crowser 1992b	**May-92**	**B-18**	**PCE**	**160**		**5**		**32**
TV-F&S 2000a	**Jul-99**	**TW-3 (DUP)**	**PCE**	**140**		**5**		**28**
TV-F&S 2000a	**Jul-99**	**TW-3**	**PCE**	**130**		**5**		**26**
TV-F&S 2000a	**Oct-99**	**B-18**	**PCE**	**130**		**5**		**26**
TV-F&S 2000a	**Oct-99**	**B-33A**	**PCE**	**130**		**5**		**26**
TV-F&S 2001a	**Jul-00**	**AGI-2**	**PCE**	**120**	**J**	**5**		**24**
Hart Crowser 1990b	**1990**	**B-12**	**PCE**	**95**		**5**		**19**
Hart Crowser 1990b	**1990**	**B-8**	**PCE**	**89**		**5**		**18**
Hart Crowser 1993a	**Aug-93**	**B-9**	**PCE**	**85**		**5**		**17**
Hart Crowser 1997	**Dec-96**	**B-35**	**PCE**	**85**		**5**		**17**
Hart Crowser 1993a	**Sep-92**	**B-9**	**PCE**	**78**		**5**		**16**
TV-F&S 2000a	**Jul-99**	**B-61**	**PCE**	**78**		**5**		**16**
TV-F&S 2000a	**Oct-99**	**B-19**	**PCE**	**64**		**5**		**13**
TV-F&S 2000a	**Feb-99**	**B-28**	**PCE**	**63**		**5**		**13**
Hart Crowser 1992b	**May-92**	**B-72**	**PCE**	**63**		**5**		**13**
Hart Crowser 1992b	**May-92**	**B-19**	**PCE**	**62**		**5**		**12**
TV-F&S 2000a	**Jul-99**	**B-64**	**PCE**	**61**		**5**		**12**
Hart Crowser 1993a	**Aug-93**	**B-34**	**PCE**	**59**		**5**		**12**
Hart Crowser 1993a	**Aug-93**	**B-36**	**PCE**	**56**		**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-33A**	**PCE**	**53**		**5**		**11**
TV-F&S 2000a	**Oct-99**	**B-64**	**PCE**	**50**		**5**		**10**
Hart Crowser 1992b	May-92	B-28	PCE	47		5		9.4
Hart Crowser 1993a	Sep-92	B-26	PCE	44		5		8.8
Hart Crowser 1993a	Aug-93	B-35	PCE	41		5		8.2
TV-F&S 2000a	Jul-99	B-63	PCE	40		5		8.0
TV-F&S 2000a	Jul-99	B-59	PCE	39		5		7.8
Hart Crowser 1990b	1990	B-11	PCE	37		5		7.4
TV-F&S 2000a	Oct-98	B-36	PCE	35		5		7.0
TV-F&S 2001a	Jul-00	AGI-3	PCE	34	J	5		6.8

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-26	PCE	33		5		6.6
Hart Crowser 1993a	Sep-92	B-33A	PCE	32		5		6.4
Hart Crowser 1997	Oct-95	B-20	PCE	32		5		6.4
Hart Crowser 1997	Oct-95	B-34	PCE	32		5		6.4
Hart Crowser 1993a	Sep-92	B-20	PCE	31		5		6.2
TV-F&S 2000a	Oct-98	B-36 (DUP)	PCE	30		5		6.0
Hart Crowser 1992b	May-92	B-26	PCE	26		5		5.2
Hart Crowser 1990b	1990	B-7	PCE	23		5		4.6
Hart Crowser 1997	Oct-95	B-26	PCE	23		5		4.6
TV-F&S 2001a	Jul-00	NW-6	PCE	19	J	5		3.8
TV-F&S 2000a	Oct-99	B-23	PCE	17		5		3.4
Hart Crowser 1990b	1990	B-8	PCE	15		5		3.0
Hart Crowser 1997	Dec-96	B-34	PCE	15		5		3.0
TV-F&S 2000a	Jul-99	B-65	PCE	15		5		3.0
TV-F&S 2000a	Oct-99	B-28	PCE	15		5		3.0
TV-F&S 2000a	Oct-98	B-34	PCE	13		5		2.6
TV-F&S 2000a	Oct-99	B-34	PCE	11		5		2.2
TV-F&S 2001a	Jul-00	NW-12	PCE	10		5		2.0
TV-F&S 2001a	Jul-00	B-28	PCE	10	J	5		2.0
Hart Crowser 1990b	1990	B-13	PCE	9	J	5		1.8
TV-F&S 2000a	Jul-99	B-63 (DUP)	PCE	8.7		5		1.7
Hart Crowser 1990b	1990	B-10	PCE	7.8	J	5		1.6
TV-F&S 2000a	Dec-98	B-23	PCE	7.2		5		1.4
Hart Crowser 1997	Oct-95	B-36	PCE	7		5		1.4
Hart Crowser 1997	Dec-96	B-26	PCE	7		5		1.4
TV-F&S 2001a	Jul-00	NW-3	PCE	7	J	5		1.4
TV-F&S 2000a	Nov-98	B-26	PCE	6.1		5		1.2
Hart Crowser 1992b	May-92	B-23	PCE	6		5		1.2
Hart Crowser 1990b	1990	B-11	PCE	5.7	J	5		1.1
Hart Crowser 1990b	1990	B-10A	PCE	5.1	J	5		1.0
Hart Crowser 1997	Dec-96	B-9	PCE	5		5		1.0
Hart Crowser 1992b	May-92	B-17	PCE	5		5		1.0
Hart Crowser 1992b	May-92	B-23 (DUP)	PCE	5		5		1.0
Hart Crowser 1992b	**May-92**	**B-31**	**Pentachlorophenol**	**11,000**		**0.73**	**10**	**15,068**
TV-F&S 2000a	**Oct-99**	**B-38**	**Pentachlorophenol**	**5,500**		**0.73**	**10**	**7,534**

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Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-31	Pentachlorophenol	4,800		0.73	10	6,575
Hart Crowser 1997	Oct-95	B-31	Pentachlorophenol	4,000		0.73	10	5,479
Hart Crowser 1993a	Sep-92	B-31	Pentachlorophenol	3,600		0.73	10	4,932
Hart Crowser 1997	Dec-96	B-39	Pentachlorophenol	3,100	J	0.73	10	4,247
Ecology 1993c	Jul-93	B-50	Pentachlorophenol	2,500		0.73	10	3,425
Hart Crowser 1992b	May-92	B-31	Pentachlorophenol	2,300		0.73	10	3,151
Ecology 1993c	Jul-93	B-27	Pentachlorophenol	2,100		0.73	10	2,877
Hart Crowser 1992b	May-92	B-30	Pentachlorophenol	2,000		0.73	10	2,740
Ecology 1993b	Jun-93	278091	Pentachlorophenol	1,900		0.73	10	2,603
TV-F&S 2000a	Nov-99	B-11	Pentachlorophenol	1,900		0.73	10	2,603
Hart Crowser 1992b	May-92	B-30	Pentachlorophenol	1,600		0.73	10	2,192
Hart Crowser 1992b	May-92	B-11	Pentachlorophenol	1,500		0.73	10	2,055
Hart Crowser 1997	Oct-95	B-31	Pentachlorophenol	1,300	J	0.73	10	1,781
Ecology 1993b	Jun-93	278092	Pentachlorophenol	1,200		0.73	10	1,644
Hart Crowser 1997	Dec-96	B-31	Pentachlorophenol	1,200		0.73	10	1,644
Hart Crowser 1997	Dec-96	B-31	Pentachlorophenol	1,100		0.73	10	1,507
Hart Crowser 1997	Oct-95	B-39	Pentachlorophenol	670		0.73	10	918
TV-F&S 2000a	Oct-99	B-47 (DUP)	Pentachlorophenol	640		0.73	10	877
TV-F&S 2000a	Oct-98	B-44	Pentachlorophenol	570		0.73	10	781
TV-F&S 2000a	Oct-99	B-49	Pentachlorophenol	520		0.73	10	712
TV-F&S 2000a	Oct-99	B-47	Pentachlorophenol	490		0.73	10	671
TV-F&S 2000a	Nov-98	B-49	Pentachlorophenol	480	J	0.73	10	658
TV-F&S 2000a	Nov-98	B-39	Pentachlorophenol	440		0.73	10	603
TV-F&S 2000a	Nov-99	B-12	Pentachlorophenol	430		0.73	10	589
TV-F&S 2000a	Oct-99	B-39	Pentachlorophenol	380	J	0.73	10	521
TV-F&S 2000a	Oct-99	B-42	Pentachlorophenol	370		0.73	10	507
TV-F&S 2000a	Nov-98	B-46	Pentachlorophenol	360		0.73	10	493
TV-F&S 2000a	Oct-99	B-44	Pentachlorophenol	360		0.73	10	493
Ecology 1993b	Jun-93	278094	Pentachlorophenol	290		0.73	10	397
TV-F&S 2000a	Nov-98	B-42	Pentachlorophenol	260	J	0.73	10	356
TV-F&S 2000a	Oct-99	B-46	Pentachlorophenol	200		0.73	10	274
Hart Crowser 1993a	Aug-93	B-20	Pentachlorophenol	160	J	0.73	10	219
TV-F&S 2000a	Oct-98	B-20	Pentachlorophenol	140		0.73	10	192
TV-F&S 2000a	Nov-98	B-52	Pentachlorophenol	120		0.73	10	164
TV-F&S 2000a	Nov-98	B-52 (DUP)	Pentachlorophenol	120		0.73	10	164

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993c	**Jul-93**	**B-48**	**Pentachlorophenol**	**96**		**0.73**	**10**	**132**
Hart Crowser 1992b	**May-92**	**B-20**	**Pentachlorophenol**	**73**		**0.73**	**10**	**100**
Hart Crowser 1992b	**May-92**	**B-8**	**Pentachlorophenol**	**72**	**J**	**0.73**	**10**	**99**
ATI 1991b	**Sep-91**	**B-16**	**Pentachlorophenol**	**62**		**0.73**	**10**	**85**
Ecology 1993b	**Jun-93**	**278093**	**Pentachlorophenol**	**56**		**0.73**	**10**	**77**
Hart Crowser 1997	**Dec-96**	**B-20**	**Pentachlorophenol**	**56**		**0.73**	**10**	**77**
Hart Crowser 1992b	**May-92**	**B-20**	**Pentachlorophenol**	**47**		**0.73**	**10**	**64**
Hart Crowser 1993a	**Sep-92**	**B-20**	**Pentachlorophenol**	**37**		**0.73**	**10**	**51**
TV-F&S 2000a	**Oct-99**	**B-52**	**Pentachlorophenol**	**37**		**0.73**	**10**	**51**
Hart Crowser 1997	**Oct-95**	**B-10A**	**Pentachlorophenol**	**36**		**0.73**	**10**	**49**
Hart Crowser 1997	**Oct-95**	**B-20**	**Pentachlorophenol**	**33**		**0.73**	**10**	**45**
TV-F&S 2000a	**Oct-99**	**B-45 (DUP)**	**Pentachlorophenol**	**29**		**0.73**	**10**	**40**
TV-F&S 2000a	**Oct-99**	**B-15**	**Pentachlorophenol**	**26**		**0.73**	**10**	**36**
Hart Crowser 1992b	**May-92**	**B-16**	**Pentachlorophenol**	**26**		**0.73**	**10**	**36**
TV-F&S 2000a	**Oct-99**	**B-45**	**Pentachlorophenol**	**24**		**0.73**	**10**	**33**
TV-F&S 2000a	**Oct-99**	**B-45**	**Pentachlorophenol**	**22**		**0.73**	**10**	**30**
Hart Crowser 1992b	**May-92**	**B-8**	**Pentachlorophenol**	**21**		**0.73**	**10**	**29**
TV-F&S 2000a	**Oct-99**	**B-18**	**Pentachlorophenol**	**13**		**0.73**	**10**	**18**
TV-F&S 2000a	**Jul-99**	**B-58**	**Pentachlorophenol**	**12**		**0.73**	**10**	**16**
TV-F&S 2000a	**Oct-99**	**B-58 (DUP)**	**Pentachlorophenol**	**10**		**0.73**	**10**	**14**
TV-F&S 2000a	**Oct-99**	**B-60**	**Pentachlorophenol**	**9.6**		**0.73**	**10**	**13**
Hart Crowser 1992b	**May-92**	**B-29**	**Pentachlorophenol**	**9.6**		**0.73**	**10**	**13**
TV-F&S 2000a	**Oct-99**	**B-58**	**Pentachlorophenol**	**9.5**		**0.73**	**10**	**13**
Hart Crowser 1997	**Dec-96**	**B-8**	**Pentachlorophenol**	**8**	**J**	**0.73**	**10**	**11**
TV-F&S 2000a	Oct-99	B-60	Pentachlorophenol	7		0.73	10	9.6
TV-F&S 2000a	Oct-99	B-35	Pentachlorophenol	6.5		0.73	10	8.9
TV-F&S 2000a	Oct-99	B-16	Pentachlorophenol	6.3		0.73	10	8.6
Hart Crowser 1997	Dec-96	B-10A	Pentachlorophenol	5.9		0.73	10	8.1
TV-F&S 2000a	Oct-99	B-58	Pentachlorophenol	5.8		0.73	10	7.9
Hart Crowser 1997	Oct-95	B-24	Pentachlorophenol	2	J	0.73	10	2.7
Hart Crowser 1992b	May-92	B-18	Pentachlorophenol	2		0.73	10	2.7
Hart Crowser 1992b	May-92	B-11	Pentachlorophenol	1.4		0.73	10	1.9
Hart Crowser 1992b	May-92	B-10A	Pentachlorophenol	1.3		0.73	10	1.8
Hart Crowser 1997	Dec-96	B-24	Pentachlorophenol	1	J	0.73	10	1.4
Hart Crowser 1993a	Sep-92	B-25	Pentachlorophenol	0.91		0.73	10	1.2

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-27	Pentachlorophenol	0.91		0.73	10	1.2
Ecology 1993c	Jul-93	B-49	Phenanthrene	39	J		23	1.7
Ecology 1993b	Jun-93	278092	Phenanthrene	24			23	1.0
TV-F&S 2000a	**Oct-99**	**B-58**	**Phosphorus (total)**	**2,600**		**0.16**		**16,250**
TV-F&S 2000a	**Nov-99**	**B-31**	**Phosphorus (total)**	**1,600**		**0.16**		**10,000**
TV-F&S 2000a	**Oct-99**	**B-25**	**Phosphorus (total)**	**1,500**		**0.16**		**9,375**
TV-F&S 2000a	**Nov-99**	**B-11**	**Phosphorus (total)**	**1,400**		**0.16**		**8,750**
TV-F&S 2000a	**Oct-99**	**B-17**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-27**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-47**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-26**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-42**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-49**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-35**	**Phosphorus (total)**	**680**		**0.16**		**4,250**
TV-F&S 2000a	**Oct-99**	**B-46**	**Phosphorus (total)**	**640**		**0.16**		**4,000**
TV-F&S 2000a	**Nov-99**	**B-12**	**Phosphorus (total)**	**510**		**0.16**		**3,188**
TV-F&S 2000a	**Oct-99**	**B-65**	**Phosphorus (total)**	**440**		**0.16**		**2,750**
TV-F&S 2000a	**Oct-99**	**B-33A**	**Phosphorus (total)**	**400**		**0.16**		**2,500**
TV-F&S 2000a	**Oct-99**	**B-6**	**Phosphorus (total)**	**380**		**0.16**		**2,375**
TV-F&S 2000a	**Oct-99**	**B-36**	**Phosphorus (total)**	**370**		**0.16**		**2,313**
TV-F&S 2000a	**Oct-99**	**B-61**	**Phosphorus (total)**	**340**		**0.16**		**2,125**
TV-F&S 2000a	**Oct-99**	**B-23**	**Phosphorus (total)**	**310**		**0.16**		**1,938**
TV-F&S 2000a	**Oct-99**	**B-44**	**Phosphorus (total)**	**310**		**0.16**		**1,938**
TV-F&S 2000a	**Oct-99**	**B-59**	**Phosphorus (total)**	**300**		**0.16**		**1,875**
TV-F&S 2000a	**Oct-99**	**B-45**	**Phosphorus (total)**	**250**		**0.16**		**1,563**
TV-F&S 2000a	**Oct-99**	**B-21**	**Phosphorus (total)**	**230**		**0.16**		**1,438**
TV-F&S 2000a	**Oct-99**	**B-64**	**Phosphorus (total)**	**200**		**0.16**		**1,250**
TV-F&S 2000a	**Oct-99**	**B-15**	**Phosphorus (total)**	**200**		**0.16**		**1,250**
TV-F&S 2000a	**Oct-99**	**B-24**	**Phosphorus (total)**	**170**		**0.16**		**1,063**
TV-F&S 2000a	**Oct-99**	**B-55**	**Phosphorus (total)**	**170**		**0.16**		**1,063**
TV-F&S 2000a	**Oct-99**	**B-13**	**Phosphorus (total)**	**150**		**0.16**		**938**
TV-F&S 2000a	**Oct-99**	**B-28**	**Phosphorus (total)**	**150**		**0.16**		**938**
TV-F&S 2000a	**Oct-99**	**B-53**	**Phosphorus (total)**	**150**		**0.16**		**938**
TV-F&S 2000a	**Oct-99**	**B-22**	**Phosphorus (total)**	**140**		**0.16**		**875**
TV-F&S 2000a	**Oct-99**	**B-54**	**Phosphorus (total)**	**140**		**0.16**		**875**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-8	Phosphorus (total)	120		0.16		750
TV-F&S 2000a	Oct-99	B-60	Phosphorus (total)	110		0.16		688
TV-F&S 2000a	Oct-99	B-16	Phosphorus (total)	100		0.16		625
TV-F&S 2000a	Oct-99	B-34	Phosphorus (total)	100		0.16		625
TV-F&S 2000a	Oct-99	B-62	Phosphorus (total)	89		0.16		556
TV-F&S 2000a	Oct-99	B-20A	Phosphorus (total)	85		0.16		531
TV-F&S 2000a	Oct-99	B-63	Phosphorus (total)	0.28		0.16		1.8
Ecology 1993c	Jul-93	B-27	Styrene	2,500	J	1.5		1,667
TV-F&S 2000a	Nov-98	B-49	Styrene	1,800		1.5		1,200
Ecology 1993b	Jun-93	278092	Styrene	1,300		1.5		867
TV-F&S 2000a	Oct-99	B-47	Styrene	1,100		1.5		733
Hart Crowser 1992b	May-92	B-30	Styrene	650		1.5		433
Hart Crowser 1993a	Sep-92	B-31	Styrene	610		1.5		407
Hart Crowser 1993a	Aug-93	B-30	Styrene	510		1.5		340
Hart Crowser 1993a	Sep-92	B-30	Styrene	460		1.5		307
TV-F&S 2000a	Nov-98	B-42	Styrene	460		1.5		307
Hart Crowser 1997	Dec-96	B-31	Styrene	400		1.5		267
Ecology 1993b	Jun-93	278091	Styrene	330	J	1.5		220
Hart Crowser 1993a	Aug-93	B-31	Styrene	310		1.5		207
Hart Crowser 1997	Dec-96	B-44	Styrene	310		1.5		207
Hart Crowser 1997	Oct-95	B-31	Styrene	230		1.5		153
Hart Crowser 1997	Dec-96	B-39	Styrene	230		1.5		153
Hart Crowser 1997	Oct-95	B-44	Styrene	130		1.5		87
Hart Crowser 1997	Dec-96	B-10A	Styrene	32	J	1.5		21
Hart Crowser 1997	Dec-96	B-35	Styrene	15		1.5		10
Hart Crowser 1993a	Jun-93	B-43	TCE	94,000		0.11		854,545
Ecology 1993b	Jun-93	278091	TCE	72,000		0.11		654,545
Hart Crowser 1993a	Sep-92	B-31	TCE	60,000		0.11		545,455
Hart Crowser 1997	Oct-95	B-31	TCE	57,000	J	0.11		518,182
Hart Crowser 1993a	Jul-93	B-49	TCE	54,000		0.11		490,909
Hart Crowser 1993a	Aug-93	B-31	TCE	52,000		0.11		472,727
Hart Crowser 1992b	May-92	B-31	TCE	51,000		0.11		463,636
Hart Crowser 1993a	Jun-93	B-44	TCE	50,000		0.11		454,545
Hart Crowser 1993a	Jul-93	B-47 (DUP)	TCE	50,000		0.11		454,545
Hart Crowser 1993a	Sep-92	B-30	TCE	47,000		0.11		427,273

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Jul-93	B-47	TCE	47,000		0.11		427,273
Ecology 1993c	Jul-93	B-49	TCE	46,000		0.11		418,182
Ecology 1993c	Jul-93	B-27	TCE	41,000		0.11		372,727
Hart Crowser 1993a	Aug-93	B-51	TCE	40,000		0.11		363,636
Hart Crowser 1992b	May-92	B-11	TCE	40,000		0.11		363,636
Hart Crowser 1993a	Aug-93	B-30	TCE	38,000		0.11		345,455
Ecology 1993b	Jun-93	278092	TCE	35,000		0.11		318,182
Hart Crowser 1992b	May-92	B-30	TCE	34,000		0.11		309,091
Ecology 1993c	Jul-93	B-48	TCE	31,000		0.11		281,818
Hart Crowser 1993a	Jul-93	B-48	TCE	30,000		0.11		272,727
Ecology 1993c	Jul-93	B-48 (DUP)	TCE	30,000		0.11		272,727
Hart Crowser 1993a	Jun-93	B-46	TCE	23,000		0.11		209,091
TV-F&S 2000a	Nov-98	B-49	TCE	22,000		0.11		200,000
TV-F&S 2000a	Oct-99	B-47 (DUP)	TCE	22,000		0.11		200,000
Hart Crowser 1992b	May-92	B-15	TCE	22,000		0.11		200,000
Hart Crowser 1993a	Sep-92	B-15	TCE	21,000		0.11		190,909
TV-F&S 2000a	Oct-99	B-47	TCE	21,000		0.11		190,909
TV-F&S 2000a	Oct-98	B-44	TCE	20,000		0.11		181,818
TV-F&S 2000a	Oct-99	B-49	TCE	19,000		0.11		172,727
TV-F&S 2000a	Oct-99	B-46	TCE	18,000		0.11		163,636
Ecology 1993b	Jun-93	278094 (DUP)	TCE	17,000		0.11		154,545
Hart Crowser 1997	Dec-96	B-44	TCE	17,000		0.11		154,545
Hart Crowser 1993a	Aug-93	B-15	TCE	16,000		0.11		145,455
Hart Crowser 1997	Oct-95	B-44	TCE	15,000		0.11		136,364
Hart Crowser 1997	Dec-96	B-39	TCE	15,000		0.11		136,364
Ecology 1993b	Jun-93	278094	TCE	14,000		0.11		127,273
Hart Crowser 1997	Dec-96	B-31	TCE	13,000		0.11		118,182
TV-F&S 2000a	Nov-98	B-42	TCE	13,000		0.11		118,182
TV-F&S 2000a	Nov-98	B-45	TCE	13,000		0.11		118,182
Hart Crowser 1993a	Jul-93	B-50	TCE	12,000		0.11		109,091
Hart Crowser 1997	Oct-95	B-45	TCE	12,000	J	0.11		109,091
Hart Crowser 1997	Dec-96	B-45	TCE	12,000		0.11		109,091
TV-F&S 2000a	Nov-98	B-45 BAL	TCE	12,000		0.11		109,091
TV-F&S 2000a	Nov-98	B-46 BAL	TCE	12,000		0.11		109,091
Hart Crowser 1993a	Sep-92	B-8	TCE	11,000		0.11		100,000

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Jul-99	B-58	TCE	11,000		0.11		100,000
Hart Crowser 1993a	Jun-93	B-45	TCE	10,000		0.11		90,909
Ecology 1993c	Jul-93	B-50	TCE	10,000		0.11		90,909
TV-F&S 2000a	Nov-98	B-12	TCE	10,000		0.11		90,909
TV-F&S 2000a	Nov-98	B-39	TCE	10,000		0.11		90,909
TV-F&S 2000a	Oct-99	B-45	TCE	10,000		0.11		90,909
TV-F&S 2000a	Oct-99	B-45 (DUP)	TCE	9,600		0.11		87,273
Hart Crowser 1993a	Jun-93	B-45 (DUP)	TCE	9,300		0.11		84,545
Hart Crowser 1993a	Aug-93	B-52 (DUP)	TCE	9,300		0.11		84,545
TV-F&S 2000a	Nov-98	B-46	TCE	9,100		0.11		82,727
TV-F&S 2000a	Oct-99	B-42	TCE	9,000		0.11		81,818
Ecology 1993b	Jun-93	278093	TCE	8,900		0.11		80,909
Hart Crowser 1993a	Aug-93	B-52	TCE	8,800		0.11		80,000
Hart Crowser 1993a	Aug-93	B-8	TCE	7,800		0.11		70,909
TV-F&S 2000a	Oct-99	B-44	TCE	7,800		0.11		70,909
TV-F&S 2000a	Oct-99	B-39	TCE	7,500	J	0.11		68,182
TV-F&S 2000a	Oct-98	B-8	TCE	7,300		0.11		66,364
Hart Crowser 1997	Dec-96	B-8	TCE	6,300		0.11		57,273
TV-F&S 2000a	Oct-99	B-58	TCE	6,200		0.11		56,364
TV-F&S 2000a	Oct-99	B-58 (DUP)	TCE	5,600		0.11		50,909
TV-F&S 2000a	Oct-99	B-15	TCE	5,600		0.11		50,909
TV-F&S 2000a	Nov-98	B-52	TCE	5,300		0.11		48,182
Hart Crowser 1992b	May-92	B-8	TCE	5,000		0.11		45,455
TV-F&S 2000a	Nov-98	B-52 (DUP)	TCE	4,100		0.11		37,273
TV-F&S 2000a	Jul-99	B-61	TCE	3,700		0.11		33,636
TV-F&S 2000a	Nov-99	B-12	TCE	3,300		0.11		30,000
TV-F&S 2000a	Oct-99	B-8	TCE	3,100		0.11		28,182
Hart Crowser 1997	Oct-95	B-10A	TCE	3,000		0.11		27,273
Hart Crowser 1997	Oct-95	B-8	TCE	2,800		0.11		25,455
TV-F&S 2000a	Nov-99	B-11	TCE	2,800		0.11		25,455
ATI 1991b	Sep-91	B-16	TCE	2,400		0.11		21,818
Hart Crowser 1993a	Aug-93	B-20	TCE	2,200		0.11		20,000
TV-F&S 2000a	Oct-99	B-61	TCE	1,700		0.11		15,455
Hart Crowser 1997	Dec-96	B-10A	TCE	1,400		0.11		12,727
Hart Crowser 1997	Dec-96	B-20	TCE	1,300		0.11		11,818

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-99	B-31	TCE	1,200		0.11		10,909
Hart Crowser 1993a	Aug-93	B-10A	TCE	1,100		0.11		10,000
TV-F&S 2000a	Oct-99	B-60	TCE	1,100		0.11		10,000
TV-F&S 2000a	Oct-99	B-62	TCE	1,000		0.11		9,091
TV-F&S 2000a	Oct-99	B-10A	TCE	950		0.11		8,636
TV-F&S 2000a	Jul-99	B-63 (DUP)	TCE	940		0.11		8,545
TV-F&S 2000a	Jul-99	B-63	TCE	920		0.11		8,364
TV-F&S 2000a	Oct-99	B-52	TCE	830		0.11		7,545
TV-F&S 2000a	Jul-99	TW-5	TCE	790		0.11		7,182
TV-F&S 2000a	Oct-99	B-63	TCE	760		0.11		6,909
Hart Crowser 1992b	May-92	B-22	TCE	690		0.11		6,273
Hart Crowser 1992b	May-92	B-10A	TCE	590		0.11		5,364
Hart Crowser 1993a	Aug-93	B-13	TCE	500		0.11		4,545
Hart Crowser 1992b	May-92	B-13	TCE	450		0.11		4,091
Hart Crowser 1993a	Sep-92	B-13	TCE	440		0.11		4,000
TV-F&S 2000a	Oct-99	B-54	TCE	420		0.11		3,818
Hart Crowser 1993a	Sep-92	B-10A	TCE	370		0.11		3,364
TV-F&S 2000a	Oct-98	B-20	TCE	340		0.11		3,091
TV-F&S 2000a	Jul-99	B-13	TCE	320		0.11		2,909
TV-F&S 2000a	Jul-99	B-60	TCE	300		0.11		2,727
TV-F&S 2000a	Oct-99	B-16	TCE	300		0.11		2,727
TV-F&S 2000a	Nov-98	B-10A	TCE	260		0.11		2,364
Hart Crowser 1992b	May-92	B-20	TCE	260		0.11		2,364
Hart Crowser 1993a	Sep-92	B-36	TCE	250		0.11		2,273
TV-F&S 2000a	Feb-99	B-22	TCE	250		0.11		2,273
Hart Crowser 1997	Oct-95	B-9	TCE	240		0.11		2,182
TV-F&S 2000a	Oct-99	B-20A	TCE	240		0.11		2,182
Hart Crowser 1993a	Sep-92	B-20	TCE	230		0.11		2,091
TV-F&S 2000a	Jul-99	TW-2	TCE	230		0.11		2,091
TV-F&S 2000a	Dec-98	B-22	TCE	226		0.11		2,055
TV-F&S 2000a	Apr-99	B-13	TCE	220		0.11		2,000
Hart Crowser 1992b	May-92	B-14	TCE	220		0.11		2,000
TV-F&S 2000a	Dec-98	B-13	TCE	214		0.11		1,945
Hart Crowser 1992b	May-92	B-16	TCE	210		0.11		1,909
TV-F&S 2000a	Oct-99	B-13	TCE	200		0.11		1,818

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-98	B-13	TCE	194		0.11		1,764
Hart Crowser 1993a	Sep-92	B-33A	TCE	180		0.11		1,636
TV-F&S 2000a	Feb-99	B-13	TCE	180		0.11		1,636
TV-F&S 2000a	Jul-99	B-62 (DUP)	TCE	180		0.11		1,636
TV-F&S 2000a	Jul-99	B-62	TCE	180		0.11		1,636
TV-F&S 2000a	Apr-99	B-54	TCE	170		0.11		1,545
TV-F&S 2000a	Oct-98	B-19	TCE	160		0.11		1,455
TV-F&S 2000a	Oct-99	B-22	TCE	160		0.11		1,455
TV-F&S 2000a	Jul-99	TW-3 (DUP)	TCE	150		0.11		1,364
TV-F&S 2000a	Jul-99	TW-6	TCE	150		0.11		1,364
TV-F&S 2000a	Oct-99	B-36	TCE	150		0.11		1,364
TV-F&S 2000a	Jul-99	TW-3	TCE	140		0.11		1,273
TV-F&S 2000a	Jan-99	TB-1	TCE	130		0.11		1,182
TV-F&S 2000a	Oct-99	B-18	TCE	120		0.11		1,091
TV-F&S 2001a	Jul-00	B-13	TCE	120	J	0.11		1,091
Hart Crowser 1992b	May-92	B-18	TCE	120		0.11		1,091
Hart Crowser 1997	Dec-96	B-36	TCE	110		0.11		1,000
Hart Crowser 1993a	Aug-93	B-34	TCE	100		0.11		909
Hart Crowser 1993a	Aug-93	B-35	TCE	100		0.11		909
TV-F&S 2000a	Feb-99	B-54	TCE	93		0.11		845
TV-F&S 2000a	Jul-99	TW-1	TCE	93		0.11		845
Hart Crowser 1997	Dec-96	B-33A	TCE	90	J	0.11		818
TV-F&S 2000a	Jan-99	TB-2	TCE	74		0.11		673
Hart Crowser 1993a	Sep-92	B-35	TCE	72		0.11		655
Hart Crowser 1990b	1990	B-8	TCE	65		0.11		591
Hart Crowser 1992b	May-92	B-1	TCE	64		0.11		582
Hart Crowser 1997	Oct-95	B-33A	TCE	62		0.11		564
TV-F&S 2000a	Oct-99	B-19	TCE	62		0.11		564
Hart Crowser 1997	Oct-95	B-20	TCE	58		0.11		527
TV-F&S 2000a	Jul-99	B-65	TCE	57		0.11		518
Hart Crowser 1992b	May-92	B-9	TCE	54		0.11		491
TV-F&S 2000a	Jan-99	TB-3	TCE	52		0.11		473
Hart Crowser 1992b	May-92	B-19	TCE	51		0.11		464
Hart Crowser 1992b	May-92	B-72	TCE	50		0.11		455
Hart Crowser 1997	Dec-96	B-35	TCE	49		0.11		445

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Apr-99	B-56	TCE	49		0.11		445
Hart Crowser 1993a	Aug-93	B-26	TCE	46		0.11		418
TV-F&S 2000a	Oct-99	B-53	TCE	42		0.11		382
TV-F&S 2000a	Nov-98	B-18	TCE	41		0.11		373
TV-F&S 2000a	Apr-99	B-53	TCE	37		0.11		336
Hart Crowser 1993a	Sep-92	B-9	TCE	36		0.11		327
TV-F&S 2000a	Jan-99	TB-4	TCE	36		0.11		327
TV-F&S 2000a	Feb-99	B-53	TCE	36.0		0.11		327
TV-F&S 2000a	Feb-99	B-55	TCE	35		0.11		318
Hart Crowser 1990b	1990	B-11	TCE	34		0.11		309
Hart Crowser 1992b	May-92	B-21	TCE	33		0.11		300
Hart Crowser 1993a	Sep-92	B-26	TCE	32		0.11		291
Hart Crowser 1993a	Aug-93	B-36	TCE	32		0.11		291
TV-F&S 2000a	Apr-99	B-55	TCE	32		0.11		291
TV-F&S 2000a	Feb-99	B-56	TCE	30		0.11		273
Hart Crowser 1990b	1990	B-12	TCE	28		0.11		255
Hart Crowser 1997	Oct-95	B-26	TCE	27		0.11		245
TV-F&S 2000a	Oct-99	B-57	TCE	23		0.11		209
TV-F&S 2001a	Jul-00	B-55	TCE	20	J	0.11		182
TV-F&S 2000a	Oct-98	B-35	TCE	19		0.11		173
TV-F&S 2000a	Apr-99	B-57	TCE	19		0.11		173
TV-F&S 2000a	Oct-99	B-64	TCE	19		0.11		173
TV-F&S 2000a	Oct-98	B-36	TCE	18		0.11		164
Hart Crowser 1992b	May-92	B-26	TCE	18		0.11		164
Hart Crowser 1993a	Aug-93	B-9	TCE	16		0.11		145
TV-F&S 2000a	Oct-98	B-36 (DUP)	TCE	16		0.11		145
TV-F&S 2000a	Oct-99	B-56	TCE	16		0.11		145
TV-F&S 2000a	Oct-99	B-55	TCE	16		0.11		145
TV-F&S 2000a	Nov-98	B-26	TCE	15		0.11		136
TV-F&S 2000a	Oct-99	B-9	TCE	15		0.11		136
TV-F&S 2001a	Jul-00	B-57	TCE	15	J	0.11		136
Hart Crowser 1997	Dec-96	B-26	TCE	14		0.11		127
TV-F&S 2000a	Jul-99	B-64	TCE	14		0.11		127
Hart Crowser 1990b	1990	B-7	TCE	13		0.11		118
Hart Crowser 1997	Dec-96	B-9	TCE	13		0.11		118

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-99**	**B-23**	**TCE**	**13**		**0.11**		**118**
TV-F&S 2000a	**Oct-99**	**B-14**	**TCE**	**13**		**0.11**		**118**
TV-F&S 2000a	**Nov-98**	**B-9**	**TCE**	**12**		**0.11**		**109**
TV-F&S 2001a	**Jul-00**	**B-53**	**TCE**	**12**	**J**	**0.11**		**109**
TV-F&S 2001a	**Jul-00**	**B-56**	**TCE**	**12**	**J**	**0.11**		**109**
Hart Crowser 1992b	**May-92**	**B-5**	**TCE**	**11**		**0.11**		**100**
Hart Crowser 1992b	**May-92**	**B-5 (DUP)**	**TCE**	**11**		**0.11**		**100**
Hart Crowser 1997	**Dec-96**	**B-34**	**TCE**	**10**		**0.11**		**91**
TV-F&S 2000a	**Feb-99**	**B-57**	**TCE**	**10**		**0.11**		**91**
TV-F&S 2000a	**Oct-99**	**B-26**	**TCE**	**9.8**		**0.11**		**89**
TV-F&S 2000a	**Jul-99**	**B-59**	**TCE**	**8.4**		**0.11**		**76**
TV-F&S 2000a	**Dec-98**	**B-23**	**TCE**	**7.96**		**0.11**		**72**
Hart Crowser 1993a	**Sep-92**	**B-25**	**TCE**	**7**		**0.11**		**64**
TV-F&S 2001a	**Jul-00**	**AGI-2**	**TCE**	**7**		**0.11**		**64**
TV-F&S 2000a	**Oct-98**	**B-34**	**TCE**	**6.8**		**0.11**		**62**
Hart Crowser 1990b	**1990**	**B-8**	**TCE**	**5.7**		**0.11**		**52**
TV-F&S 2000a	**Oct-99**	**B-34**	**TCE**	**5.7**		**0.11**		**52**
TV-F&S 2000a	**Oct-99**	**B-38**	**TCE**	**5.2**		**0.11**		**47**
Hart Crowser 1993a	**Sep-92**	**B-24**	**TCE**	**5**		**0.11**		**45**
Hart Crowser 1997	**Oct-95**	**B-35**	**TCE**	**5**		**0.11**		**45**
Hart Crowser 1992b	**May-92**	**B-23**	**TCE**	**5**		**0.11**		**45**
Hart Crowser 1992b	**May-92**	**B-23 (DUP)**	**TCE**	**5**		**0.11**		**45**
Hart Crowser 1990b	**1990**	**B-11**	**TCE**	**3.2**		**0.11**		**29**
Hart Crowser 1997	**Oct-95**	**B-36**	**TCE**	**3**		**0.11**		**27**
Hart Crowser 1992b	**May-92**	**B-27**	**TCE**	**3**		**0.11**		**27**
Hart Crowser 1992b	**May-92**	**B-28**	**TCE**	**3**		**0.11**		**27**
TV-F&S 2000a	**Oct-99**	**B-28**	**TCE**	**2.6**		**0.11**		**24**
Hart Crowser 1992b	**May-92**	**B-25**	**TCE**	**2**		**0.11**		**18**
Hart Crowser 1990b	**1990**	**B-10**	**TCE**	**1.3**		**0.11**		**12**
Hart Crowser 1993a	Aug-93	B-33A	TCE	1		0.11		9.1
TV-F&S 2000a	Feb-99	B-28	TCE	1.0		0.11		9.1
TV-F&S 2001a	Jul-00	NW-6	TCE	1		0.11		9.1
TV-F&S 2001a	Jul-00	NW-12	TCE	1		0.11		9.1
TV-F&S 2001a	Jul-00	B-28	TCE	1	J	0.11		9.1
Hart Crowser 1990b	1990	B-10A	TCE	0.88		0.11		8.0

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1990a	May-89	B-1	TCE	0.140		0.11		1.3
Hart Crowser 1990b	1990	B-14	TCE	0.13		0.11		1.2
Hart Crowser 1990b	1990	B-1	TCE	0.120		0.11		1.1
Ecology 1993c	**Jul-93**	**B-27**	**Toluene**	**76,000**		**640**		**119**
Ecology 1993b	**Jun-93**	**278092**	**Toluene**	**48,000**		**640**		**75**
Ecology 1993b	**Jun-93**	**278091**	**Toluene**	**38,000**		**640**		**59**
Hart Crowser 1992b	**May-92**	**B-30**	**Toluene**	**36,000**		**640**		**56**
Hart Crowser 1992b	**May-92**	**B-31**	**Toluene**	**33,000**		**640**		**52**
TV-F&S 2000a	**Nov-98**	**B-49**	**Toluene**	**27,000**		**640**		**42**
Ecology 1993c	**Jul-93**	**B-49**	**Toluene**	**26,000**		**640**		**41**
TV-F&S 2000a	**Oct-99**	**B-47**	**Toluene**	**23,000**		**640**		**36**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**Toluene**	**23,000**		**640**		**36**
TV-F&S 2000a	**Oct-99**	**B-49**	**Toluene**	**13,000**		**640**		**20**
Hart Crowser 1997	**Dec-96**	**B-31**	**Toluene**	**12,000**		**640**		**19**
Hart Crowser 1997	**Dec-96**	**B-44**	**Toluene**	**11,000**		**640**		**17**
Hart Crowser 1997	**Dec-96**	**B-39**	**Toluene**	**9,100**		**640**		**14**
TV-F&S 2000a	**Oct-98**	**B-20**	**Toluene**	**7,200**		**640**		**11**
Hart Crowser 1992b	**May-92**	**B-15**	**Toluene**	**6,700**		**640**		**10**
TV-F&S 2000a	**Oct-98**	**B-44**	**Toluene**	**6,500**		**640**		**10**
TV-F&S 2000a	Nov-98	B-42	Toluene	6,100		640		9.5
Hart Crowser 1992b	May-92	B-11	Toluene	5,800		640		9.1
TV-F&S 2000a	Oct-99	B-42	Toluene	4,700		640		7.3
Hart Crowser 1997	Dec-96	B-35	Toluene	3,900		640		6.1
TV-F&S 2000a	Oct-98	B-21	Toluene	3,900		640		6.1
Ecology 1993c	Jul-93	B-50	Toluene	3,700	J	640		5.8
TV-F&S 2000a	Nov-98	B-12	Toluene	3,700		640		5.8
Ecology 1993c	Jul-93	B-48	Toluene	3,100	J	640		4.8
Ecology 1993c	Jul-93	B-48 (DUP)	Toluene	3,100	J	640		4.8
Hart Crowser 1992b	May-92	B-21	Toluene	2,800		640		4.4
Ecology 1993b	Jun-93	278094 (DUP)	Toluene	2,700	J	640		4.2
TV-F&S 2000a	Oct-98	B-35	Toluene	2,400		640		3.8
TV-F&S 2000a	Oct-99	B-44	Toluene	2,400		640		3.8
Ecology 1993b	Jun-93	278094	Toluene	2,300		640		3.6
Hart Crowser 1997	Dec-96	B-20	Toluene	2,100		640		3.3
TV-F&S 2000a	Oct-99	B-35	Toluene	1,700		640		2.7

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-10A	Toluene	1,700		640		2.7
TV-F&S 2000a	Nov-98	B-39	Toluene	1,500		640		2.3
Hart Crowser 1997	Dec-96	B-21	Toluene	1,300		640		2.0
Ecology 1993b	Jun-93	278093	Toluene	1,200		640		1.9
TV-F&S 2000a	Nov-99	B-12	Toluene	1,000		640		1.6
Hart Crowser 1992b	May-92	B-16	Toluene	960		640		1.5
TV-F&S 2000a	Oct-99	B-21	Toluene	690		640		1.1
TV-F&S 2000a	Nov-98	B-45 BAL	Toluene	670		640		1.0
Hart Crowser 1990b	1990	B-7	Total Hydrocarbons (Light)	270		30		9.0
Hart Crowser 1990b	1990	B-12	Total Hydrocarbons (Light)	230		30		7.7
Hart Crowser 1990b	1990	B-12	Total Hydrocarbons (Light)	75		30		2.5
TV-F&S 2000a	Oct-99	B-58	trans-1,2-DCE	680		160		4.3
TV-F&S 2000a	Nov-98	B-46 BAL	trans-1,2-DCE	590		160		3.7
TV-F&S 2000a	Oct-98	B-21	trans-1,2-DCE	530		160		3.3
TV-F&S 2000a	Nov-98	B-46	trans-1,2-DCE	490		160		3.1
TV-F&S 2000a	Oct-98	B-20	trans-1,2-DCE	470		160		2.9
TV-F&S 2000a	Oct-98	B-44	trans-1,2-DCE	440		160		2.8
TV-F&S 2000a	Nov-98	B-12	trans-1,2-DCE	420		160		2.6
TV-F&S 2000a	Oct-99	B-65	trans-1,2-DCE	360	J	160		2.3
TV-F&S 2000a	Jul-99	B-65	trans-1,2-DCE	340		160		2.1
TV-F&S 2000a	Oct-99	B-58 (DUP)	trans-1,2-DCE	320		160		2.0
TV-F&S 2000a	Oct-98	B-33A	trans-1,2-DCE	300		160		1.9
TV-F&S 2000a	Jul-99	B-58	trans-1,2-DCE	290		160		1.8
TV-F&S 2000a	Nov-98	B-45	trans-1,2-DCE	270		160		1.7
TV-F&S 2000a	Nov-98	B-49	trans-1,2-DCE	270		160		1.7
TV-F&S 2000a	Nov-98	B-45 BAL	trans-1,2-DCE	220		160		1.4
TV-F&S 2000a	Jul-99	B-61	trans-1,2-DCE	180		160		1.1
TV-F&S 2000a	Oct-99	B-45 (DUP)	trans-1,2-DCE	170		160		1.1
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**Vinyl Chloride**	**25,000**		**0.029**		**862,069**
Hart Crowser 1992b	**May-92**	**B-21**	**Vinyl Chloride**	**25,000**		**0.029**		**862,069**
TV-F&S 2000a	**Oct-99**	**B-33A**	**Vinyl Chloride**	**23,000**		**0.029**		**793,103**
Hart Crowser 1993a	**Sep-92**	**B-35**	**Vinyl Chloride**	**19,000**		**0.029**		**655,172**
Hart Crowser 1997	**Oct-95**	**B-21**	**Vinyl Chloride**	**19,000**		**0.029**		**655,172**
Hart Crowser 1997	**Dec-96**	**B-21**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2000a	**Oct-98**	**B-20**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-21	Vinyl Chloride	18,000		0.029		620,690
Hart Crowser 1992b	May-92	B-21	Vinyl Chloride	18,000		0.029		620,690
TV-F&S 2000a	Oct-99	B-65	Vinyl Chloride	15,000	J	0.029		517,241
Hart Crowser 1993a	Sep-92	B-20	Vinyl Chloride	14,000		0.029		482,759
Hart Crowser 1993a	Aug-93	B-21	Vinyl Chloride	14,000		0.029		482,759
Hart Crowser 1993a	Sep-92	B-21	Vinyl Chloride	13,000		0.029		448,276
TV-F&S 2000a	Oct-98	B-21	Vinyl Chloride	11,000		0.029		379,310
TV-F&S 2000a	Jul-99	B-65	Vinyl Chloride	11,000		0.029		379,310
Hart Crowser 1997	Dec-96	B-35	Vinyl Chloride	8,100		0.029		279,310
Hart Crowser 1997	Dec-96	B-33A	Vinyl Chloride	7,700		0.029		265,517
Hart Crowser 1993a	Sep-92	B-36	Vinyl Chloride	7,300		0.029		251,724
TV-F&S 2000a	Oct-98	B-33A	Vinyl Chloride	7,300		0.029		251,724
Hart Crowser 1992b	May-92	B-29	Vinyl Chloride	7,100		0.029		244,828
Hart Crowser 1997	Oct-95	B-20	Vinyl Chloride	6,800	J	0.029		234,483
TV-F&S 2000a	Oct-99	B-18	Vinyl Chloride	6,100		0.029		210,345
TV-F&S 2000a	Oct-99	B-63	Vinyl Chloride	5,800		0.029		200,000
TV-F&S 2000a	Nov-98	B-12	Vinyl Chloride	5,500		0.029		189,655
Hart Crowser 1992b	May-92	B-29	Vinyl Chloride	5,200		0.029		179,310
Hart Crowser 1997	Dec-96	B-20	Vinyl Chloride	3,700		0.029		127,586
Hart Crowser 1997	Oct-95	B-33A	Vinyl Chloride	3,400		0.029		117,241
TV-F&S 2000a	Oct-98	B-35	Vinyl Chloride	3,300		0.029		113,793
TV-F&S 2000a	Oct-99	B-52	Vinyl Chloride	3,100		0.029		106,897
TV-F&S 2000a	Oct-99	B-58	Vinyl Chloride	3,100		0.029		106,897
TV-F&S 2000a	Oct-98	B-44	Vinyl Chloride	3,000		0.029		103,448
TV-F&S 2000a	Oct-99	B-58 (DUP)	Vinyl Chloride	2,900		0.029		100,000
TV-F&S 2000a	Nov-98	B-52	Vinyl Chloride	2,800		0.029		96,552
Hart Crowser 1993a	Sep-92	B-33A	Vinyl Chloride	2,700		0.029		93,103
TV-F&S 2000a	Oct-99	B-61	Vinyl Chloride	2,700		0.029		93,103
TV-F&S 2000a	Nov-98	B-46 BAL	Vinyl Chloride	2,600		0.029		89,655
TV-F&S 2000a	Jul-99	B-63	Vinyl Chloride	2,500		0.029		86,207
TV-F&S 2000a	Jul-99	B-63 (DUP)	Vinyl Chloride	2,400		0.029		82,759
TV-F&S 2000a	Nov-98	B-52 (DUP)	Vinyl Chloride	2,300		0.029		79,310
TV-F&S 2000a	Oct-99	B-35	Vinyl Chloride	2,300		0.029		79,310
Hart Crowser 1993a	Jul-93	B-50	Vinyl Chloride	2,100		0.029		72,414
TV-F&S 2000a	Oct-99	B-39	Vinyl Chloride	1,900	J	0.029		65,517

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-99	B-11	Vinyl Chloride	1,900		0.029		65,517
Hart Crowser 1993a	Aug-93	B-10A	Vinyl Chloride	1,600		0.029		55,172
TV-F&S 2000a	Nov-98	B-46	Vinyl Chloride	1,600		0.029		55,172
Ecology 1993b	Jun-93	278092	Vinyl Chloride	1,500		0.029		51,724
TV-F&S 2000a	Nov-98	B-39	Vinyl Chloride	1,400		0.029		48,276
TV-F&S 2000a	Oct-99	B-46	Vinyl Chloride	1,400		0.029		48,276
Hart Crowser 1993a	Sep-92	B-10A	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1993a	Jul-93	B-47	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1997	Oct-95	B-44	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1993a	Jul-93	B-47 (DUP)	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1997	Dec-96	B-44	Vinyl Chloride	1,200		0.029		41,379
TV-F&S 2000a	Nov-98	B-49	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1992b	May-92	B-18	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1993a	Jul-93	B-48	Vinyl Chloride	1,100		0.029		37,931
Hart Crowser 1992b	May-92	B-20	Vinyl Chloride	1,100		0.029		37,931
Hart Crowser 1993a	Aug-93	B-52 (DUP)	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Oct-99	B-62	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Oct-99	B-10A	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Jul-99	B-61	Vinyl Chloride	970		0.029		33,448
Hart Crowser 1993a	Aug-93	B-52	Vinyl Chloride	960		0.029		33,103
Hart Crowser 1992b	May-92	B-16	Vinyl Chloride	920		0.029		31,724
ATI 1991b	Sep-91	B-16	Vinyl Chloride	880		0.029		30,345
Hart Crowser 1997	Dec-96	B-39	Vinyl Chloride	810		0.029		27,931
Hart Crowser 1993a	Aug-93	B-35	Vinyl Chloride	790		0.029		27,241
Hart Crowser 1993a	Aug-93	B-51	Vinyl Chloride	780		0.029		26,897
Hart Crowser 1992b	May-92	B-20	Vinyl Chloride	760		0.029		26,207
TV-F&S 2000a	Nov-99	B-12	Vinyl Chloride	750		0.029		25,862
Hart Crowser 1992b	May-92	B-18	Vinyl Chloride	700		0.029		24,138
TV-F&S 2000a	Nov-98	B-42	Vinyl Chloride	690		0.029		23,793
Hart Crowser 1992b	May-92	B-16	Vinyl Chloride	690		0.029		23,793
Hart Crowser 1997	Dec-96	B-10A	Vinyl Chloride	630		0.029		21,724
Hart Crowser 1992b	May-92	B-10A (DUP)	Vinyl Chloride	620	J	0.029		21,379
Hart Crowser 1993a	Aug-93	B-36	Vinyl Chloride	590		0.029		20,345
Hart Crowser 1992b	May-92	B-10A	Vinyl Chloride	540		0.029		18,621
Hart Crowser 1992b	May-92	B-10A	Vinyl Chloride	510	J	0.029		17,586

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-44	Vinyl Chloride	490		0.029		16,897
Hart Crowser 1993a	Sep-92	B-15	Vinyl Chloride	450		0.029		15,517
TV-F&S 2000a	Nov-98	B-10A	Vinyl Chloride	440		0.029		15,172
TV-F&S 2000a	Nov-98	B-18	Vinyl Chloride	430		0.029		14,828
Ecology 1993b	Jun-93	278091	Vinyl Chloride	400	J	0.029		13,793
Hart Crowser 1993a	Aug-93	B-20	Vinyl Chloride	340		0.029		11,724
TV-F&S 2000a	Nov-98	B-45 BAL	Vinyl Chloride	340		0.029		11,724
TV-F&S 2000a	Oct-99	B-16	Vinyl Chloride	340		0.029		11,724
Hart Crowser 1992b	May-92	B-1	Vinyl Chloride	340		0.029		11,724
Hart Crowser 1993a	Aug-93	B-34	Vinyl Chloride	320		0.029		11,034
Hart Crowser 1993a	Sep-92	B-31	Vinyl Chloride	300		0.029		10,345
TV-F&S 2000a	Nov-98	B-45	Vinyl Chloride	290		0.029		10,000
Hart Crowser 1992b	May-92	B-15	Vinyl Chloride	280		0.029		9,655
TV-F&S 2000a	Oct-99	B-45	Vinyl Chloride	270		0.029		9,310
Hart Crowser 1993a	Sep-92	B-30	Vinyl Chloride	260		0.029		8,966
Hart Crowser 1993a	Aug-93	B-30	Vinyl Chloride	260		0.029		8,966
TV-F&S 2000a	Oct-99	B-45 (DUP)	Vinyl Chloride	230		0.029		7,931
Hart Crowser 1992b	May-92	B-30	Vinyl Chloride	230		0.029		7,931
Hart Crowser 1997	Dec-96	B-45	Vinyl Chloride	220		0.029		7,586
TV-F&S 2000a	Jul-99	B-58	Vinyl Chloride	220		0.029		7,586
TV-F&S 2000a	Oct-99	B-36	Vinyl Chloride	210		0.029		7,241
Hart Crowser 1993a	Sep-92	B-34	Vinyl Chloride	200		0.029		6,897
TV-F&S 2000a	Jul-99	TW-2	Vinyl Chloride	200		0.029		6,897
Hart Crowser 1992b	May-92	B-30	Vinyl Chloride	200		0.029		6,897
Hart Crowser 1993a	Aug-93	B-31	Vinyl Chloride	190		0.029		6,552
Hart Crowser 1997	Dec-96	B-36	Vinyl Chloride	180		0.029		6,207
TV-F&S 2000a	Oct-99	B-59	Vinyl Chloride	180		0.029		6,207
Hart Crowser 1992b	May-92	B-31	Vinyl Chloride	150		0.029		5,172
Hart Crowser 1993a	Sep-92	B-8	Vinyl Chloride	130		0.029		4,483
Hart Crowser 1997	Oct-95	B-31	Vinyl Chloride	130		0.029		4,483
Hart Crowser 1997	Oct-95	B-10A	Vinyl Chloride	110		0.029		3,793
Hart Crowser 1997	Oct-95	B-45	Vinyl Chloride	96		0.029		3,310
TV-F&S 2000a	Jul-99	B-59	Vinyl Chloride	77		0.029		2,655
Hart Crowser 1993a	Aug-93	B-15	Vinyl Chloride	73		0.029		2,517
Hart Crowser 1992b	May-92	B-8	Vinyl Chloride	70		0.029		2,414

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-11	Vinyl Chloride	69		0.029		2,379
Hart Crowser 1992b	May-92	B-22	Vinyl Chloride	68		0.029		2,345
Hart Crowser 1992b	May-92	B-22	Vinyl Chloride	62		0.029		2,138
Ecology 1993b	Jun-93	278093	Vinyl Chloride	48		0.029		1,655
TV-F&S 2000a	Feb-99	B-22	Vinyl Chloride	44.0		0.029		1,517
TV-F&S 2000a	Oct-98	B-36	Vinyl Chloride	37		0.029		1,276
TV-F&S 2000a	Oct-98	B-36 (DUP)	Vinyl Chloride	37		0.029		1,276
TV-F&S 2000a	Jul-99	B-62 (DUP)	Vinyl Chloride	36		0.029		1,241
TV-F&S 2000a	Jul-99	B-62	Vinyl Chloride	35		0.029		1,207
TV-F&S 2000a	Jul-99	TW-1	Vinyl Chloride	31		0.029		1,069
Hart Crowser 1997	Oct-95	B-35	Vinyl Chloride	29		0.029		1,000
TV-F&S 2000a	Jul-99	TW-5	Vinyl Chloride	18		0.029		621
TV-F&S 2000a	Dec-98	B-22	Vinyl Chloride	17.4		0.029		600
ATI 1991b	Sep-91	B-17	Vinyl Chloride	16		0.029		552
Hart Crowser 1997	Dec-96	B-9	Vinyl Chloride	16		0.029		552
TV-F&S 2000a	Oct-99	B-9	Vinyl Chloride	14		0.029		483
TV-F&S 2000a	Jul-99	TW-3	Vinyl Chloride	12		0.029		414
TV-F&S 2000a	Nov-98	B-9	Vinyl Chloride	11		0.029		379
TV-F&S 2000a	Jul-99	TW-3 (DUP)	Vinyl Chloride	9.9		0.029		341
Hart Crowser 1993a	Sep-92	B-9	Vinyl Chloride	9		0.029		310
Hart Crowser 1993a	Aug-93	B-9	Vinyl Chloride	9		0.029		310
Hart Crowser 1993a	Aug-93	B-33A	Vinyl Chloride	8		0.029		276
Hart Crowser 1993a	Sep-92	B-27	Vinyl Chloride	6		0.029		207
Hart Crowser 1997	Oct-95	B-27	Vinyl Chloride	6		0.029		207
Hart Crowser 1992b	May-92	B-9	Vinyl Chloride	5.8		0.029		200
Hart Crowser 1992b	May-92	B-19	Vinyl Chloride	5.3	J	0.029		183
Hart Crowser 1993a	Aug-93	B-26	Vinyl Chloride	5		0.029		172
TV-F&S 2000a	Oct-98	B-19	Vinyl Chloride	5		0.029		172
TV-F&S 2000a	Oct-99	B-27	Vinyl Chloride	4.3		0.029		148
Hart Crowser 1992b	May-92	B-27	Vinyl Chloride	4		0.029		138
Hart Crowser 1992b	May-92	B-72	Vinyl Chloride	4		0.029		138
TV-F&S 2000a	Oct-98	B-34	Vinyl Chloride	3.7		0.029		128
TV-F&S 2000a	Jul-99	TW-6	Vinyl Chloride	3.4		0.029		117
TV-F&S 2000a	Oct-99	B-17	Vinyl Chloride	3.3		0.029		114
TV-F&S 2000a	Oct-99	B-55	Vinyl Chloride	3.2		0.029		110

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	**May-92**	**B-72**	**Vinyl Chloride**	**3.1**		**0.029**		**107**
Hart Crowser 1997	**Dec-96**	**B-27**	**Vinyl Chloride**	**3**		**0.029**		**103**
TV-F&S 2000a	**Nov-98**	**B-27**	**Vinyl Chloride**	**3**		**0.029**		**103**
Hart Crowser 1992b	**May-92**	**B-6**	**Vinyl Chloride**	**3**		**0.029**		**103**
TV-F&S 2000a	**Oct-99**	**B-19**	**Vinyl Chloride**	**2.8**		**0.029**		**97**
Hart Crowser 1992b	**May-92**	**B-6**	**Vinyl Chloride**	**2.8**		**0.029**		**97**
Hart Crowser 1992b	**May-92**	**B-23**	**Vinyl Chloride**	**2.4**		**0.029**		**83**
TV-F&S 2000a	**Oct-99**	**B-6**	**Vinyl Chloride**	**2.3**		**0.029**		**79**
TV-F&S 2000a	**Oct-99**	**B-34**	**Vinyl Chloride**	**2.2**		**0.029**		**76**
Hart Crowser 1992b	**May-92**	**B-17**	**Vinyl Chloride**	**2.2**		**0.029**		**76**
Hart Crowser 1997	**Oct-95**	**B-36**	**Vinyl Chloride**	**2**		**0.029**		**69**
Hart Crowser 1997	**Dec-96**	**B-34**	**Vinyl Chloride**	**2**		**0.029**		**69**
Hart Crowser 1992b	**May-92**	**B-23 (DUP)**	**Vinyl Chloride**	**2**		**0.029**		**69**
TV-F&S 2000a	**Oct-98**	**B-8**	**Vinyl Chloride**	**1.5**		**0.029**		**52**
Hart Crowser 1992b	**May-92**	**B-24**	**Vinyl Chloride**	**0.5**		**0.029**		**17**
Hart Crowser 1992b	May-92	B-26	Vinyl Chloride	0.2		0.029		6.9
Hart Crowser 1990b	1990	B-10A	Vinyl Chloride	0.170		0.029		5.9
Hart Crowser 1990b	1990	B-9	Vinyl Chloride	0.051		0.029		1.8
TV-F&S 2000a	Nov-98	B-49	Xylenes (m&p)	4,900		1,000		4.9
TV-F&S 2000a	Oct-99	B-47 (DUP)	Xylenes (m&p)	3,800		1,000		3.8
TV-F&S 2000a	Oct-99	B-47	Xylenes (m&p)	3,600		1,000		3.6
TV-F&S 2000a	Nov-98	B-42	Xylenes (m&p)	2,100		1,000		2.1
TV-F&S 2000a	Oct-99	B-49	Xylenes (m&p)	2,000		1,000		2.0
TV-F&S 2000a	Oct-98	B-44	Xylenes (m&p)	1,300		1,000		1.3
TV-F&S 2000a	Oct-98	B-20	Xylenes (m&p)	1,100		1,000		1.1
TV-F&S 2000a	Nov-98	B-12	Xylenes (m&p)	1,100		1,000		1.1
Ecology 1993b	Jun-93	278091	Xylenes (total)	6,900		1,000		6.9
Hart Crowser 1992b	May-92	B-15	Xylenes (total)	5,300		1,000		5.3
Hart Crowser 1992b	May-92	B-10A	Xylenes (total)	5,100		1,000		5.1
Hart Crowser 1997	Dec-96	B-10A	Xylenes (total)	4,600		1,000		4.6
Ecology 1993c	Jul-93	B-49	Xylenes (total)	4,300	J	1,000		4.3
Hart Crowser 1992b	May-92	B-30	Xylenes (total)	4,200		1,000		4.2
Hart Crowser 1997	Dec-96	B-31	Xylenes (total)	4,100		1,000		4.1
Hart Crowser 1997	Dec-96	B-44	Xylenes (total)	2,400		1,000		2.4
Hart Crowser 1992b	May-92	B-16	Xylenes (total)	1,800		1,000		1.8

Table 7
Chemicals Above Screening Levels in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-39	Xylenes (total)	1,700		1,000		1.7
Ecology 1993b	Jun-93	278094 (DUP)	Xylenes (total)	1,300	J	1,000		1.3
Hart Crowser 1992b	May-92	B-21	Xylenes (total)	1,200		1,000		1.2
Hart Crowser 1992b	May-92	B-31	Xylenes (total)	1,100		1,000		1.1
Ecology 1993b	Jun-93	278094	Xylenes (total)	1,000	J	1,000		1.0
Hart Crowser 1992b	May-92	B-15	Zinc (dissolved)	150		4,800	76	2.0
Hart Crowser 1992b	**May-92**	**B-15**	**Zinc (total)**	**1,300**		**4,800**	**76**	**17**
Hart Crowser 1992b	May-92	B-31	Zinc (total)	320		4,800	76	4.2
Hart Crowser 1992b	May-92	B-24	Zinc (total)	280		4,800	76	3.7
Hart Crowser 1992b	May-92	B-16	Zinc (total)	260		4,800	76	3.4
Hart Crowser 1992b	May-92	B-22	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-23	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-72	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-14	Zinc (total)	210		4,800	76	2.8
Hart Crowser 1992b	May-92	B-11	Zinc (total)	190		4,800	76	2.5
Hart Crowser 1992b	May-92	B-26	Zinc (total)	180		4,800	76	2.4
Hart Crowser 1992b	May-92	B-19	Zinc (total)	140		4,800	76	1.8
Hart Crowser 1992b	May-92	B-18	Zinc (total)	120		4,800	76	1.6
Hart Crowser 1992b	May-92	B-9	Zinc (total)	120		4,800	76	1.6
Hart Crowser 1992b	May-92	B-29	Zinc (total)	96		4,800	76	1.3
Hart Crowser 1992b	May-92	B-27	Zinc (total)	79		4,800	76	1.0

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 8
Chemicals Above Screening Levels in Soil
Former Tyee Industries

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
TV-F&S 2001b	**Aug-00**	**WH-2**	**11.0**	**PCE**	**4.4**		**0.05**		**88**
TV-F&S 2001b	**Aug-00**	**WH-11**	**11.0**	**PCE**	**0.59**		**0.05**		**12**
TV-F&S 2001b	**Aug-00**	**WH-10**	**11.0**	**PCE**	**0.57**		**0.05**		**11**
TV-F&S 2001b	Aug-00	WH-9	11.0	PCE	0.39		0.05		7.8
TV-F&S 2001b	Aug-00	WH-5	15.5	PCE	0.25		0.05		5.0
TV-F&S 2001b	Aug-00	WH-9	12.5	PCE	0.23		0.05		4.6
TV-F&S 2001b	Aug-00	WH-11	12.5	PCE	0.22		0.05		4.4
TV-F&S 2001b	Aug-00	WH-3	11.0	PCE	0.2		0.05		4.0
TV-F&S 2001b	Aug-00	WH-3	12.5	PCE	0.19		0.05		3.8
TV-F&S 2001b	Aug-00	WH-8	11.0	PCE	0.14		0.05		2.8
TV-F&S 2001b	Aug-00	WH-10	16.5	PCE	0.14		0.05		2.8
TV-F&S 2001b	Aug-00	WH-1	10.5	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-2	12.5	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-4	14.0	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-10	12.5	PCE	0.1		0.05		2.0
TV-F&S 2001b	Aug-00	WH-5	12.5	PCE	0.092		0.05		1.8
TV-F&S 2001b	Aug-00	WH-4	11.0	PCE	0.081		0.05		1.6
TV-F&S 2001b	**Aug-00**	**WH-2**	**12.5**	**Pentachlorophenol**	**3.3**		**8.3**	**0.037**	**89**
TV-F&S 2001b	**Aug-00**	**WH-7**	**16.5**	**Pentachlorophenol**	**1.4**		**8.3**	**0.037**	**38**
TV-F&S 2001b	**Aug-00**	**WH-3**	**12.5**	**Pentachlorophenol**	**0.74**		**8.3**	**0.037**	**20**
TV-F&S 2001b	**Aug-00**	**WH-4**	**14.0**	**TCE**	**0.57**		**0.03**		**19**
TV-F&S 2001b	**Aug-00**	**WH-2**	**11.0**	**TCE**	**0.45**		**0.03**		**15**
TV-F&S 2001b	Aug-00	WH-9	12.5	TCE	0.26		0.03		8.7
TV-F&S 2001b	Aug-00	WH-3	12.5	TCE	0.2		0.03		6.7
TV-F&S 2001b	Aug-00	WH-1	11.5	Vinyl Chloride	3.3		0.67		4.9
TV-F&S 2001b	Aug-00	WH-5	16.5	Vinyl Chloride	1.2		0.67		1.8
TV-F&S 2001b	Aug-00	WH-3	12.5	Vinyl Chloride	0.7		0.67		1.0

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 9
Chemicals Above Screening Levels in Groundwater
Former Tyee Industries

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001b	Aug-00	B-31	Gasoline-Range Hydrocarbons	66,000		800		83
TV-F&S 2001b	Aug-00	WH-7	Gasoline-Range Hydrocarbons	66,000		800		83
TV-F&S 2001b	Aug-00	WH-6	Gasoline-Range Hydrocarbons	18,000		800		23
TV-F&S 2001b	Aug-00	WH-8	Gasoline-Range Hydrocarbons	10,000		800		13
TV-F&S 2001b	Aug-00	WH-4	Gasoline-Range Hydrocarbons	6,500		800		8.1
TV-F&S 2001b	Aug-00	WH-5	Gasoline-Range Hydrocarbons	6,500		800		8.1
TV-F&S 2001b	Aug-00	WH-2	Gasoline-Range Hydrocarbons	4,300		800		5.4
TV-F&S 2001b	Aug-00	B-60	Gasoline-Range Hydrocarbons	4,000		800		5.0
TV-F&S 2001b	Aug-00	WH-10	Gasoline-Range Hydrocarbons	3,400		800		4.3
TV-F&S 2001b	Aug-00	B-11	Gasoline-Range Hydrocarbons	3,100		800		3.9
TV-F&S 2001b	Aug-00	WH-1	Gasoline-Range Hydrocarbons	1,800		800		2.3
TV-F&S 2001b	Aug-00	WH-11	Gasoline-Range Hydrocarbons	1,300		800		1.6
TV-F&S 2001b	Aug-00	B-31	PCE	63,000		5		12,600
TV-F&S 2001b	Aug-00	B-11	PCE	21,000		5		4,200
TV-F&S 2001b	Aug-00	WH-4	PCE	13,000		5		2,600
TV-F&S 2001b	Aug-00	WH-5	PCE	9,400		5		1,880
TV-F&S 2001b	Aug-00	B-60	PCE	5,900		5		1,180
TV-F&S 2001b	Aug-00	WH-2	PCE	5,900		5		1,180
TV-F&S 2001b	Aug-00	WH-10	PCE	5,000		5		1,000
TV-F&S 2001b	Aug-00	WH-7	PCE	2,200		5		440
TV-F&S 2001b	Aug-00	WH-1	PCE	1,700		5		340
TV-F&S 2001b	Aug-00	WH-6	PCE	1,600		5		320
TV-F&S 2001b	Aug-00	WH-11	PCE	1,400		5		280
TV-F&S 2001b	Aug-00	WH-8	PCE	110		5		22
TV-F&S 2001b	Aug-00	B-18	PCE	100		5		20
TV-F&S 2001b	Aug-00	WH-7	Pentachlorophenol	1,500		0.73	10	2,055
TV-F&S 2001b	Aug-00	WH-2	Pentachlorophenol	170		0.73	10	233
TV-F&S 2001b	Aug-00	B-31	Pentachlorophenol	140		0.73	10	192
TV-F&S 2001b	Aug-00	B-11	Pentachlorophenol	110		0.73	10	151
TV-F&S 2001b	Aug-00	WH-6	Pentachlorophenol	46		0.73	10	63
TV-F&S 2001b	Aug-00	WH-4	Pentachlorophenol	39		0.73	10	53
TV-F&S 2001b	Aug-00	WH-10	Pentachlorophenol	37		0.73	10	51
TV-F&S 2001b	Aug-00	WH-11	Pentachlorophenol	21		0.73	10	29
TV-F&S 2001b	Aug-00	WH-1	Pentachlorophenol	16		0.73	10	22
TV-F&S 2001b	Aug-00	WH-5	Pentachlorophenol	12		0.73	10	16
TV-F&S 2001b	Aug-00	B-60	Pentachlorophenol	5.1		0.73	10	7.0

Table 9
Chemicals Above Screening Levels in Groundwater
Former Tyee Industries

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001b	Aug-00	B-18	Pentachlorophenol	2.8	J	0.73	10	3.8
TV-F&S 2001b	**Aug-00**	**B-31**	**TCE**	**14,000**		**0.11**		**127,273**
TV-F&S 2001b	**Aug-00**	**B-11**	**TCE**	**8,900**		**0.11**		**80,909**
TV-F&S 2001b	**Aug-00**	**WH-4**	**TCE**	**5,300**		**0.11**		**48,182**
TV-F&S 2001b	**Aug-00**	**WH-2**	**TCE**	**3,200**		**0.11**		**29,091**
TV-F&S 2001b	**Aug-00**	**WH-5**	**TCE**	**2,600**		**0.11**		**23,636**
TV-F&S 2001b	**Aug-00**	**WH-7**	**TCE**	**2,100**		**0.11**		**19,091**
TV-F&S 2001b	**Aug-00**	**WH-10**	**TCE**	**1,600**		**0.11**		**14,545**
TV-F&S 2001b	**Aug-00**	**WH-6**	**TCE**	**1,400**		**0.11**		**12,727**
TV-F&S 2001b	**Aug-00**	**WH-1**	**TCE**	**500**		**0.11**		**4,545**
TV-F&S 2001b	**Aug-00**	**B-60**	**TCE**	**380**		**0.11**		**3,455**
TV-F&S 2001b	**Aug-00**	**WH-11**	**TCE**	**300**		**0.11**		**2,727**
TV-F&S 2001b	**Aug-00**	**WH-7**	**Toluene**	**21,000**		**640**		**33**
TV-F&S 2001b	Aug-00	WH-6	Toluene	4,200		640		6.6
TV-F&S 2001b	Aug-00	B-31	Toluene	3,700		640		5.8
TV-F&S 2001b	Aug-00	WH-8	Toluene	3,100		640		4.8
TV-F&S 2001b	**Aug-00**	**WH-7**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2001b	**Aug-00**	**WH-8**	**Vinyl Chloride**	**14,000**		**0.029**		**482,759**
TV-F&S 2001b	**Aug-00**	**WH-6**	**Vinyl Chloride**	**3,600**		**0.029**		**124,138**
TV-F&S 2001b	**Aug-00**	**WH-5**	**Vinyl Chloride**	**3,500**		**0.029**		**120,690**
TV-F&S 2001b	**Aug-00**	**B-18**	**Vinyl Chloride**	**2,600**		**0.029**		**89,655**
TV-F&S 2001b	**Aug-00**	**B-11**	**Vinyl Chloride**	**1,200**		**0.029**		**41,379**
TV-F&S 2001b	**Aug-00**	**WH-4**	**Vinyl Chloride**	**110**		**0.029**		**3,793**

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 10
Chemicals Above Screening Levels in Soil
Perkins Lot

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Onsite 2006	Apr-06	1	0.5	Chromium	57		19	270	3.0
Onsite 2006	Apr-06	3	0.5	Chromium	37		19	270	1.9
Onsite 2006	Apr-06	2	0.5	Chromium	20		19	270	1.1

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database

b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight

CSL - Contaminant Screening Level from Washington Sediment Management Standards

NA - Not available

Notes:

(1) Table presents detected chemicals only.

(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.

(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 11
Chemicals Above Screening Levels in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Aroclor 1254**	**23**	**1.6**	**1.3**	**18**
Terra 1987	Apr-86	TP-2	0.8	Aroclor 1254	12	1.6	1.3	9.2
Terra 1987	**Apr-86**	**TP-5**	**1.0**	**Aroclor 1260**	**75**		**1.3**	**58**
Terra 1987	**Dec-86**	**TH-4**	**1.0**	**Aroclor 1260**	**42**		**1.3**	**32**
Terra 1987	Apr-86	TP-10	1.0	Aroclor 1260	3.3		1.3	2.5
Terra 1987	Dec-86	TH-3	1.0	Aroclor 1260	3.11		1.3	2.4
SEACOR 1990	1990	MW-4	2	Arsenic	26.7	20	12,000	1.3
SEACOR 1990	1990	SB-5	2	Arsenic	20.7	20	12,000	1.0
SEACOR 1990	1990	SB-4	2	Benzene	0.23	0.03		7.7
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(a)anthracene**	**109.5**		**5.4**	**20**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(a)anthracene**	**105.8**		**5.4**	**20**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(a)pyrene**	**23.1**	**0.1**	**4.2**	**231**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(g,h,i)perylene**	**473.1**		**1.6**	**296**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(g,h,i)perylene**	**253.1**		**1.6**	**158**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(k)fluoranthene**	**158.1**		**9**	**18**
SEACOR 1990	1990	SB-4	2	Benzo(k)fluoranthene	24.0		9	2.7
Terra 1987	**Apr-86**	**TP-3**	**0.8**	**Cadmium**	**310**	**2**	**34**	**155**
SEACOR 1990	**1990**	**SB-5**	**2**	**Cadmium**	**74.9**	**2**	**34**	**37**
Terra 1987	**Apr-86**	**TP-6**	**1.0**	**Cadmium**	**74**	**2**	**34**	**37**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Cadmium**	**53**	**2**	**34**	**27**
Terra 1987	**Apr-86**	**TP-10**	**1.0**	**Cadmium**	**45**	**2**	**34**	**23**
Terra 1987	**Apr-86**	**TP-8**	**1.3**	**Cadmium**	**42**	**2**	**34**	**21**
Terra 1987	**Apr-86**	**TP-4**	**1.0**	**Cadmium**	**39**	**2**	**34**	**20**
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Cadmium**	**35**	**2**	**34**	**18**
SEACOR 1990	**1990**	**MW-4**	**2**	**Cadmium**	**26.2**	**2**	**34**	**13**
SEACOR 1990	1990	SB-4	2	Cadmium	19.8	2	34	9.9
SEACOR 1990	1990	MW-3	2.5	Cadmium	16.5	2	34	8.3
SEACOR 1990	1990	SB-2	3	Cadmium	13.5	2	34	6.8
SEACOR 1990	1990	SB-7	9-9.4	Cadmium	13.2	2	34	6.6
Terra 1987	Apr-86	TP-2	0.8	Cadmium	8.2	2	34	4.1
SEACOR 1990	1990	MW-3	6	Cadmium	7.3	2	34	3.7
SEACOR 1990	1990	MW-4	2	Chromium	154.0	19	270	8.1

Table 11
Chemicals Above Screening Levels in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-5	2	Chromium	121.0		19	270	6.4
SEACOR 1990	1990	SB-4	2	Chromium	87.3		19	270	4.6
SEACOR 1990	1990	SB-7	9-9.4	Chromium	56.8		19	270	3.0
SEACOR 1990	1990	MW-3	2.5	Chromium	56.6		19	270	3.0
SEACOR 1990	1990	SB-2	3	Chromium	53.7		19	270	2.8
SEACOR 1990	1990	MW-3	6	Chromium	36.8		19	270	1.9
SEACOR 1990	1990	SB-9	2	Chromium	31.5		19	270	1.7
SEACOR 1990	1990	SB-1	6	Chromium	21.1		19	270	1.1
SEACOR 1990	**1990**	**SB-4**	**2**	**Chyrsene**	**104.2**			**9.2**	**11**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Chyrsene**	**102.9**			**9.2**	**11**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Copper**	**8,300**		**3,000**	**780**	**11**
Terra 1987	Apr-86	TP-10	1.0	Copper	5,800		3,000	780	7.4
Terra 1987	Apr-86	TP-1	2.0	Copper	5,500		3,000	780	7.1
Terra 1987	Apr-86	TP-6	1.0	Copper	5,500		3,000	780	7.1
SEACOR 1990	1990	SB-4	2	Copper	4,787		3,000	780	6.1
SEACOR 1990	1990	SB-5	2	Copper	3,829		3,000	780	4.9
SEACOR 1990	1990	MW-4	2	Copper	2,508		3,000	780	3.2
SEACOR 1990	1990	SB-6	4.5-6.0	Copper	1,837		3,000	780	2.4
Terra 1987	Apr-86	TP-2	0.8	Copper	1,600		3,000	780	2.1
Terra 1987	Apr-86	TP-4	1.0	Copper	1,100		3,000	780	1.4
Terra 1987	Apr-86	TP-8	1.3	Copper	870		3,000	780	1.1
SEACOR 1990	1990	SB-7	1.5-3.5	Di-n-butylphthalate	121.0		8,000	39	3.1
SEACOR 1990	**1990**	**SB-4**	**2**	**Fluorene**	**45.8**		**3,200**	**0.081**	**565**
Terra 1987	**Apr-86**	**TP-6**	**1.0**	**Lead**	**19,800**		**250**	**1,300**	**79**
Terra 1987	**Apr-86**	**TP-3**	**0.8**	**Lead**	**9,800**		**250**	**1,300**	**39**
Terra 1987	**Apr-86**	**TP-4**	**1.0**	**Lead**	**8,800**		**250**	**1,300**	**35**
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Lead**	**7,100**		**250**	**1,300**	**28**
Terra 1987	**Apr-86**	**TP-10**	**1.0**	**Lead**	**6,700**		**250**	**1,300**	**27**
Terra 1987	**Apr-86**	**TP-2**	**0.8**	**Lead**	**6,500**		**250**	**1,300**	**26**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Lead**	**5,800**		**250**	**1,300**	**23**
SEACOR 1990	**1990**	**SB-5**	**2**	**Lead**	**4,336**		**250**	**1,300**	**17**
SEACOR 1990	**1990**	**MW-4**	**2**	**Lead**	**2,845**		**250**	**1,300**	**11**

Table 11
Chemicals Above Screening Levels in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-6	4.5-6.0	Lead	1,999		250	1,300	8.0
SEACOR 1990	1990	SB-4	2	Lead	1,980		250	1,300	7.9
Terra 1987	Apr-86	TP-8	1.3	Lead	1,600		250	1,300	6.4
SEACOR 1990	1990	SB-2	3	Lead	1,441		250	1,300	5.8
SEACOR 1990	1990	MW-3	2.5	Lead	1,159		250	1,300	4.6
SEACOR 1990	1990	SB-7	9-9.4	Lead	1,064		250	67	4.3
SEACOR 1990	1990	MW-3	6	Lead	344.0		250	1,300	1.4
SEACOR 1990	**1990**	**SB-4**	**2**	**Mercury**	**5.9**		**2**	**0.59**	**10**
SEACOR 1990	1990	SB-5	2	Mercury	4.2		2	0.59	7.1
SEACOR 1990	1990	MW-4	2	Mercury	3.53		2	0.59	6.0
SEACOR 1990	1990	SB-2	3	Mercury	3.12		2	0.59	5.3
SEACOR 1990	1990	MW-3	2.5	Mercury	0.67		2	0.59	1.1
SEACOR 1990	1990	SB-7	9-9.4	Mercury	0.52		2	0.030	17
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Naphthalene**	**22.8**		**5**	**0.20**	**114**
SEACOR 1990	**1990**	**SB-5**	**2**	**PCBs**	**26.6**		**1**	**1.3**	**27**
SEACOR 1990	**1990**	**SB-4**	**2**	**PCBs**	**18.3**		**1**	**1.3**	**18**
SEACOR 1990	1990	SB-6	4.5-6.0	PCBs	6.5		1	1.3	6.5
SEACOR 1990	1990	MW-4	2	PCBs	5.2		1	1.3	5.2
SEACOR 1990	1990	SB-2	3	PCBs	5.1		1	1.3	5.1
SEACOR 1990	1990	MW-3	2.5	PCBs	5.0		1	1.3	5.0
SEACOR 1990	**1990**	**SB-6**	**9-9.5**	**PCBs**	**2.2**		**1**	**0.065**	**34**
SEACOR 1990	**1990**	**SB-7**	**9-9.4**	**PCBs**	**1.8**		**1**	**0.065**	**28**
SEACOR 1990	1990	MW-3	6	PCBs	1.1		1	1.3	1.1
SEACOR 1990	**1990**	**SB-7**	**11-12.5**	**PCBs**	**0.9**		**1**	**0.065**	**14**
SEACOR 1990	1990	SB-7	1.5-3.5	Phenanthrene	21.6			9.7	2.2
SEACOR 1990	1990	SB-4	2	Phenanthrene	18.8			9.7	1.9
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Total Hydrocarbons**	**25,000**		**2,000**		**13**
SEACOR 1990	**1990**	**SB-5**	**2**	**Total Petroleum Hydrocarbons**	**43,771**		**2,000**		**22**
SEACOR 1990	**1990**	**MW-4**	**2**	**Total Petroleum Hydrocarbons**	**28,550**		**2,000**		**14**
SEACOR 1990	**1990**	**SB-7**	**9-9.4**	**Total Petroleum Hydrocarbons**	**22,450**		**2,000**		**11**
SEACOR 1990	1990	MW-4	5	Total Petroleum Hydrocarbons	8,942		2,000		4.5
SEACOR 1990	1990	SB-2	15	Total Petroleum Hydrocarbons	7,662		2,000		3.8

Table 11
Chemicals Above Screening Levels in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	MW-3	2.5	Total Petroleum Hydrocarbons	7,248		2,000		3.6
SEACOR 1990	1990	SB-2	3	Total Petroleum Hydrocarbons	3,692		2,000		1.8
SEACOR 1990	1990	MW-3	6	Total Petroleum Hydrocarbons	2,654		2,000		1.3
SEACOR 1990	1990	SB-4	2	Total Petroleum Hydrocarbons	2,266		2,000		1.1
SEACOR 1990	1990	SB-4	2	Xylenes (total)	13.5		9		1.5
SEACOR 1990	**1990**	**SB-5**	**2**	**Zinc**	**20,953**		**24,000**	**770**	**27**
SEACOR 1990	**1990**	**SB-4**	**2**	**Zinc**	**8,616**		**24,000**	**770**	**11**
SEACOR 1990	1990	MW-4	2	Zinc	6,966		24,000	770	9.0
SEACOR 1990	1990	SB-6	4.5-6.0	Zinc	6,655		24,000	770	8.6
SEACOR 1990	1990	MW-3	2.5	Zinc	5,508		24,000	770	7.2
SEACOR 1990	1990	SB-2	3	Zinc	3,237		24,000	770	4.2
SEACOR 1990	1990	SB-7	9-9.4	Zinc	2,803		24,000	38	74
SEACOR 1990	1990	MW-3	6	Zinc	2,089		24,000	770	2.7

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 12
Chemicals Above Screening Levels in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SED-7	--	Antimony	49.3		32		1.5
SEACOR 1990	1990	SED-2	--	Antimony	44.7		32		1.4
SEACOR 1990	1990	SED-6	--	Antimony	33.8		32		1.1
SEACOR 1990	1990	SED-6	--	Arsenic	48.6		20	12,000	2.4
SEACOR 1990	1990	SED-2	--	Arsenic	31.6		20	12,000	1.6
SEACOR 1990	1990	SED-3	--	Arsenic	31.6		20	12,000	1.6
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Arsenic	31.0		20	12,000	1.6
SEACOR 1990	1990	SED-4	--	Arsenic	26.5		20	12,000	1.3
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Cadmium**	**53.2**		**2**	**34**	**27**
SEACOR 1990	**1990**	**SED-7**	**--**	**Cadmium**	**35.3**		**2**	**34**	**18**
SEACOR 1990	1990	SED-6	--	Cadmium	18.8		2	34	9.4
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Cadmium	17.2		2	34	8.6
SEACOR 1990	1990	SED-2	--	Cadmium	13.2		2	34	6.6
SEACOR 1990	1990	SED-5	--	Cadmium	12.9		2	34	6.5
SEACOR 1990	1990	SED-4	--	Cadmium	11.4		2	34	5.7
SEACOR 1990	1990	SED-3	--	Cadmium	9.10		2	34	4.6
SEACOR 1990	1990	SED-1	--	Cadmium	6.6		2	34	3.3
SEACOR 1990	**1990**	**SED-5**	**--**	**Chromium**	**193.0**		**19**	**5,400**	**10**
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Chromium	185.0		19	5,400	9.7
SEACOR 1990	1990	SED-3	--	Chromium	154.0		19	5,400	8.1
SEACOR 1990	1990	SED-6	--	Chromium	148.0		19	5,400	7.8
SEACOR 1990	1990	SED-4	--	Chromium	122.0		19	5,400	6.4
SEACOR 1990	1990	SED-2	--	Chromium	90.4		19	5,400	4.8
SEACOR 1990	1990	SED-1	--	Chromium	85.2		19	5,400	4.5
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Chromium	64.1		19	5,400	3.4
SEACOR 1990	1990	SED-7	--	Chromium	54.6		19	5,400	2.9
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**Copper**	**340,654**		**3,000**	**780**	**437**
SEACOR 1990	**1990**	**SED-2**	**--**	**Copper**	**42,798**		**3,000**	**780**	**55**
SEACOR 1990	**1990**	**SED-7**	**--**	**Copper**	**29,896**		**3,000**	**780**	**38**
SEACOR 1990	**1990**	**SED-3**	**--**	**Copper**	**24,526**		**3,000**	**780**	**31**
SEACOR 1990	**1990**	**SED-6**	**--**	**Copper**	**13,715**		**3,000**	**780**	**18**
SEACOR 1990	**1990**	**SED-4**	**--**	**Copper**	**10,649**		**3,000**	**780**	**14**

Table 12
Chemicals Above Screening Levels in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SED-1	--	Copper	5,154		3,000	780	6.6
SEACOR 1990	1990	SED-5	--	Copper	3,965		3,000	780	5.1
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Copper	1,831		3,000	780	2.3
SEACOR 1990	**1990**	**SED-7**	**--**	**Lead**	**82,893**		**250**	**1,300**	**332**
SEACOR 1990	**1990**	**SED-2**	**--**	**Lead**	**37,957**		**250**	**1,300**	**152**
SEACOR 1990	**1990**	**SED-4**	**--**	**Lead**	**36,790**		**250**	**1,300**	**147**
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**Lead**	**27,853**		**250**	**1,300**	**111**
SEACOR 1990	**1990**	**SED-5**	**--**	**Lead**	**19,177**		**250**	**1,300**	**77**
SEACOR 1990	**1990**	**SED-6**	**--**	**Lead**	**16,144**		**250**	**1,300**	**65**
SEACOR 1990	**1990**	**SED-1**	**--**	**Lead**	**15,776**		**250**	**1,300**	**63**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Lead**	**7,208**		**250**	**1,300**	**29**
SEACOR 1990	**1990**	**SED-3**	**--**	**Lead**	**6,854**		**250**	**1,300**	**27**
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Mercury	4.41		2	0.59	7.5
SEACOR 1990	1990	SED-3	--	Mercury	4.35		2	0.59	7.4
SEACOR 1990	1990	SED-2	--	Mercury	3.35		2	0.59	5.7
SEACOR 1990	1990	SED-6	--	Mercury	2.91		2	0.59	4.9
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Mercury	2.2		2	0.59	3.7
SEACOR 1990	1990	SED-7	--	Mercury	1.90		2	0.59	3.2
SEACOR 1990	1990	SED-5	--	Mercury	1.77		2	0.59	3.0
SEACOR 1990	1990	SED-4	--	Mercury	1.35		2	0.59	2.3
SEACOR 1990	1990	SED-1	--	Mercury	0.9		2	0.59	1.5
SEACOR 1990	**1990**	**SED-3**	**--**	**PCBs**	**163.0**		**1**	**1.3**	**163**
SEACOR 1990	**1990**	**SED-2**	**--**	**PCBs**	**73.0**		**1**	**1.3**	**73**
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**PCBs**	**31.0**		**1**	**1.3**	**31**
SEACOR 1990	**1990**	**SED-6**	**--**	**PCBs**	**23.0**		**1**	**1.3**	**23**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**PCBs**	**18.8**		**1**	**1.3**	**19**
SEACOR 1990	1990	SED-4	--	PCBs	4.8		1	1.3	4.8
SEACOR 1990	1990	SED-7	--	PCBs	3.9		1	1.3	3.9
SEACOR 1990	1990	SED-1	--	PCBs	3.3		1	1.3	3.3
SEACOR 1990	1990	SED-5	--	PCBs	2.2		1	1.3	2.2
SEACOR 1990	**1990**	**SED-3**	**--**	**Total Petroleum Hydrocarbons**	**48,615.4**		**2,000**		**24**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Total Petroleum Hydrocarbons**	**45,880**		**2,000**		**23**

Table 12
Chemicals Above Screening Levels in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	**1990**	**SED-6**	**--**	**Total Petroleum Hydrocarbons**	**40,123**		**2,000**		**20**
SEACOR 1990	**1990**	**SED-7**	**--**	**Total Petroleum Hydrocarbons**	**33,042**		**2,000**		**17**
SEACOR 1990	1990	SED-4	--	Total Petroleum Hydrocarbons	17,863.01		2,000		8.9
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Total Petroleum Hydrocarbons	17,688		2,000		8.8
SEACOR 1990	1990	SED-2	--	Total Petroleum Hydrocarbons	8,023		2,000		4.0
SEACOR 1990	1990	SED-5	--	Total Petroleum Hydrocarbons	7,516		2,000		3.8
SEACOR 1990	1990	SED-1	--	Total Petroleum Hydrocarbons	6,283		2,000		3.1
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Zinc**	**12,351**		**24,000**	**770**	**16**
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Zinc	5,210		24,000	770	6.8
SEACOR 1990	1990	SED-2	--	Zinc	4,435		24,000	770	5.8
SEACOR 1990	1990	SED-6	--	Zinc	3,860		24,000	770	5.0
SEACOR 1990	1990	SED-7	--	Zinc	2,660		24,000	770	3.5
SEACOR 1990	1990	SED-4	--	Zinc	2,308		24,000	770	3.0
SEACOR 1990	1990	SED-5	--	Zinc	2,104		24,000	770	2.7
SEACOR 1990	1990	SED-3	--	Zinc	1,305		24,000	770	1.7
SEACOR 1990	1990	SED-1	--	Zinc	1,272		24,000	770	1.7

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table 13

Chemicals Above Screening Levels in Groundwater

Former Sternoff Property

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Terra 1987	1986	B-2	Aroclor 1260	1.52			0.31	4.9
SEACOR 1990	1990	MW-2	Copper	136		590	120	1.1
SEACOR 1990	**1990**	**MW-1**	**Mercury**	**0.3**		**2**	**0.0074**	**41**
Terra 1987	**1986**	**B-1**	**Mercury**	**0.09**		**2**	**0.0074**	**12**
Terra 1987	1986	B-2	Mercury	0.07		2	0.0074	9.5
SEACOR 1990	1990	MW-3	Total Petroleum Hydrocarbons	4,000		500		8.0
SEACOR 1990	1990	MW-2	Total Petroleum Hydrocarbons	2,400		500		4.8
SEACOR 1990	1990	MW-1	Total Petroleum Hydrocarbons	2,000		500		4.0
SEACOR 1990	1990	Sump	Total Petroleum Hydrocarbons	1,800		500		3.6

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database

b - From: SAIC 2006

DW - dry weight

CSL - Contaminant Screening Level from Washington Sediment Management Standards

NA - Not available

Notes:

(1) Table presents detected chemicals only.

(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower. Only samples with exceedance factors greater than or equal to 1 are shown.

(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Appendix A
Sediment Sampling Data
RM 2.3-2.8 East

Appendix A

A-1 Surface Sediment Sampling Results, RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

A-2 Subsurface Sediment Sampling Results, RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Appendix A-1

Surface Sediment Sampling Results, RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,4,6,7,8-HpCDD	1.15E-03		2.07	5.56E-02					
EPA SI	DR115 (681)	1,2,3,4,6,7,8-HpCDD	2.60E-04		1.3	2.00E-02					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,4,6,7,8-HpCDF	1.38E-04		2.07	6.67E-03					
EPA SI	DR115 (681)	1,2,3,4,6,7,8-HpCDF	2.50E-05		1.3	1.92E-03					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,4,7,8,9-HpCDF	1.03E-05	J	2.07	4.98E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,4,7,8-HxCDD	1.02E-05	J	2.07	4.93E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,4,7,8-HxCDF	1.04E-05	J	2.07	5.02E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,6,7,8-HxCDD	3.37E-05		2.07	1.63E-03					
EPA SI	DR115 (681)	1,2,3,6,7,8-HxCDD	8.60E-06		1.3	6.62E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,6,7,8-HxCDF	5.39E-06	J	2.07	2.60E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,7,8,9-HxCDD	3.07E-05		2.07	1.48E-03					
EPA SI	DR115 (681)	1,2,3,7,8,9-HxCDD	6.90E-06	J	1.3	5.31E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,7,8,9-HxCDF	4.43E-07	J	2.07	2.14E-05					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,7,8-PeCDD	5.27E-06	J	2.07	2.55E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	1,2,3,7,8-PeCDF	2.18E-06	J	2.07	1.05E-04					
EPA SI	DR116 (682)	1,2-Dichlorobenzene	2.60E-03	J	2.53	1.03E-01	2.3	2.3	mg/kg OC	0.045	0.045
LDWRI-SurfaceSedimentRound1	LDW-SS83	2,3,4,6,7,8-HxCDF	4.83E-06	J	2.07	2.33E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	2,3,4,7,8-PeCDF	3.52E-06	J	2.07	1.70E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	2,3,7,8-TCDD	1.02E-06	J	2.07	4.93E-05					
LDWRI-SurfaceSedimentRound1	LDW-SS83	2,3,7,8-TCDF	2.31E-06		2.07	1.12E-04					
EPA SI	DR115 (681)	2,3,7,8-TCDF	9.90E-07	J	1.3	7.62E-05					
EPA SI	DR175 (741)	2-Methylnaphthalene	8.00E-02		1.74	4.60E+00	38	64	mg/kg OC-dry	0.12	0.072
EPA SI	DR174 (740)	2-Methylnaphthalene	3.00E-02		1.59	1.89E+00	38	64	mg/kg OC	0.050	0.029
EPA SI	DR114 (680)	2-Methylnaphthalene	2.00E-02		2.51	7.97E-01	38	64	mg/kg OC	0.021	0.012
EPA SI	DR175 (741)	Acenaphthene	7.40E-01		1.74	4.25E+01	16	57	mg/kg OC-dry	2.7	0.75
EPA SI	DR117 (683)	Acenaphthene	1.00E-01		2.6	3.85E+00	16	57	mg/kg OC	0.24	0.067
EPA SI	DR174 (740)	Acenaphthene	1.00E-01		1.59	6.29E+00	16	57	mg/kg OC	0.39	0.11
EPA SI	DR149 (715)	Acenaphthene	9.00E-02		2.01	4.48E+00	16	57	mg/kg OC	0.28	0.079
EPA SI	DR118 (684)	Acenaphthene	6.00E-02		2.8	2.14E+00	16	57	mg/kg OC	0.13	0.038
EPA SI	DR115 (681)	Acenaphthene	3.00E-02		1.3	2.31E+00	16	57	mg/kg OC	0.14	0.040
EPA SI	DR151 (717)	Acenaphthene	3.00E-02		2.68	1.12E+00	16	57	mg/kg OC	0.070	0.020
LDWRI-SurfaceSedimentRound1	LDW-SS88	Acenaphthene	2.10E-02		1.75	1.20E+00	16	57	mg/kg OC	0.075	0.021
EPA SI	DR114 (680)	Acenaphthene	2.00E-02		2.51	7.97E-01	16	57	mg/kg OC	0.050	0.014
EPA SI	DR116 (682)	Acenaphthene	2.00E-02		2.53	7.91E-01	16	57	mg/kg OC	0.049	0.014
EPA SI	DR119 (685)	Acenaphthene	2.00E-02		2.69	7.43E-01	16	57	mg/kg OC	0.046	0.013
EPA SI	DR175 (741)	Acenaphthylene	6.00E-02		1.74	3.45E+00	66	66	mg/kg OC-dry	0.052	0.052

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR174 (740)	Acenaphthylene	4.00E-02		1.59	2.52E+00	66	66	mg/kg OC	0.038	0.038
EPA SI	DR113 (679)	Aluminum	2.48E+04		2.72	9.12E+05					
EPA SI	DR117 (683)	Aluminum	2.10E+04		2.6	8.08E+05					
EPA SI	DR118 (684)	Aluminum	2.10E+04		2.8	7.50E+05					
EPA SI	DR119 (685)	Aluminum	2.10E+04		2.69	7.81E+05					
EPA SI	DR150 (716)	Aluminum	2.10E+04		2.18	9.63E+05					
EPA SI	DR114 (680)	Aluminum	1.90E+04		2.51	7.57E+05					
EPA SI	DR116 (682)	Aluminum	1.90E+04		2.53	7.51E+05					
EPA SI	DR149 (715)	Aluminum	1.90E+04		2.01	9.45E+05					
EPA SI	DR151 (717)	Aluminum	1.90E+04		2.68	7.09E+05					
EPA SI	DR170 (736)	Aluminum	1.90E+04		2.04	9.31E+05					
EPA SI	DR115 (681)	Aluminum	1.80E+04		1.3	1.38E+06					
EPA SI	DR175 (741)	Aluminum	1.67E+04		1.74	9.60E+05					
EPA SI	DR213 (779)	Aluminum	1.40E+04		1.25	1.12E+06					
EPA SI	DR174 (740)	Aluminum	1.30E+04		1.59	8.18E+05					
EPA SI	DR212 (778)	Aluminum	1.10E+04		1.5	7.33E+05					
EPA SI	DR173 (739)	Aluminum	8.70E+03		0.87	1.00E+06					
EPA SI	DR172 (738)	Aluminum	3.80E+03		0.24	1.58E+06					
EPA SI	DR175 (741)	Anthracene	1.50E+00		1.74	8.62E+01	220	1200	mg/kg OC-dry	0.39	0.072
EPA SI	DR114 (680)	Anthracene	4.00E-01		2.51	1.59E+01	220	1200	mg/kg OC	0.072	0.013
EPA SI	DR174 (740)	Anthracene	3.30E-01		1.59	2.08E+01	220	1200	mg/kg OC	0.094	0.017
EPA SI	DR117 (683)	Anthracene	2.90E-01		2.6	1.12E+01	220	1200	mg/kg OC	0.051	0.009
LDWRI-SurfaceSedimentRound1	LDW-SS83	Anthracene	2.40E-01		2.07	1.16E+01	220	1200	mg/kg OC	0.053	0.010
EPA SI	DR149 (715)	Anthracene	2.20E-01		2.01	1.09E+01	220	1200	mg/kg OC	0.050	0.009
EPA SI	DR151 (717)	Anthracene	1.20E-01		2.68	4.48E+00	220	1200	mg/kg OC	0.020	0.004
EPA SI	DR118 (684)	Anthracene	1.10E-01		2.8	3.93E+00	220	1200	mg/kg OC	0.018	0.003
EPA SI	DR115 (681)	Anthracene	1.00E-01		1.3	7.69E+00	220	1200	mg/kg OC	0.035	0.006
EPA SI	DR116 (682)	Anthracene	1.00E-01		2.53	3.95E+00	220	1200	mg/kg OC	0.018	0.003
EPA SI	DR213 (779)	Anthracene	8.00E-02		1.25	6.40E+00	220	1200	mg/kg OC	0.029	0.005
EPA SI	DR119 (685)	Anthracene	6.00E-02		2.69	2.23E+00	220	1200	mg/kg OC	0.010	0.002
LDWRI-SurfaceSedimentRound1	LDW-SS92	Anthracene	5.50E-02	J	1.27	4.33E+00	220	1200	mg/kg OC	0.020	0.004
EPA SI	DR150 (716)	Anthracene	5.00E-02		2.18	2.29E+00	220	1200	mg/kg OC	0.010	0.002
EPA SI	DR212 (778)	Anthracene	5.00E-02		1.5	3.33E+00	220	1200	mg/kg OC	0.015	0.003
LDWRI-SurfaceSedimentRound1	LDW-SS88	Anthracene	4.70E-02		1.75	2.69E+00	220	1200	mg/kg OC	0.012	0.002
LDWRI-SurfaceSedimentRound3	LDW-SS333	Anthracene	4.50E-02	J	1.66	2.71E+00	220	1200	mg/kg OC	0.012	0.002
LDWRI-SurfaceSedimentRound2	LDW-SS81	Anthracene	4.30E-02		2.47	1.74E+00	220	1200	mg/kg OC	0.008	0.001

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR173 (739)	Anthracene	4.00E-02		0.87	4.60E+00	220	1200	mg/kg OC	0.021	0.004
EPA SI	DR113 (679)	Anthracene	3.00E-02		2.72	1.10E+00	220	1200	mg/kg OC-dry	0.005	0.001
LDWRI-SurfaceSedimentRound1	LDW-SS87	Anthracene	2.70E-02		2.18	1.24E+00	220	1200	mg/kg OC	0.006	0.001
LDWRI-SurfaceSedimentRound1	LDW-SS94	Anthracene	2.60E-02		2.05	1.27E+00	220	1200	mg/kg OC	0.006	0.001
EPA SI	DR119 (685)	Antimony	6.00E+00	J	2.69	2.23E+02					
EPA SI	DR118 (684)	Antimony	5.00E+00	J	2.8	1.79E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Antimony	4.00E-01	J	2.05	1.95E+01					
EPA SI	DR113 (679)	Aroclor-1242	2.83E-01	J	2.72	1.04E+01					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Aroclor-1242	3.80E-02		2.47	1.54E+00					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Aroclor-1248	3.70E-02		1.66	2.23E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Aroclor-1248	2.00E-02	J	2.07	9.66E-01					
LDWRI-SurfaceSedimentRound3	LDW-SS334	Aroclor-1248	6.30E-03		0.909	6.93E-01					
LDWRI-SurfaceSedimentRound1	LDW-SS89	Aroclor-1254	1.20E+00		1.02	1.18E+02					
EPA SI	DR113 (679)	Aroclor-1254	1.16E+00	J	2.72	4.26E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS92	Aroclor-1254	4.80E-01		1.27	3.78E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Aroclor-1254	3.80E-01		1.75	2.17E+01					
EPA SI	DR174 (740)	Aroclor-1254	3.30E-01		1.59	2.08E+01					
EPA SI	DR119 (685)	Aroclor-1254	2.00E-01	J	2.69	7.43E+00					
EPA SI	DR151 (717)	Aroclor-1254	1.70E-01	J	2.68	6.34E+00					
EPA SI	DR114 (680)	Aroclor-1254	1.10E-01		2.51	4.38E+00					
EPA SI	DR117 (683)	Aroclor-1254	1.10E-01	J	2.6	4.23E+00					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Aroclor-1254	1.00E-01		2.47	4.05E+00					
EPA SI	DR115 (681)	Aroclor-1254	8.50E-02		1.3	6.54E+00					
EPA SI	DR116 (682)	Aroclor-1254	8.20E-02	J	2.53	3.24E+00					
EPA SI	DR150 (716)	Aroclor-1254	7.70E-02		2.18	3.53E+00					
EPA SI	DR213 (779)	Aroclor-1254	7.00E-02	J	1.25	5.60E+00					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Aroclor-1254	6.20E-02		1.66	3.73E+00					
EPA SI	DR175 (741)	Aroclor-1254	5.20E-02		1.74	2.99E+00					
EPA SI	DR149 (715)	Aroclor-1254	5.00E-02		2.01	2.49E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS87	Aroclor-1254	4.00E-02		2.18	1.83E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Aroclor-1254	3.80E-02		2.07	1.84E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Aroclor-1254	3.70E-02		2.05	1.80E+00					
EPA SI	DR173 (739)	Aroclor-1254	3.30E-02		0.87	3.79E+00					
EPA SI	DR170 (736)	Aroclor-1254	2.80E-02		2.04	1.37E+00					
EPA SI	DR212 (778)	Aroclor-1254	2.50E-02	J	1.5	1.67E+00					
EPA SI	DR118 (684)	Aroclor-1254	2.10E-02	J	2.8	7.50E-01					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound3	LDW-SS334	Aroclor-1254	1.20E-02		0.909	1.32E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS89	Aroclor-1260	6.20E-01		1.02	6.08E+01					
EPA SI	DR113 (679)	Aroclor-1260	5.84E-01	J	2.72	2.15E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS92	Aroclor-1260	4.90E-01		1.27	3.86E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Aroclor-1260	2.80E-01		1.75	1.60E+01					
EPA SI	DR119 (685)	Aroclor-1260	1.90E-01	J	2.69	7.06E+00					
EPA SI	DR151 (717)	Aroclor-1260	1.60E-01	J	2.68	5.97E+00					
EPA SI	DR174 (740)	Aroclor-1260	1.60E-01		1.59	1.01E+01					
EPA SI	DR117 (683)	Aroclor-1260	9.60E-02	J	2.6	3.69E+00					
EPA SI	DR114 (680)	Aroclor-1260	7.60E-02	J	2.51	3.03E+00					
EPA SI	DR116 (682)	Aroclor-1260	7.50E-02	J	2.53	2.96E+00					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Aroclor-1260	7.50E-02		2.47	3.04E+00					
EPA SI	DR175 (741)	Aroclor-1260	6.80E-02		1.74	3.91E+00					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Aroclor-1260	6.80E-02		1.66	4.10E+00					
EPA SI	DR213 (779)	Aroclor-1260	6.60E-02	J	1.25	5.28E+00					
EPA SI	DR150 (716)	Aroclor-1260	6.00E-02	J	2.18	2.75E+00					
EPA SI	DR115 (681)	Aroclor-1260	5.70E-02		1.3	4.38E+00					
EPA SI	DR212 (778)	Aroclor-1260	5.20E-02	J	1.5	3.47E+00					
EPA SI	DR149 (715)	Aroclor-1260	4.50E-02	J	2.01	2.24E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Aroclor-1260	3.90E-02		2.07	1.88E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Aroclor-1260	3.50E-02		2.05	1.71E+00					
EPA SI	DR118 (684)	Aroclor-1260	3.20E-02	J	2.8	1.14E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS87	Aroclor-1260	3.20E-02		2.18	1.47E+00					
EPA SI	DR173 (739)	Aroclor-1260	2.90E-02	J	0.87	3.33E+00					
EPA SI	DR170 (736)	Aroclor-1260	2.30E-02	J	2.04	1.13E+00					
LDWRI-SurfaceSedimentRound3	LDW-SS334	Aroclor-1260	1.50E-02		0.909	1.65E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Arsenic	2.65E+01		2.05		57	93	mg/kg dw	0.46	0.28
LDWRI-SurfaceSedimentRound2	LDW-SS81	Arsenic	1.81E+01		2.47		57	93	mg/kg dw	0.32	0.19
LDWRI-SurfaceSedimentRound1	LDW-SS83	Arsenic	1.79E+01		2.07		57	93	mg/kg dw	0.31	0.19
EPA SI	DR119 (685)	Arsenic	1.40E+01		2.69		57	93	mg/kg dw	0.25	0.15
LDWRI-SurfaceSedimentRound1	LDW-SS87	Arsenic	1.39E+01		2.18		57	93	mg/kg dw	0.24	0.15
EPA SI	DR113 (679)	Arsenic	1.34E+01		2.72		57	93	mg/kg, dry wt.	0.24	0.14
EPA SI	DR114 (680)	Arsenic	1.30E+01		2.51		57	93	mg/kg dw	0.23	0.14
EPA SI	DR118 (684)	Arsenic	1.30E+01		2.8		57	93	mg/kg dw	0.23	0.14
EPA SI	DR175 (741)	Arsenic	1.22E+01		1.74		57	93	mg/kg, dry wt.	0.21	0.13
EPA SI	DR116 (682)	Arsenic	1.20E+01		2.53		57	93	mg/kg dw	0.21	0.13

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR117 (683)	Arsenic	1.20E+01		2.6		57	93	mg/kg dw	0.21	0.13
EPA SI	DR151 (717)	Arsenic	1.20E+01		2.68		57	93	mg/kg dw	0.21	0.13
LDWRI-SurfaceSedimentRound1	LDW-SS88	Arsenic	1.16E+01		1.75		57	93	mg/kg dw	0.20	0.12
EPA SI	DR149 (715)	Arsenic	1.10E+01		2.01		57	93	mg/kg dw	0.19	0.12
LDWRI-SurfaceSedimentRound1	LDW-SS92	Arsenic	9.80E+00		1.27		57	93	mg/kg dw	0.17	0.11
EPA SI	DR174 (740)	Arsenic	9.60E+00		1.59		57	93	mg/kg dw	0.17	0.10
EPA SI	DR150 (716)	Arsenic	9.40E+00		2.18		57	93	mg/kg dw	0.16	0.10
EPA SI	DR115 (681)	Arsenic	8.20E+00		1.3		57	93	mg/kg dw	0.14	0.088
EPA SI	DR212 (778)	Arsenic	8.10E+00		1.5		57	93	mg/kg dw	0.14	0.087
EPA SI	DR170 (736)	Arsenic	8.00E+00		2.04		57	93	mg/kg dw	0.14	0.086
EPA SI	DR213 (779)	Arsenic	8.00E+00		1.25		57	93	mg/kg dw	0.14	0.086
LDWRI-SurfaceSedimentRound3	LDW-SS333	Arsenic	7.60E+00		1.66		57	93	mg/kg dw	0.13	0.082
EPA SI	DR173 (739)	Arsenic	7.40E+00		0.87		57	93	mg/kg dw	0.13	0.080
LDWRI-SurfaceSedimentRound1	LDW-SS89	Arsenic	4.20E+00		1.02		57	93	mg/kg dw	0.074	0.045
EPA SI	DR172 (738)	Arsenic	4.00E+00		0.24		57	93	mg/kg dw	0.070	0.043
LDWRI-SurfaceSedimentRound3	LDW-SS334	Arsenic	4.00E+00		0.909		57	93	mg/kg dw	0.070	0.043
EPA SI	DR113 (679)	Barium	2.79E+02		2.72	1.03E+04					
EPA SI	DR114 (680)	Barium	8.00E+01		2.51	3.19E+03					
EPA SI	DR150 (716)	Barium	8.00E+01		2.18	3.67E+03					
EPA SI	DR118 (684)	Barium	7.90E+01		2.8	2.82E+03					
EPA SI	DR170 (736)	Barium	7.80E+01		2.04	3.82E+03					
EPA SI	DR115 (681)	Barium	7.70E+01		1.3	5.92E+03					
EPA SI	DR119 (685)	Barium	7.70E+01		2.69	2.86E+03					
EPA SI	DR117 (683)	Barium	7.60E+01		2.6	2.92E+03					
EPA SI	DR116 (682)	Barium	7.20E+01		2.53	2.85E+03					
EPA SI	DR151 (717)	Barium	7.20E+01		2.68	2.69E+03					
EPA SI	DR149 (715)	Barium	6.60E+01		2.01	3.28E+03					
EPA SI	DR175 (741)	Barium	5.70E+01		1.74	3.28E+03					
EPA SI	DR174 (740)	Barium	5.40E+01		1.59	3.40E+03					
EPA SI	DR213 (779)	Barium	4.50E+01		1.25	3.60E+03					
EPA SI	DR212 (778)	Barium	3.20E+01		1.5	2.13E+03					
EPA SI	DR173 (739)	Barium	2.90E+01		0.87	3.33E+03					
EPA SI	DR172 (738)	Barium	1.20E+01		0.24	5.00E+03					
EPA SI	DR175 (741)	Benzo(a)anthracene	3.00E+00		1.74	1.72E+02	110	270	mg/kg OC-dry	1.6	0.64
EPA SI	DR174 (740)	Benzo(a)anthracene	1.50E+00		1.59	9.43E+01	110	270	mg/kg OC	0.86	0.35
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzo(a)anthracene	6.50E-01		2.07	3.14E+01	110	270	mg/kg OC	0.29	0.12

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR149 (715)	Benzo(a)anthracene	6.00E-01		2.01	2.99E+01	110	270	mg/kg OC	0.27	0.11
EPA SI	DR117 (683)	Benzo(a)anthracene	4.00E-01		2.6	1.54E+01	110	270	mg/kg OC	0.14	0.057
EPA SI	DR115 (681)	Benzo(a)anthracene	3.80E-01		1.3	2.92E+01	110	270	mg/kg OC	0.27	0.11
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzo(a)anthracene	3.60E-01		1.27	2.83E+01	110	270	mg/kg OC	0.26	0.10
EPA SI	DR114 (680)	Benzo(a)anthracene	3.50E-01		2.51	1.39E+01	110	270	mg/kg OC	0.13	0.052
EPA SI	DR118 (684)	Benzo(a)anthracene	3.50E-01		2.8	1.25E+01	110	270	mg/kg OC	0.11	0.046
EPA SI	DR213 (779)	Benzo(a)anthracene	3.50E-01		1.25	2.80E+01	110	270	mg/kg OC	0.25	0.10
EPA SI	DR116 (682)	Benzo(a)anthracene	3.30E-01		2.53	1.30E+01	110	270	mg/kg OC	0.12	0.048
EPA SI	DR151 (717)	Benzo(a)anthracene	3.20E-01		2.68	1.19E+01	110	270	mg/kg OC	0.11	0.044
EPA SI	DR119 (685)	Benzo(a)anthracene	2.20E-01		2.69	8.18E+00	110	270	mg/kg OC	0.074	0.030
EPA SI	DR150 (716)	Benzo(a)anthracene	1.80E-01		2.18	8.26E+00	110	270	mg/kg OC	0.075	0.031
EPA SI	DR173 (739)	Benzo(a)anthracene	1.60E-01		0.87	1.84E+01	110	270	mg/kg OC	0.17	0.068
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzo(a)anthracene	1.60E-01		2.47	6.48E+00	110	270	mg/kg OC	0.059	0.024
EPA SI	DR212 (778)	Benzo(a)anthracene	1.30E-01		1.5	8.67E+00	110	270	mg/kg OC	0.079	0.032
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzo(a)anthracene	1.30E-01		1.75	7.43E+00	110	270	mg/kg OC	0.068	0.028
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzo(a)anthracene	1.20E-01		1.66	7.23E+00	110	270	mg/kg OC	0.066	0.027
LDWRI-SurfaceSedimentRound1	LDW-SS94	Benzo(a)anthracene	9.50E-02		2.05	4.63E+00	110	270	mg/kg OC	0.042	0.017
EPA SI	DR170 (736)	Benzo(a)anthracene	9.00E-02		2.04	4.41E+00	110	270	mg/kg OC	0.040	0.016
LDWRI-SurfaceSedimentRound1	LDW-SS87	Benzo(a)anthracene	7.80E-02		2.18	3.58E+00	110	270	mg/kg OC	0.033	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS89	Benzo(a)anthracene	5.40E-02		1.02	5.29E+00	110	270	mg/kg OC	0.048	0.020
EPA SI	DR113 (679)	Benzo(a)anthracene	5.00E-02		2.72	1.84E+00	110	270	mg/kg OC-dry	0.017	0.007
EPA SI	DR172 (738)	Benzo(a)anthracene	5.00E-02		0.24		1300	1600	ug/kg dw	0.038	0.031
EPA SI	DR175 (741)	Benzo(a)pyrene	1.20E+00		1.74	6.90E+01	99	210	mg/kg OC-dry	0.70	0.33
EPA SI	DR174 (740)	Benzo(a)pyrene	1.10E+00		1.59	6.92E+01	99	210	mg/kg OC	0.70	0.33
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzo(a)pyrene	4.90E-01		2.07	2.37E+01	99	210	mg/kg OC	0.24	0.11
EPA SI	DR149 (715)	Benzo(a)pyrene	3.90E-01		2.01	1.94E+01	99	210	mg/kg OC	0.20	0.092
EPA SI	DR115 (681)	Benzo(a)pyrene	3.60E-01		1.3	2.77E+01	99	210	mg/kg OC	0.28	0.13
EPA SI	DR213 (779)	Benzo(a)pyrene	3.20E-01		1.25	2.56E+01	99	210	mg/kg OC	0.26	0.12
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzo(a)pyrene	3.20E-01		1.27	2.52E+01	99	210	mg/kg OC	0.25	0.12
EPA SI	DR151 (717)	Benzo(a)pyrene	3.00E-01		2.68	1.12E+01	99	210	mg/kg OC	0.11	0.053
EPA SI	DR114 (680)	Benzo(a)pyrene	2.80E-01		2.51	1.12E+01	99	210	mg/kg OC	0.11	0.053
EPA SI	DR116 (682)	Benzo(a)pyrene	2.70E-01		2.53	1.07E+01	99	210	mg/kg OC	0.11	0.051
EPA SI	DR118 (684)	Benzo(a)pyrene	2.60E-01		2.8	9.29E+00	99	210	mg/kg OC	0.094	0.044
EPA SI	DR117 (683)	Benzo(a)pyrene	2.50E-01		2.6	9.62E+00	99	210	mg/kg OC	0.097	0.046
EPA SI	DR119 (685)	Benzo(a)pyrene	2.20E-01		2.69	8.18E+00	99	210	mg/kg OC	0.083	0.039
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzo(a)pyrene	1.80E-01		2.47	7.29E+00	99	210	mg/kg OC	0.074	0.035

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR173 (739)	Benzo(a)pyrene	1.70E-01		0.87	1.95E+01	99	210	mg/kg OC	0.20	0.093
EPA SI	DR150 (716)	Benzo(a)pyrene	1.60E-01		2.18	7.34E+00	99	210	mg/kg OC	0.074	0.035
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzo(a)pyrene	1.30E-01		1.66	7.83E+00	99	210	mg/kg OC	0.079	0.037
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzo(a)pyrene	1.30E-01		1.75	7.43E+00	99	210	mg/kg OC	0.075	0.035
EPA SI	DR113 (679)	Benzo(a)pyrene	1.00E-01		2.72	3.68E+00	99	210	mg/kg OC-dry	0.037	0.018
EPA SI	DR212 (778)	Benzo(a)pyrene	9.00E-02		1.5	6.00E+00	99	210	mg/kg OC	0.061	0.029
EPA SI	DR170 (736)	Benzo(a)pyrene	8.00E-02		2.04	3.92E+00	99	210	mg/kg OC	0.040	0.019
LDWRI-SurfaceSedimentRound1	LDW-SS94	Benzo(a)pyrene	6.90E-02		2.05	3.37E+00	99	210	mg/kg OC	0.034	0.016
LDWRI-SurfaceSedimentRound1	LDW-SS87	Benzo(a)pyrene	5.80E-02		2.18	2.66E+00	99	210	mg/kg OC	0.027	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS89	Benzo(a)pyrene	5.10E-02		1.02	5.00E+00	99	210	mg/kg OC	0.051	0.024
EPA SI	DR172 (738)	Benzo(a)pyrene	5.00E-02		0.24		1600	3000	ug/kg dw	0.031	0.017
EPA SI	DR175 (741)	Benzo(b)fluoranthene	2.00E+00		1.74	1.15E+02	230	450	mg/kg OC	0.50	0.26
EPA SI	DR174 (740)	Benzo(b)fluoranthene	1.50E+00		1.59	9.43E+01	230	450	mg/kg OC	0.41	0.21
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzo(b)fluoranthene	8.40E-01		2.07	4.06E+01	230	450	mg/kg OC	0.18	0.090
EPA SI	DR149 (715)	Benzo(b)fluoranthene	4.80E-01		2.01	2.39E+01	230	450	mg/kg OC	0.10	0.053
EPA SI	DR115 (681)	Benzo(b)fluoranthene	4.10E-01		1.3	3.15E+01	230	450	mg/kg OC	0.14	0.070
EPA SI	DR116 (682)	Benzo(b)fluoranthene	3.50E-01		2.53	1.38E+01	230	450	mg/kg OC	0.060	0.031
EPA SI	DR151 (717)	Benzo(b)fluoranthene	3.50E-01		2.68	1.31E+01	230	450	mg/kg OC	0.057	0.029
EPA SI	DR213 (779)	Benzo(b)fluoranthene	3.40E-01		1.25	2.72E+01	230	450	mg/kg OC	0.12	0.060
EPA SI	DR114 (680)	Benzo(b)fluoranthene	3.30E-01		2.51	1.31E+01	230	450	mg/kg OC	0.057	0.029
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzo(b)fluoranthene	3.30E-01		1.27	2.60E+01	230	450	mg/kg OC	0.11	0.058
EPA SI	DR118 (684)	Benzo(b)fluoranthene	3.20E-01		2.8	1.14E+01	230	450	mg/kg OC	0.050	0.025
EPA SI	DR117 (683)	Benzo(b)fluoranthene	2.90E-01		2.6	1.12E+01	230	450	mg/kg OC	0.048	0.025
EPA SI	DR119 (685)	Benzo(b)fluoranthene	2.70E-01		2.69	1.00E+01	230	450	mg/kg OC	0.044	0.022
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzo(b)fluoranthene	2.70E-01		2.47	1.09E+01	230	450	mg/kg OC	0.048	0.024
EPA SI	DR150 (716)	Benzo(b)fluoranthene	2.00E-01		2.18	9.17E+00	230	450	mg/kg OC	0.040	0.020
EPA SI	DR173 (739)	Benzo(b)fluoranthene	1.90E-01		0.87	2.18E+01	230	450	mg/kg OC	0.095	0.049
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzo(b)fluoranthene	1.90E-01		1.66	1.14E+01	230	450	mg/kg OC	0.050	0.025
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzo(b)fluoranthene	1.40E-01		1.75	8.00E+00	230	450	mg/kg OC	0.035	0.018
EPA SI	DR113 (679)	Benzo(b)fluoranthene	1.20E-01		2.72	4.41E+00	230	450	mg/kg OC	0.019	0.010
EPA SI	DR170 (736)	Benzo(b)fluoranthene	1.10E-01		2.04	5.39E+00	230	450	mg/kg OC	0.023	0.012
EPA SI	DR212 (778)	Benzo(b)fluoranthene	1.00E-01		1.5	6.67E+00	230	450	mg/kg OC	0.029	0.015
LDWRI-SurfaceSedimentRound1	LDW-SS94	Benzo(b)fluoranthene	8.20E-02		2.05	4.00E+00	230	450	mg/kg OC	0.017	0.009
LDWRI-SurfaceSedimentRound1	LDW-SS87	Benzo(b)fluoranthene	8.10E-02		2.18	3.72E+00	230	450	mg/kg OC	0.016	0.008
EPA SI	DR172 (738)	Benzo(b)fluoranthene	7.00E-02		0.24	2.92E+01	230	450	mg/kg OC	0.13	0.065
LDWRI-SurfaceSedimentRound1	LDW-SS89	Benzo(b)fluoranthene	6.70E-02		1.02	6.57E+00	230	450	mg/kg OC	0.029	0.015

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound3	LDW-SS334	Benzo(b)fluoranthene	3.60E-02	J	0.909	3.96E+00	230	450	mg/kg OC	0.017	0.009
EPA SI	DR175 (741)	Benzo(g,h,i)perylene	4.50E-01		1.74	2.59E+01	31	78	mg/kg OC-dry	0.83	0.33
EPA SI	DR174 (740)	Benzo(g,h,i)perylene	3.40E-01		1.59	2.14E+01	31	78	mg/kg OC	0.69	0.27
EPA SI	DR149 (715)	Benzo(g,h,i)perylene	1.80E-01		2.01	8.96E+00	31	78	mg/kg OC	0.29	0.11
EPA SI	DR151 (717)	Benzo(g,h,i)perylene	1.80E-01		2.68	6.72E+00	31	78	mg/kg OC	0.22	0.086
EPA SI	DR115 (681)	Benzo(g,h,i)perylene	1.70E-01		1.3	1.31E+01	31	78	mg/kg OC	0.42	0.17
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzo(g,h,i)perylene	1.70E-01		2.07	8.21E+00	31	78	mg/kg OC	0.26	0.11
EPA SI	DR213 (779)	Benzo(g,h,i)perylene	1.60E-01		1.25	1.28E+01	31	78	mg/kg OC	0.41	0.16
EPA SI	DR114 (680)	Benzo(g,h,i)perylene	1.40E-01		2.51	5.58E+00	31	78	mg/kg OC	0.18	0.072
EPA SI	DR116 (682)	Benzo(g,h,i)perylene	1.40E-01		2.53	5.53E+00	31	78	mg/kg OC	0.18	0.071
EPA SI	DR119 (685)	Benzo(g,h,i)perylene	1.40E-01		2.69	5.20E+00	31	78	mg/kg OC	0.17	0.067
EPA SI	DR118 (684)	Benzo(g,h,i)perylene	1.30E-01		2.8	4.64E+00	31	78	mg/kg OC	0.15	0.060
EPA SI	DR117 (683)	Benzo(g,h,i)perylene	1.20E-01		2.6	4.62E+00	31	78	mg/kg OC	0.15	0.059
EPA SI	DR150 (716)	Benzo(g,h,i)perylene	1.10E-01		2.18	5.05E+00	31	78	mg/kg OC	0.16	0.065
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzo(g,h,i)perylene	9.50E-02		2.47	3.85E+00	31	78	mg/kg OC	0.12	0.049
EPA SI	DR173 (739)	Benzo(g,h,i)perylene	9.00E-02		0.87	1.03E+01	31	78	mg/kg OC	0.33	0.13
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzo(g,h,i)perylene	8.80E-02	J	1.75	5.03E+00	31	78	mg/kg OC	0.16	0.064
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzo(g,h,i)perylene	8.20E-02		1.66	4.94E+00	31	78	mg/kg OC	0.16	0.063
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzo(g,h,i)perylene	7.80E-02		1.27	6.14E+00	31	78	mg/kg OC	0.20	0.079
EPA SI	DR170 (736)	Benzo(g,h,i)perylene	6.00E-02		2.04	2.94E+00	31	78	mg/kg OC	0.095	0.038
EPA SI	DR113 (679)	Benzo(g,h,i)perylene	5.00E-02		2.72	1.84E+00	31	78	mg/kg OC-dry	0.059	0.024
EPA SI	DR212 (778)	Benzo(g,h,i)perylene	4.00E-02		1.5	2.67E+00	31	78	mg/kg OC	0.086	0.034
EPA SI	DR172 (738)	Benzo(g,h,i)perylene	3.00E-02		0.24		670	720	ug/kg dw	0.045	0.042
EPA SI	DR175 (741)	Benzo(k)fluoranthene	1.30E+00		1.74	7.47E+01	230	450	mg/kg OC	0.32	0.17
EPA SI	DR174 (740)	Benzo(k)fluoranthene	1.00E+00		1.59	6.29E+01	230	450	mg/kg OC	0.27	0.14
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzo(k)fluoranthene	7.40E-01		2.07	3.57E+01	230	450	mg/kg OC	0.16	0.079
EPA SI	DR149 (715)	Benzo(k)fluoranthene	4.30E-01		2.01	2.14E+01	230	450	mg/kg OC	0.093	0.048
EPA SI	DR115 (681)	Benzo(k)fluoranthene	3.80E-01		1.3	2.92E+01	230	450	mg/kg OC	0.13	0.065
EPA SI	DR114 (680)	Benzo(k)fluoranthene	3.20E-01		2.51	1.27E+01	230	450	mg/kg OC	0.055	0.028
EPA SI	DR151 (717)	Benzo(k)fluoranthene	3.20E-01		2.68	1.19E+01	230	450	mg/kg OC	0.052	0.027
EPA SI	DR213 (779)	Benzo(k)fluoranthene	3.10E-01		1.25	2.48E+01	230	450	mg/kg OC	0.11	0.055
EPA SI	DR116 (682)	Benzo(k)fluoranthene	3.00E-01		2.53	1.19E+01	230	450	mg/kg OC	0.052	0.026
EPA SI	DR118 (684)	Benzo(k)fluoranthene	2.80E-01		2.8	1.00E+01	230	450	mg/kg OC	0.043	0.022
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzo(k)fluoranthene	2.80E-01		1.27	2.20E+01	230	450	mg/kg OC	0.096	0.049
EPA SI	DR117 (683)	Benzo(k)fluoranthene	2.70E-01		2.6	1.04E+01	230	450	mg/kg OC	0.045	0.023
EPA SI	DR119 (685)	Benzo(k)fluoranthene	2.40E-01		2.69	8.92E+00	230	450	mg/kg OC	0.039	0.020

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR150 (716)	Benzo(k)fluoranthene	1.70E-01		2.18	7.80E+00	230	450	mg/kg OC	0.034	0.017
EPA SI	DR173 (739)	Benzo(k)fluoranthene	1.70E-01		0.87	1.95E+01	230	450	mg/kg OC	0.085	0.043
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzo(k)fluoranthene	1.70E-01		1.66	1.02E+01	230	450	mg/kg OC	0.045	0.023
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzo(k)fluoranthene	1.70E-01		2.47	6.88E+00	230	450	mg/kg OC	0.030	0.015
EPA SI	DR113 (679)	Benzo(k)fluoranthene	1.00E-01		2.72	3.68E+00	230	450	mg/kg OC	0.016	0.008
EPA SI	DR170 (736)	Benzo(k)fluoranthene	9.00E-02		2.04	4.41E+00	230	450	mg/kg OC	0.019	0.010
EPA SI	DR212 (778)	Benzo(k)fluoranthene	9.00E-02		1.5	6.00E+00	230	450	mg/kg OC	0.026	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS87	Benzo(k)fluoranthene	8.80E-02		2.18	4.04E+00	230	450	mg/kg OC	0.018	0.009
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzo(k)fluoranthene	8.40E-02	J	1.75	4.80E+00	230	450	mg/kg OC	0.021	0.011
LDWRI-SurfaceSedimentRound1	LDW-SS94	Benzo(k)fluoranthene	8.40E-02		2.05	4.10E+00	230	450	mg/kg OC	0.018	0.009
EPA SI	DR172 (738)	Benzo(k)fluoranthene	5.00E-02		0.24	2.08E+01	230	450	mg/kg OC	0.091	0.046
LDWRI-SurfaceSedimentRound1	LDW-SS89	Benzo(k)fluoranthene	4.40E-02		1.02	4.31E+00	230	450	mg/kg OC	0.019	0.010
EPA SI	DR175 (741)	Benzofluoranthenes (total-calc'd)	3.30E+00		1.74	1.90E+02	230	450	mg/kg OC-dry	0.82	0.42
EPA SI	DR174 (740)	Benzofluoranthenes (total-calc'd)	2.50E+00		1.59	1.57E+02	230	450	mg/kg OC	0.68	0.35
LDWRI-SurfaceSedimentRound1	LDW-SS83	Benzofluoranthenes (total-calc'd)	1.58E+00		2.07	7.63E+01	230	450	mg/kg OC	0.33	0.17
EPA SI	DR149 (715)	Benzofluoranthenes (total-calc'd)	9.10E-01		2.01	4.53E+01	230	450	mg/kg OC	0.20	0.10
EPA SI	DR115 (681)	Benzofluoranthenes (total-calc'd)	7.90E-01		1.3	6.08E+01	230	450	mg/kg OC	0.26	0.14
EPA SI	DR151 (717)	Benzofluoranthenes (total-calc'd)	6.70E-01		2.68	2.50E+01	230	450	mg/kg OC	0.11	0.056
EPA SI	DR114 (680)	Benzofluoranthenes (total-calc'd)	6.50E-01		2.51	2.59E+01	230	450	mg/kg OC	0.11	0.058
EPA SI	DR116 (682)	Benzofluoranthenes (total-calc'd)	6.50E-01		2.53	2.57E+01	230	450	mg/kg OC	0.11	0.057
EPA SI	DR213 (779)	Benzofluoranthenes (total-calc'd)	6.50E-01		1.25	5.20E+01	230	450	mg/kg OC	0.23	0.12
LDWRI-SurfaceSedimentRound1	LDW-SS92	Benzofluoranthenes (total-calc'd)	6.10E-01		1.27	4.80E+01	230	450	mg/kg OC	0.21	0.11
EPA SI	DR118 (684)	Benzofluoranthenes (total-calc'd)	6.00E-01		2.8	2.14E+01	230	450	mg/kg OC	0.093	0.048
EPA SI	DR117 (683)	Benzofluoranthenes (total-calc'd)	5.60E-01		2.6	2.15E+01	230	450	mg/kg OC	0.094	0.048
EPA SI	DR119 (685)	Benzofluoranthenes (total-calc'd)	5.10E-01		2.69	1.90E+01	230	450	mg/kg OC	0.082	0.042
LDWRI-SurfaceSedimentRound2	LDW-SS81	Benzofluoranthenes (total-calc'd)	4.40E-01		2.47	1.78E+01	230	450	mg/kg OC	0.077	0.040
EPA SI	DR150 (716)	Benzofluoranthenes (total-calc'd)	3.70E-01		2.18	1.70E+01	230	450	mg/kg OC	0.074	0.038
EPA SI	DR173 (739)	Benzofluoranthenes (total-calc'd)	3.60E-01		0.87	4.14E+01	230	450	mg/kg OC	0.18	0.092
LDWRI-SurfaceSedimentRound3	LDW-SS333	Benzofluoranthenes (total-calc'd)	3.60E-01		1.66	2.17E+01	230	450	mg/kg OC	0.094	0.048
EPA SI	DR113 (679)	Benzofluoranthenes (total-calc'd)	2.20E-01		2.72	8.09E+00	230	450	mg/kg OC-dry	0.035	0.018
LDWRI-SurfaceSedimentRound1	LDW-SS88	Benzofluoranthenes (total-calc'd)	2.20E-01	J	1.75	1.26E+01	230	450	mg/kg OC	0.055	0.028
EPA SI	DR170 (736)	Benzofluoranthenes (total-calc'd)	2.00E-01		2.04	9.80E+00	230	450	mg/kg OC	0.043	0.022
EPA SI	DR212 (778)	Benzofluoranthenes (total-calc'd)	1.90E-01		1.5	1.27E+01	230	450	mg/kg OC	0.055	0.028
LDWRI-SurfaceSedimentRound1	LDW-SS87	Benzofluoranthenes (total-calc'd)	1.69E-01		2.18	7.75E+00	230	450	mg/kg OC	0.034	0.017
LDWRI-SurfaceSedimentRound1	LDW-SS94	Benzofluoranthenes (total-calc'd)	1.66E-01		2.05	8.10E+00	230	450	mg/kg OC	0.035	0.018
EPA SI	DR172 (738)	Benzofluoranthenes (total-calc'd)	1.20E-01		0.24		3200	3600	ug/kg dw	0.038	0.033

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS89	Benzofluoranthenes (total-calc'd)	1.11E-01		1.02	1.09E+01	230	450	mg/kg OC	0.047	0.024
LDWRI-SurfaceSedimentRound3	LDW-SS334	Benzofluoranthenes (total-calc'd)	3.60E-02	J	0.909	3.96E+00	230	450	mg/kg OC	0.017	0.009
EPA SI	DR113 (679)	Beryllium	5.40E-01		2.72	1.99E+01					
EPA SI	DR117 (683)	Beryllium	5.00E-01		2.6	1.92E+01					
EPA SI	DR118 (684)	Beryllium	5.00E-01		2.8	1.79E+01					
EPA SI	DR119 (685)	Beryllium	4.90E-01		2.69	1.82E+01					
EPA SI	DR150 (716)	Beryllium	4.90E-01		2.18	2.25E+01					
EPA SI	DR151 (717)	Beryllium	4.90E-01		2.68	1.83E+01					
EPA SI	DR116 (682)	Beryllium	4.80E-01		2.53	1.90E+01					
EPA SI	DR170 (736)	Beryllium	4.40E-01		2.04	2.16E+01					
EPA SI	DR114 (680)	Beryllium	4.20E-01		2.51	1.67E+01					
EPA SI	DR149 (715)	Beryllium	4.00E-01		2.01	1.99E+01					
EPA SI	DR175 (741)	Beryllium	3.40E-01		1.74	1.95E+01					
EPA SI	DR115 (681)	Beryllium	3.30E-01	J	1.3	2.54E+01					
EPA SI	DR213 (779)	Beryllium	2.90E-01		1.25	2.32E+01					
EPA SI	DR174 (740)	Beryllium	2.70E-01		1.59	1.70E+01					
EPA SI	DR212 (778)	Beryllium	2.40E-01		1.5	1.60E+01					
EPA SI	DR173 (739)	Beryllium	2.30E-01		0.87	2.64E+01					
EPA SI	DR172 (738)	Beryllium	1.00E-01		0.24	4.17E+01					
EPA SI	DR113 (679)	Bis(2-ethylhexyl)phthalate	9.10E-01		2.72	3.35E+01	47	78	mg/kg OC-dry	0.71	0.43
EPA SI	DR151 (717)	Bis(2-ethylhexyl)phthalate	5.40E-01		2.68	2.01E+01	47	78	mg/kg OC	0.43	0.26
EPA SI	DR119 (685)	Bis(2-ethylhexyl)phthalate	5.20E-01		2.69	1.93E+01	47	78	mg/kg OC	0.41	0.25
LDWRI-SurfaceSedimentRound1	LDW-SS83	Bis(2-ethylhexyl)phthalate	4.60E-01		2.07	2.22E+01	47	78	mg/kg OC	0.47	0.28
EPA SI	DR116 (682)	Bis(2-ethylhexyl)phthalate	3.90E-01		2.53	1.54E+01	47	78	mg/kg OC	0.33	0.20
EPA SI	DR150 (716)	Bis(2-ethylhexyl)phthalate	3.90E-01		2.18	1.79E+01	47	78	mg/kg OC	0.38	0.23
EPA SI	DR118 (684)	Bis(2-ethylhexyl)phthalate	3.50E-01		2.8	1.25E+01	47	78	mg/kg OC	0.27	0.16
EPA SI	DR114 (680)	Bis(2-ethylhexyl)phthalate	3.30E-01		2.51	1.31E+01	47	78	mg/kg OC	0.28	0.17
EPA SI	DR117 (683)	Bis(2-ethylhexyl)phthalate	3.10E-01		2.6	1.19E+01	47	78	mg/kg OC	0.25	0.15
EPA SI	DR174 (740)	Bis(2-ethylhexyl)phthalate	3.00E-01		1.59	1.89E+01	47	78	mg/kg OC	0.40	0.24
EPA SI	DR175 (741)	Bis(2-ethylhexyl)phthalate	2.70E-01		1.74	1.55E+01	47	78	mg/kg OC-dry	0.33	0.20
LDWRI-SurfaceSedimentRound3	LDW-SS333	Bis(2-ethylhexyl)phthalate	1.70E-01		1.66	1.02E+01	47	78	mg/kg OC	0.22	0.13
EPA SI	DR173 (739)	Bis(2-ethylhexyl)phthalate	1.00E-01		0.87	1.15E+01	47	78	mg/kg OC	0.24	0.15
LDWRI-SurfaceSedimentRound1	LDW-SS87	Bis(2-ethylhexyl)phthalate	9.70E-02		2.18	4.45E+00	47	78	mg/kg OC	0.095	0.057
LDWRI-SurfaceSedimentRound1	LDW-SS92	Bis(2-ethylhexyl)phthalate	6.30E-02		1.27	4.96E+00	47	78	mg/kg OC	0.11	0.064
LDWRI-SurfaceSedimentRound1	LDW-SS94	Bis(2-ethylhexyl)phthalate	4.60E-02		2.05	2.24E+00	47	78	mg/kg OC	0.048	0.029
LDWRI-SurfaceSedimentRound3	LDW-SS334	Bis(2-ethylhexyl)phthalate	4.40E-02	J	0.909	4.84E+00	47	78	mg/kg OC	0.10	0.062

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS89	Bis(2-ethylhexyl)phthalate	3.10E-02		1.02	3.04E+00	47	78	mg/kg OC	0.065	0.039
LDWRI-SurfaceSedimentRound1	LDW-SS88	Bis(2-ethylhexyl)phthalate	2.70E-02		1.75	1.54E+00	47	78	mg/kg OC	0.033	0.020
EPA SI	DR172 (738)	Bis(2-ethylhexyl)phthalate	2.00E-02		0.24		1300	1900	ug/kg dw	0.015	0.011
EPA SI	DR113 (679)	Butyl benzyl phthalate	6.00E-02		2.72	2.21E+00	4.9	64	mg/kg OC-dry	0.45	0.034
LDWRI-SurfaceSedimentRound1	LDW-SS87	Butyl benzyl phthalate	4.60E-02		2.18	2.11E+00	4.9	64	mg/kg OC	0.43	0.033
LDWRI-SurfaceSedimentRound2	LDW-SS81	Butyl benzyl phthalate	4.20E-02		2.47	1.70E+00	4.9	64	mg/kg OC	0.35	0.027
EPA SI	DR119 (685)	Butyl benzyl phthalate	4.00E-02		2.69	1.49E+00	4.9	64	mg/kg OC	0.30	0.023
EPA SI	DR151 (717)	Butyl benzyl phthalate	4.00E-02		2.68	1.49E+00	4.9	64	mg/kg OC	0.30	0.023
EPA SI	DR115 (681)	Butyl benzyl phthalate	3.00E-02		1.3	2.31E+00	4.9	64	mg/kg OC	0.47	0.036
EPA SI	DR116 (682)	Butyl benzyl phthalate	3.00E-02		2.53	1.19E+00	4.9	64	mg/kg OC	0.24	0.019
EPA SI	DR118 (684)	Butyl benzyl phthalate	3.00E-02		2.8	1.07E+00	4.9	64	mg/kg OC	0.22	0.017
EPA SI	DR174 (740)	Butyl benzyl phthalate	3.00E-02		1.59	1.89E+00	4.9	64	mg/kg OC	0.39	0.029
EPA SI	DR114 (680)	Butyl benzyl phthalate	2.00E-02		2.51	7.97E-01	4.9	64	mg/kg OC	0.16	0.012
EPA SI	DR150 (716)	Butyl benzyl phthalate	2.00E-02		2.18	9.17E-01	4.9	64	mg/kg OC	0.19	0.014
LDWRI-SurfaceSedimentRound3	LDW-SS333	Butyl benzyl phthalate	1.60E-02		1.66	9.64E-01	4.9	64	mg/kg OC	0.20	0.015
LDWRI-SurfaceSedimentRound1	LDW-SS83	Butyl benzyl phthalate	7.20E-03		2.07	3.48E-01	4.9	64	mg/kg OC	0.071	0.005
EPA SI	DR113 (679)	Cadmium	1.80E+00		2.72		5.1	6.7	mg/kg, dry wt.	0.35	0.27
LDWRI-SurfaceSedimentRound1	LDW-SS88	Cadmium	1.00E+00		1.75		5.1	6.7	mg/kg dw	0.20	0.15
EPA SI	DR212 (778)	Cadmium	7.20E-01		1.5		5.1	6.7	mg/kg dw	0.14	0.11
LDWRI-SurfaceSedimentRound2	LDW-SS81	Cadmium	7.00E-01		2.47		5.1	6.7	mg/kg dw	0.14	0.10
EPA SI	DR114 (680)	Cadmium	6.00E-01		2.51		5.1	6.7	mg/kg dw	0.12	0.090
LDWRI-SurfaceSedimentRound1	LDW-SS83	Cadmium	6.00E-01		2.07		5.1	6.7	mg/kg dw	0.12	0.090
EPA SI	DR119 (685)	Cadmium	4.40E-01		2.69		5.1	6.7	mg/kg dw	0.086	0.066
EPA SI	DR150 (716)	Cadmium	4.20E-01		2.18		5.1	6.7	mg/kg dw	0.082	0.063
EPA SI	DR118 (684)	Cadmium	4.10E-01		2.8		5.1	6.7	mg/kg dw	0.080	0.061
EPA SI	DR174 (740)	Cadmium	4.10E-01		1.59		5.1	6.7	mg/kg dw	0.080	0.061
EPA SI	DR149 (715)	Cadmium	4.00E-01		2.01		5.1	6.7	mg/kg dw	0.078	0.060
EPA SI	DR151 (717)	Cadmium	4.00E-01		2.68		5.1	6.7	mg/kg dw	0.078	0.060
EPA SI	DR116 (682)	Cadmium	3.70E-01		2.53		5.1	6.7	mg/kg dw	0.073	0.055
EPA SI	DR213 (779)	Cadmium	3.70E-01		1.25		5.1	6.7	mg/kg dw	0.073	0.055
EPA SI	DR117 (683)	Cadmium	3.30E-01		2.6		5.1	6.7	mg/kg dw	0.065	0.049
EPA SI	DR175 (741)	Cadmium	3.30E-01		1.74		5.1	6.7	mg/kg, dry wt.	0.065	0.049
EPA SI	DR170 (736)	Cadmium	2.60E-01		2.04		5.1	6.7	mg/kg dw	0.051	0.039
EPA SI	DR115 (681)	Cadmium	2.00E-01		1.3		5.1	6.7	mg/kg dw	0.039	0.030
EPA SI	DR173 (739)	Cadmium	1.30E-01		0.87		5.1	6.7	mg/kg dw	0.025	0.019
EPA SI	DR172 (738)	Cadmium	7.00E-02		0.24		5.1	6.7	mg/kg dw	0.014	0.010

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR175 (741)	Carbazole	3.70E-01		1.74	2.13E+01					
EPA SI	DR174 (740)	Carbazole	1.20E-01		1.59	7.55E+00					
EPA SI	DR114 (680)	Carbazole	1.00E-01		2.51	3.98E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Carbazole	9.90E-02		2.07	4.78E+00					
EPA SI	DR117 (683)	Carbazole	8.00E-02		2.6	3.08E+00					
EPA SI	DR149 (715)	Carbazole	4.00E-02		2.01	1.99E+00					
EPA SI	DR151 (717)	Carbazole	4.00E-02		2.68	1.49E+00					
EPA SI	DR115 (681)	Carbazole	3.00E-02		1.3	2.31E+00					
EPA SI	DR116 (682)	Carbazole	3.00E-02		2.53	1.19E+00					
EPA SI	DR118 (684)	Carbazole	3.00E-02		2.8	1.07E+00					
EPA SI	DR119 (685)	Carbazole	3.00E-02		2.69	1.12E+00					
EPA SI	DR213 (779)	Carbazole	3.00E-02		1.25	2.40E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Carbazole	2.70E-02		1.75	1.54E+00					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Chromium	5.71E+01		1.75		260	270	mg/kg dw	0.22	0.21
EPA SI	DR113 (679)	Chromium	4.80E+01		2.72		260	270	mg/kg, dry wt.	0.18	0.18
LDWRI-SurfaceSedimentRound1	LDW-SS83	Chromium	3.70E+01		2.07		260	270	mg/kg dw	0.14	0.14
LDWRI-SurfaceSedimentRound2	LDW-SS81	Chromium	3.50E+01		2.47		260	270	mg/kg dw	0.13	0.13
LDWRI-SurfaceSedimentRound1	LDW-SS87	Chromium	3.10E+01		2.18		260	270	mg/kg dw	0.12	0.11
EPA SI	DR115 (681)	Chromium	2.90E+01		1.3		260	270	mg/kg dw	0.11	0.11
EPA SI	DR118 (684)	Chromium	2.90E+01		2.8		260	270	mg/kg dw	0.11	0.11
EPA SI	DR150 (716)	Chromium	2.90E+01		2.18		260	270	mg/kg dw	0.11	0.11
EPA SI	DR117 (683)	Chromium	2.80E+01		2.6		260	270	mg/kg dw	0.11	0.10
EPA SI	DR119 (685)	Chromium	2.80E+01		2.69		260	270	mg/kg dw	0.11	0.10
EPA SI	DR116 (682)	Chromium	2.70E+01		2.53		260	270	mg/kg dw	0.10	0.10
EPA SI	DR151 (717)	Chromium	2.70E+01		2.68		260	270	mg/kg dw	0.10	0.10
EPA SI	DR114 (680)	Chromium	2.60E+01		2.51		260	270	mg/kg dw	0.10	0.096
EPA SI	DR149 (715)	Chromium	2.60E+01		2.01		260	270	mg/kg dw	0.10	0.096
EPA SI	DR170 (736)	Chromium	2.50E+01		2.04		260	270	mg/kg dw	0.096	0.093
EPA SI	DR212 (778)	Chromium	2.50E+01		1.5		260	270	mg/kg dw	0.096	0.093
LDWRI-SurfaceSedimentRound1	LDW-SS92	Chromium	2.34E+01		1.27		260	270	mg/kg dw	0.090	0.087
EPA SI	DR175 (741)	Chromium	2.30E+01		1.74		260	270	mg/kg, dry wt.	0.088	0.085
EPA SI	DR174 (740)	Chromium	2.20E+01		1.59		260	270	mg/kg dw	0.085	0.081
LDWRI-SurfaceSedimentRound1	LDW-SS94	Chromium	2.12E+01		2.05		260	270	mg/kg dw	0.082	0.079
EPA SI	DR213 (779)	Chromium	2.10E+01		1.25		260	270	mg/kg dw	0.081	0.078
LDWRI-SurfaceSedimentRound3	LDW-SS333	Chromium	2.06E+01		1.66		260	270	mg/kg dw	0.079	0.076
EPA SI	DR173 (739)	Chromium	1.50E+01		0.87		260	270	mg/kg dw	0.058	0.056

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS89	Chromium	1.44E+01		1.02		260	270	mg/kg dw	0.055	0.053
LDWRI-SurfaceSedimentRound3	LDW-SS334	Chromium	1.10E+01		0.909		260	270	mg/kg dw	0.042	0.041
EPA SI	DR172 (738)	Chromium	9.00E+00		0.24		260	270	mg/kg dw	0.035	0.033
EPA SI	DR175 (741)	Chrysene	3.40E+00		1.74	1.95E+02	100	460	mg/kg OC-dry	1.95	0.42
EPA SI	DR174 (740)	Chrysene	1.80E+00		1.59	1.13E+02	110	460	mg/kg OC	1.03	0.25
LDWRI-SurfaceSedimentRound1	LDW-SS83	Chrysene	1.40E+00		2.07	6.76E+01	110	460	mg/kg OC	0.61	0.15
EPA SI	DR149 (715)	Chrysene	7.40E-01		2.01	3.68E+01	110	460	mg/kg OC	0.33	0.080
EPA SI	DR115 (681)	Chrysene	6.10E-01		1.3	4.69E+01	110	460	mg/kg OC	0.43	0.10
LDWRI-SurfaceSedimentRound1	LDW-SS92	Chrysene	5.40E-01		1.27	4.25E+01	110	460	mg/kg OC	0.39	0.092
EPA SI	DR116 (682)	Chrysene	4.70E-01		2.53	1.86E+01	110	460	mg/kg OC	0.17	0.040
EPA SI	DR118 (684)	Chrysene	4.70E-01		2.8	1.68E+01	110	460	mg/kg OC	0.15	0.036
EPA SI	DR117 (683)	Chrysene	4.60E-01		2.6	1.77E+01	110	460	mg/kg OC	0.16	0.038
EPA SI	DR151 (717)	Chrysene	4.40E-01		2.68	1.64E+01	110	460	mg/kg OC	0.15	0.036
EPA SI	DR114 (680)	Chrysene	4.30E-01		2.51	1.71E+01	110	460	mg/kg OC	0.16	0.037
EPA SI	DR213 (779)	Chrysene	4.20E-01		1.25	3.36E+01	110	460	mg/kg OC	0.31	0.073
EPA SI	DR119 (685)	Chrysene	3.20E-01		2.69	1.19E+01	110	460	mg/kg OC	0.11	0.026
LDWRI-SurfaceSedimentRound2	LDW-SS81	Chrysene	2.60E-01		2.47	1.05E+01	110	460	mg/kg OC	0.096	0.023
EPA SI	DR150 (716)	Chrysene	2.50E-01		2.18	1.15E+01	110	460	mg/kg OC	0.10	0.025
EPA SI	DR173 (739)	Chrysene	2.50E-01		0.87	2.87E+01	110	460	mg/kg OC	0.26	0.062
LDWRI-SurfaceSedimentRound1	LDW-SS88	Chrysene	2.50E-01		1.75	1.43E+01	110	460	mg/kg OC	0.13	0.031
LDWRI-SurfaceSedimentRound3	LDW-SS333	Chrysene	2.00E-01		1.66	1.20E+01	110	460	mg/kg OC	0.11	0.026
EPA SI	DR212 (778)	Chrysene	1.90E-01		1.5	1.27E+01	110	460	mg/kg OC	0.12	0.028
EPA SI	DR170 (736)	Chrysene	1.20E-01		2.04	5.88E+00	110	460	mg/kg OC	0.053	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS87	Chrysene	1.20E-01		2.18	5.50E+00	110	460	mg/kg OC	0.050	0.012
LDWRI-SurfaceSedimentRound1	LDW-SS94	Chrysene	1.20E-01		2.05	5.85E+00	110	460	mg/kg OC	0.053	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS89	Chrysene	9.90E-02		1.02	9.71E+00	110	460	mg/kg OC	0.088	0.021
EPA SI	DR113 (679)	Chrysene	9.00E-02		2.72	3.31E+00	100	460	mg/kg OC-dry	0.033	0.007
EPA SI	DR172 (738)	Chrysene	9.00E-02		0.24		1400	2800	ug/kg dw	0.064	0.032
LDWRI-SurfaceSedimentRound3	LDW-SS334	Chrysene	3.80E-02	J	0.909	4.18E+00	110	460	mg/kg OC	0.038	0.009
EPA SI	DR113 (679)	Cobalt	1.10E+01		2.72	4.04E+02					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Cobalt	1.07E+01		2.47	4.33E+02					
EPA SI	DR116 (682)	Cobalt	1.00E+01		2.53	3.95E+02					
EPA SI	DR117 (683)	Cobalt	1.00E+01		2.6	3.85E+02					
EPA SI	DR118 (684)	Cobalt	1.00E+01		2.8	3.57E+02					
EPA SI	DR119 (685)	Cobalt	1.00E+01		2.69	3.72E+02					
EPA SI	DR149 (715)	Cobalt	1.00E+01		2.01	4.98E+02					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR150 (716)	Cobalt	9.00E+00		2.18	4.13E+02					
EPA SI	DR151 (717)	Cobalt	9.00E+00		2.68	3.36E+02					
EPA SI	DR170 (736)	Cobalt	9.00E+00		2.04	4.41E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS87	Cobalt	8.90E+00		2.18	4.08E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Cobalt	8.70E+00		1.75	4.97E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Cobalt	8.40E+00		2.07	4.06E+02					
EPA SI	DR114 (680)	Cobalt	8.00E+00		2.51	3.19E+02					
EPA SI	DR115 (681)	Cobalt	8.00E+00		1.3	6.15E+02					
EPA SI	DR175 (741)	Cobalt	8.00E+00		1.74	4.60E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Cobalt	7.40E+00		2.05	3.61E+02					
EPA SI	DR174 (740)	Cobalt	7.00E+00		1.59	4.40E+02					
EPA SI	DR213 (779)	Cobalt	7.00E+00		1.25	5.60E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS92	Cobalt	6.20E+00		1.27	4.88E+02					
EPA SI	DR212 (778)	Cobalt	6.00E+00		1.5	4.00E+02					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Cobalt	5.90E+00		1.66	3.55E+02					
EPA SI	DR173 (739)	Cobalt	5.00E+00		0.87	5.75E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS89	Cobalt	4.90E+00		1.02	4.80E+02					
LDWRI-SurfaceSedimentRound3	LDW-SS334	Cobalt	4.40E+00		0.909	4.84E+02					
EPA SI	DR172 (738)	Cobalt	3.00E+00		0.24	1.25E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Copper	1.09E+02		2.07		390	390	mg/kg dw	0.28	0.28
LDWRI-SurfaceSedimentRound2	LDW-SS81	Copper	8.94E+01		2.47		390	390	mg/kg dw	0.23	0.23
EPA SI	DR115 (681)	Copper	8.30E+01		1.3		390	390	mg/kg dw	0.21	0.21
LDWRI-SurfaceSedimentRound1	LDW-SS87	Copper	7.26E+01		2.18		390	390	mg/kg dw	0.19	0.19
LDWRI-SurfaceSedimentRound1	LDW-SS94	Copper	7.19E+01		2.05		390	390	mg/kg dw	0.18	0.18
EPA SI	DR113 (679)	Copper	7.00E+01		2.72		390	390	mg/kg, dry wt.	0.18	0.18
EPA SI	DR119 (685)	Copper	6.10E+01		2.69		390	390	mg/kg dw	0.16	0.16
EPA SI	DR114 (680)	Copper	5.90E+01		2.51		390	390	mg/kg dw	0.15	0.15
EPA SI	DR116 (682)	Copper	5.90E+01		2.53		390	390	mg/kg dw	0.15	0.15
EPA SI	DR118 (684)	Copper	5.90E+01		2.8		390	390	mg/kg dw	0.15	0.15
EPA SI	DR151 (717)	Copper	5.70E+01		2.68		390	390	mg/kg dw	0.15	0.15
EPA SI	DR117 (683)	Copper	5.50E+01		2.6		390	390	mg/kg dw	0.14	0.14
EPA SI	DR149 (715)	Copper	5.30E+01		2.01		390	390	mg/kg dw	0.14	0.14
LDWRI-SurfaceSedimentRound1	LDW-SS88	Copper	4.87E+01		1.75		390	390	mg/kg dw	0.12	0.12
EPA SI	DR150 (716)	Copper	4.80E+01		2.18		390	390	mg/kg dw	0.12	0.12
EPA SI	DR175 (741)	Copper	4.70E+01		1.74		390	390	mg/kg, dry wt.	0.12	0.12
EPA SI	DR174 (740)	Copper	4.00E+01		1.59		390	390	mg/kg dw	0.10	0.10

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS92	Copper	3.50E+01		1.27		390	390	mg/kg dw	0.090	0.090
EPA SI	DR170 (736)	Copper	3.40E+01		2.04		390	390	mg/kg dw	0.087	0.087
EPA SI	DR213 (779)	Copper	3.40E+01		1.25		390	390	mg/kg dw	0.087	0.087
LDWRI-SurfaceSedimentRound3	LDW-SS333	Copper	3.30E+01		1.66		390	390	mg/kg dw	0.085	0.085
EPA SI	DR212 (778)	Copper	2.60E+01		1.5		390	390	mg/kg dw	0.067	0.067
EPA SI	DR173 (739)	Copper	2.40E+01		0.87		390	390	mg/kg dw	0.062	0.062
LDWRI-SurfaceSedimentRound1	LDW-SS89	Copper	1.86E+01		1.02		390	390	mg/kg dw	0.048	0.048
EPA SI	DR172 (738)	Copper	1.60E+01		0.24		390	390	mg/kg dw	0.041	0.041
LDWRI-SurfaceSedimentRound3	LDW-SS334	Copper	1.45E+01		0.909		390	390	mg/kg dw	0.037	0.037
EPA SI	DR175 (741)	Dibenzo(a,h)anthracene	1.50E-01		1.74	8.62E+00	12	33	mg/kg OC-dry	0.72	0.26
EPA SI	DR174 (740)	Dibenzo(a,h)anthracene	1.30E-01		1.59	8.18E+00	12	33	mg/kg OC	0.68	0.25
LDWRI-SurfaceSedimentRound1	LDW-SS83	Dibenzo(a,h)anthracene	9.50E-02	J	2.07	4.59E+00	12	33	mg/kg OC	0.38	0.14
EPA SI	DR114 (680)	Dibenzo(a,h)anthracene	5.00E-02		2.51	1.99E+00	12	33	mg/kg OC	0.17	0.060
EPA SI	DR115 (681)	Dibenzo(a,h)anthracene	5.00E-02		1.3	3.85E+00	12	33	mg/kg OC	0.32	0.12
EPA SI	DR149 (715)	Dibenzo(a,h)anthracene	5.00E-02		2.01	2.49E+00	12	33	mg/kg OC	0.21	0.075
EPA SI	DR213 (779)	Dibenzo(a,h)anthracene	5.00E-02		1.25	4.00E+00	12	33	mg/kg OC	0.33	0.12
LDWRI-SurfaceSedimentRound2	LDW-SS81	Dibenzo(a,h)anthracene	4.20E-02		2.47	1.70E+00	12	33	mg/kg OC	0.14	0.052
EPA SI	DR116 (682)	Dibenzo(a,h)anthracene	4.00E-02		2.53	1.58E+00	12	33	mg/kg OC	0.13	0.048
EPA SI	DR118 (684)	Dibenzo(a,h)anthracene	4.00E-02		2.8	1.43E+00	12	33	mg/kg OC	0.12	0.043
EPA SI	DR151 (717)	Dibenzo(a,h)anthracene	4.00E-02		2.68	1.49E+00	12	33	mg/kg OC	0.12	0.045
EPA SI	DR117 (683)	Dibenzo(a,h)anthracene	3.00E-02		2.6	1.15E+00	12	33	mg/kg OC	0.096	0.035
EPA SI	DR119 (685)	Dibenzo(a,h)anthracene	3.00E-02		2.69	1.12E+00	12	33	mg/kg OC	0.093	0.034
EPA SI	DR150 (716)	Dibenzo(a,h)anthracene	3.00E-02		2.18	1.38E+00	12	33	mg/kg OC	0.11	0.042
EPA SI	DR173 (739)	Dibenzo(a,h)anthracene	3.00E-02		0.87	3.45E+00	12	33	mg/kg OC	0.29	0.10
LDWRI-SurfaceSedimentRound3	LDW-SS333	Dibenzo(a,h)anthracene	1.50E-02		1.66	9.04E-01	12	33	mg/kg OC	0.075	0.027
EPA SI	DR175 (741)	Dibenzofuran	7.50E-01		1.74	4.31E+01	15	58	mg/kg OC-dry	2.87	0.74
EPA SI	DR117 (683)	Dibenzofuran	7.00E-02		2.6	2.69E+00	15	58	mg/kg OC	0.18	0.046
EPA SI	DR149 (715)	Dibenzofuran	7.00E-02		2.01	3.48E+00	15	58	mg/kg OC	0.23	0.060
EPA SI	DR174 (740)	Dibenzofuran	6.00E-02		1.59	3.77E+00	15	58	mg/kg OC	0.25	0.065
EPA SI	DR118 (684)	Dibenzofuran	5.00E-02		2.8	1.79E+00	15	58	mg/kg OC	0.12	0.031
EPA SI	DR114 (680)	Dibenzofuran	4.00E-02		2.51	1.59E+00	15	58	mg/kg OC	0.11	0.027
EPA SI	DR116 (682)	Dibenzofuran	3.00E-02		2.53	1.19E+00	15	58	mg/kg OC	0.079	0.020
EPA SI	DR151 (717)	Dibenzofuran	3.00E-02		2.68	1.12E+00	15	58	mg/kg OC	0.075	0.019
EPA SI	DR115 (681)	Dibenzofuran	2.00E-02		1.3	1.54E+00	15	58	mg/kg OC	0.10	0.027
EPA SI	DR119 (685)	Dibenzofuran	2.00E-02		2.69	7.43E-01	15	58	mg/kg OC	0.050	0.013
EPA SI	DR116 (682)	Dibutyltin as ion	2.20E-02	J	2.53	8.70E-01					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR174 (740)	Dibutyltin as ion	1.10E-02	J	1.59	6.92E-01					
EPA SI	DR115 (681)	Dibutyltin as ion	9.00E-03	J	1.3	6.92E-01					
EPA SI	DR151 (717)	Dibutyltin as ion	8.00E-03	J	2.68	2.99E-01					
EPA SI	DR116 (682)	Dimethyl phthalate	5.00E-02		2.53	1.98E+00	53	53	mg/kg OC	0.037	0.037
EPA SI	DR119 (685)	Dimethyl phthalate	2.00E-02		2.69	7.43E-01	53	53	mg/kg OC	0.014	0.014
EPA SI	DR151 (717)	Dimethyl phthalate	2.00E-02		2.68	7.46E-01	53	53	mg/kg OC	0.014	0.014
LDWRI-SurfaceSedimentRound2	LDW-SS81	Dimethyl phthalate	7.10E-03		2.47	2.87E-01	53	53	mg/kg OC	0.005	0.005
EPA SI	DR174 (740)	Di-n-butyl phthalate	7.00E-02		1.59	4.40E+00	220	1700	mg/kg OC	0.020	0.003
EPA SI	DR113 (679)	Di-n-butyl phthalate	3.00E-02		2.72	1.10E+00	220	1700	mg/kg OC-dry	0.005	0.001
EPA SI	DR114 (680)	Di-n-butyl phthalate	2.00E-02		2.51	7.97E-01	220	1700	mg/kg OC	0.004	0.000
LDWRI-SurfaceSedimentRound1	LDW-SS83	Dioxin/furan TEQ - Bird - Half DL	2.20E-05	J	2.07	1.06E-03					
EPA SI	DR115 (681)	Dioxin/furan TEQ - Bird - Half DL	5.00E-06	J	1.3	3.85E-04					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Dioxin/furan TEQ - Mammal - Half DL	3.20E-05	J	2.07	1.55E-03					
EPA SI	DR115 (681)	Dioxin/furan TEQ - Mammal - Half DL	6.60E-06	J	1.3	5.08E-04					
EPA SI	DR175 (741)	Fluoranthene	1.80E+01		1.74	1.03E+03	160	1200	mg/kg OC-dry	6.5	0.86
EPA SI	DR174 (740)	Fluoranthene	2.80E+00		1.59	1.76E+02	160	1200	mg/kg OC	1.1	0.15
EPA SI	DR149 (715)	Fluoranthene	2.20E+00		2.01	1.09E+02	160	1200	mg/kg OC	0.68	0.091
LDWRI-SurfaceSedimentRound1	LDW-SS83	Fluoranthene	1.50E+00		2.07	7.25E+01	160	1200	mg/kg OC	0.45	0.060
EPA SI	DR117 (683)	Fluoranthene	1.40E+00		2.6	5.38E+01	160	1200	mg/kg OC	0.34	0.045
EPA SI	DR115 (681)	Fluoranthene	1.00E+00		1.3	7.69E+01	160	1200	mg/kg OC	0.48	0.064
EPA SI	DR118 (684)	Fluoranthene	9.60E-01		2.8	3.43E+01	160	1200	mg/kg OC	0.21	0.029
EPA SI	DR114 (680)	Fluoranthene	8.00E-01		2.51	3.19E+01	160	1200	mg/kg OC	0.20	0.027
LDWRI-SurfaceSedimentRound1	LDW-SS88	Fluoranthene	7.80E-01		1.75	4.46E+01	160	1200	mg/kg OC	0.28	0.037
LDWRI-SurfaceSedimentRound1	LDW-SS92	Fluoranthene	7.70E-01		1.27	6.06E+01	160	1200	mg/kg OC	0.38	0.051
EPA SI	DR116 (682)	Fluoranthene	7.40E-01		2.53	2.92E+01	160	1200	mg/kg OC	0.18	0.024
EPA SI	DR151 (717)	Fluoranthene	7.40E-01		2.68	2.76E+01	160	1200	mg/kg OC	0.17	0.023
EPA SI	DR213 (779)	Fluoranthene	7.00E-01		1.25	5.60E+01	160	1200	mg/kg OC	0.35	0.047
EPA SI	DR119 (685)	Fluoranthene	5.40E-01		2.69	2.01E+01	160	1200	mg/kg OC	0.13	0.017
EPA SI	DR150 (716)	Fluoranthene	4.90E-01		2.18	2.25E+01	160	1200	mg/kg OC	0.14	0.019
EPA SI	DR173 (739)	Fluoranthene	3.90E-01		0.87	4.48E+01	160	1200	mg/kg OC	0.28	0.037
LDWRI-SurfaceSedimentRound3	LDW-SS333	Fluoranthene	3.00E-01		1.66	1.81E+01	160	1200	mg/kg OC	0.11	0.015
LDWRI-SurfaceSedimentRound2	LDW-SS81	Fluoranthene	3.00E-01		2.47	1.21E+01	160	1200	mg/kg OC	0.076	0.010
EPA SI	DR170 (736)	Fluoranthene	2.30E-01		2.04	1.13E+01	160	1200	mg/kg OC	0.070	0.009
LDWRI-SurfaceSedimentRound1	LDW-SS94	Fluoranthene	2.00E-01		2.05	9.76E+00	160	1200	mg/kg OC	0.061	0.008
EPA SI	DR212 (778)	Fluoranthene	1.90E-01		1.5	1.27E+01	160	1200	mg/kg OC	0.079	0.011
LDWRI-SurfaceSedimentRound1	LDW-SS87	Fluoranthene	1.80E-01		2.18	8.26E+00	160	1200	mg/kg OC	0.052	0.007

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR172 (738)	Fluoranthene	1.30E-01		0.24		1700	2500	ug/kg dw	0.076	0.052
LDWRI-SurfaceSedimentRound1	LDW-SS89	Fluoranthene	1.30E-01		1.02	1.27E+01	160	1200	mg/kg OC	0.080	0.011
EPA SI	DR113 (679)	Fluoranthene	1.00E-01		2.72	3.68E+00	160	1200	mg/kg OC-dry	0.023	0.003
LDWRI-SurfaceSedimentRound3	LDW-SS334	Fluoranthene	7.90E-02		0.909	8.69E+00	160	1200	mg/kg OC	0.054	0.007
EPA SI	DR175 (741)	Fluorene	1.70E+00		1.74	9.77E+01	23	79	mg/kg OC-dry	4.2	1.2
EPA SI	DR174 (740)	Fluorene	1.20E-01		1.59	7.55E+00	23	79	mg/kg OC	0.33	0.096
EPA SI	DR117 (683)	Fluorene	1.10E-01		2.6	4.23E+00	23	79	mg/kg OC	0.18	0.054
EPA SI	DR149 (715)	Fluorene	1.10E-01		2.01	5.47E+00	23	79	mg/kg OC	0.24	0.069
EPA SI	DR114 (680)	Fluorene	9.00E-02		2.51	3.59E+00	23	79	mg/kg OC	0.16	0.045
EPA SI	DR118 (684)	Fluorene	7.00E-02		2.8	2.50E+00	23	79	mg/kg OC	0.11	0.032
LDWRI-SurfaceSedimentRound1	LDW-SS83	Fluorene	5.70E-02	J	2.07	2.75E+00	23	79	mg/kg OC	0.12	0.035
EPA SI	DR116 (682)	Fluorene	4.00E-02		2.53	1.58E+00	23	79	mg/kg OC	0.069	0.020
EPA SI	DR151 (717)	Fluorene	4.00E-02		2.68	1.49E+00	23	79	mg/kg OC	0.065	0.019
EPA SI	DR115 (681)	Fluorene	3.00E-02		1.3	2.31E+00	23	79	mg/kg OC	0.10	0.029
EPA SI	DR119 (685)	Fluorene	3.00E-02		2.69	1.12E+00	23	79	mg/kg OC	0.048	0.014
LDWRI-SurfaceSedimentRound1	LDW-SS88	Fluorene	2.40E-02		1.75	1.37E+00	23	79	mg/kg OC	0.060	0.017
EPA SI	DR173 (739)	Fluorene	2.00E-02		0.87	2.30E+00	23	79	mg/kg OC	0.10	0.029
EPA SI	DR213 (779)	Fluorene	2.00E-02		1.25	1.60E+00	23	79	mg/kg OC	0.070	0.020
EPA SI	DR175 (741)	Indeno(1,2,3-cd)pyrene	6.60E-01		1.74	3.79E+01	34	88	mg/kg OC-dry	1.1	0.43
EPA SI	DR174 (740)	Indeno(1,2,3-cd)pyrene	4.80E-01		1.59	3.02E+01	34	88	mg/kg OC	0.89	0.34
EPA SI	DR149 (715)	Indeno(1,2,3-cd)pyrene	2.40E-01		2.01	1.19E+01	34	88	mg/kg OC	0.35	0.14
EPA SI	DR115 (681)	Indeno(1,2,3-cd)pyrene	2.10E-01		1.3	1.62E+01	34	88	mg/kg OC	0.48	0.18
EPA SI	DR151 (717)	Indeno(1,2,3-cd)pyrene	2.10E-01		2.68	7.84E+00	34	88	mg/kg OC	0.23	0.089
EPA SI	DR213 (779)	Indeno(1,2,3-cd)pyrene	2.10E-01		1.25	1.68E+01	34	88	mg/kg OC	0.49	0.19
LDWRI-SurfaceSedimentRound1	LDW-SS83	Indeno(1,2,3-cd)pyrene	2.00E-01		2.07	9.66E+00	34	88	mg/kg OC	0.28	0.11
EPA SI	DR114 (680)	Indeno(1,2,3-cd)pyrene	1.90E-01		2.51	7.57E+00	34	88	mg/kg OC	0.22	0.086
EPA SI	DR116 (682)	Indeno(1,2,3-cd)pyrene	1.70E-01		2.53	6.72E+00	34	88	mg/kg OC	0.20	0.076
EPA SI	DR119 (685)	Indeno(1,2,3-cd)pyrene	1.70E-01		2.69	6.32E+00	34	88	mg/kg OC	0.19	0.072
EPA SI	DR118 (684)	Indeno(1,2,3-cd)pyrene	1.60E-01		2.8	5.71E+00	34	88	mg/kg OC	0.17	0.065
EPA SI	DR117 (683)	Indeno(1,2,3-cd)pyrene	1.40E-01		2.6	5.38E+00	34	88	mg/kg OC	0.16	0.061
EPA SI	DR150 (716)	Indeno(1,2,3-cd)pyrene	1.30E-01		2.18	5.96E+00	34	88	mg/kg OC	0.18	0.068
LDWRI-SurfaceSedimentRound2	LDW-SS81	Indeno(1,2,3-cd)pyrene	1.10E-01		2.47	4.45E+00	34	88	mg/kg OC	0.13	0.051
EPA SI	DR173 (739)	Indeno(1,2,3-cd)pyrene	1.00E-01		0.87	1.15E+01	34	88	mg/kg OC	0.34	0.13
LDWRI-SurfaceSedimentRound1	LDW-SS92	Indeno(1,2,3-cd)pyrene	9.00E-02		1.27	7.09E+00	34	88	mg/kg OC	0.21	0.081
EPA SI	DR113 (679)	Indeno(1,2,3-cd)pyrene	7.00E-02		2.72	2.57E+00	34	88	mg/kg OC-dry	0.076	0.029
LDWRI-SurfaceSedimentRound3	LDW-SS333	Indeno(1,2,3-cd)pyrene	7.00E-02		1.66	4.22E+00	34	88	mg/kg OC	0.12	0.048

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR170 (736)	Indeno(1,2,3-cd)pyrene	6.00E-02		2.04	2.94E+00	34	88	mg/kg OC	0.087	0.033
EPA SI	DR212 (778)	Indeno(1,2,3-cd)pyrene	6.00E-02		1.5	4.00E+00	34	88	mg/kg OC	0.12	0.045
EPA SI	DR172 (738)	Indeno(1,2,3-cd)pyrene	3.00E-02		0.24		600	690	ug/kg dw	0.050	0.043
LDWRI-SurfaceSedimentRound1	LDW-SS88	Indeno(1,2,3-cd)pyrene	2.10E-02		1.75	1.20E+00	34	88	mg/kg OC	0.035	0.014
LDWRI-SurfaceSedimentRound1	LDW-SS89	Indeno(1,2,3-cd)pyrene	2.10E-02		1.02	2.06E+00	34	88	mg/kg OC	0.061	0.023
LDWRI-SurfaceSedimentRound1	LDW-SS87	Indeno(1,2,3-cd)pyrene	2.00E-02		2.18	9.17E-01	34	88	mg/kg OC	0.027	0.010
LDWRI-SurfaceSedimentRound1	LDW-SS94	Indeno(1,2,3-cd)pyrene	2.00E-02		2.05	9.76E-01	34	88	mg/kg OC	0.029	0.011
EPA SI	DR113 (679)	Iron	3.19E+04	J	2.72	1.17E+06					
EPA SI	DR118 (684)	Iron	3.10E+04	J	2.8	1.11E+06					
EPA SI	DR119 (685)	Iron	3.10E+04	J	2.69	1.15E+06					
EPA SI	DR115 (681)	Iron	2.90E+04		1.3	2.23E+06					
EPA SI	DR116 (682)	Iron	2.90E+04	J	2.53	1.15E+06					
EPA SI	DR117 (683)	Iron	2.90E+04	J	2.6	1.12E+06					
EPA SI	DR150 (716)	Iron	2.90E+04	J	2.18	1.33E+06					
EPA SI	DR151 (717)	Iron	2.90E+04	J	2.68	1.08E+06					
EPA SI	DR114 (680)	Iron	2.60E+04	J	2.51	1.04E+06					
EPA SI	DR149 (715)	Iron	2.60E+04	J	2.01	1.29E+06					
EPA SI	DR170 (736)	Iron	2.40E+04	J	2.04	1.18E+06					
EPA SI	DR175 (741)	Iron	2.28E+04	J	1.74	1.31E+06					
EPA SI	DR174 (740)	Iron	1.90E+04	J	1.59	1.19E+06					
EPA SI	DR213 (779)	Iron	1.90E+04	J	1.25	1.52E+06					
EPA SI	DR173 (739)	Iron	1.50E+04	J	0.87	1.72E+06					
EPA SI	DR212 (778)	Iron	1.50E+04	J	1.5	1.00E+06					
EPA SI	DR172 (738)	Iron	9.70E+03	J	0.24	4.04E+06					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Lead	7.40E+01		1.75		450	530	mg/kg dw	0.16	0.14
EPA SI	DR113 (679)	Lead	6.73E+01		2.72		450	530	mg/kg, dry wt.	0.15	0.13
LDWRI-SurfaceSedimentRound1	LDW-SS83	Lead	5.50E+01		2.07		450	530	mg/kg dw	0.12	0.10
LDWRI-SurfaceSedimentRound2	LDW-SS81	Lead	5.20E+01		2.47		450	530	mg/kg dw	0.12	0.098
LDWRI-SurfaceSedimentRound1	LDW-SS94	Lead	3.70E+01		2.05		450	530	mg/kg dw	0.082	0.070
LDWRI-SurfaceSedimentRound1	LDW-SS87	Lead	3.60E+01		2.18		450	530	mg/kg dw	0.080	0.068
EPA SI	DR212 (778)	Lead	3.20E+01		1.5		450	530	mg/kg dw	0.071	0.060
EPA SI	DR114 (680)	Lead	3.10E+01		2.51		450	530	mg/kg dw	0.069	0.058
EPA SI	DR115 (681)	Lead	3.00E+01	J	1.3		450	530	mg/kg dw	0.067	0.057
EPA SI	DR119 (685)	Lead	3.00E+01		2.69		450	530	mg/kg dw	0.067	0.057
EPA SI	DR174 (740)	Lead	2.90E+01		1.59		450	530	mg/kg dw	0.064	0.055
EPA SI	DR118 (684)	Lead	2.80E+01		2.8		450	530	mg/kg dw	0.062	0.053

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR151 (717)	Lead	2.80E+01		2.68		450	530	mg/kg dw	0.062	0.053
EPA SI	DR116 (682)	Lead	2.50E+01		2.53		450	530	mg/kg dw	0.056	0.047
EPA SI	DR117 (683)	Lead	2.50E+01		2.6		450	530	mg/kg dw	0.056	0.047
EPA SI	DR170 (736)	Lead	2.50E+01		2.04		450	530	mg/kg dw	0.056	0.047
LDWRI-SurfaceSedimentRound1	LDW-SS92	Lead	2.40E+01		1.27		450	530	mg/kg dw	0.053	0.045
EPA SI	DR149 (715)	Lead	2.30E+01		2.01		450	530	mg/kg dw	0.051	0.043
EPA SI	DR213 (779)	Lead	2.20E+01		1.25		450	530	mg/kg dw	0.049	0.042
EPA SI	DR175 (741)	Lead	2.16E+01		1.74		450	530	mg/kg, dry wt.	0.048	0.041
LDWRI-SurfaceSedimentRound3	LDW-SS333	Lead	2.00E+01		1.66		450	530	mg/kg dw	0.044	0.038
EPA SI	DR150 (716)	Lead	1.90E+01		2.18		450	530	mg/kg dw	0.042	0.036
EPA SI	DR173 (739)	Lead	1.60E+01		0.87		450	530	mg/kg dw	0.036	0.030
LDWRI-SurfaceSedimentRound1	LDW-SS89	Lead	1.00E+01		1.02		450	530	mg/kg dw	0.022	0.019
EPA SI	DR172 (738)	Lead	8.20E+00		0.24		450	530	mg/kg dw	0.018	0.015
LDWRI-SurfaceSedimentRound3	LDW-SS334	Lead	7.00E+00		0.909		450	530	mg/kg dw	0.016	0.013
EPA SI	DR118 (684)	Manganese	3.30E+02		2.8	1.18E+04					
EPA SI	DR113 (679)	Manganese	3.11E+02		2.72	1.14E+04					
EPA SI	DR119 (685)	Manganese	3.10E+02		2.69	1.15E+04					
EPA SI	DR115 (681)	Manganese	2.90E+02		1.3	2.23E+04					
EPA SI	DR117 (683)	Manganese	2.90E+02		2.6	1.12E+04					
EPA SI	DR150 (716)	Manganese	2.90E+02		2.18	1.33E+04					
EPA SI	DR151 (717)	Manganese	2.90E+02		2.68	1.08E+04					
EPA SI	DR114 (680)	Manganese	2.80E+02		2.51	1.12E+04					
EPA SI	DR116 (682)	Manganese	2.80E+02		2.53	1.11E+04					
EPA SI	DR170 (736)	Manganese	2.70E+02		2.04	1.32E+04					
EPA SI	DR149 (715)	Manganese	2.60E+02		2.01	1.29E+04					
EPA SI	DR175 (741)	Manganese	2.39E+02		1.74	1.37E+04					
EPA SI	DR173 (739)	Manganese	2.10E+02		0.87	2.41E+04					
EPA SI	DR213 (779)	Manganese	1.90E+02		1.25	1.52E+04					
EPA SI	DR172 (738)	Manganese	1.80E+02		0.24	7.50E+04					
EPA SI	DR174 (740)	Manganese	1.70E+02		1.59	1.07E+04					
EPA SI	DR212 (778)	Manganese	1.30E+02		1.5	8.67E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Mercury	6.20E-01		1.75		0.41	0.59	mg/kg dw	1.5	1.1
EPA SI	DR113 (679)	Mercury	3.90E-01		2.72		0.41	0.59	mg/kg, dry wt.	0.95	0.66
EPA SI	DR118 (684)	Mercury	3.10E-01		2.8		0.41	0.59	mg/kg dw	0.76	0.53
EPA SI	DR117 (683)	Mercury	2.30E-01		2.6		0.41	0.59	mg/kg dw	0.56	0.39
LDWRI-SurfaceSedimentRound2	LDW-SS81	Mercury	2.00E-01		2.47		0.41	0.59	mg/kg dw	0.49	0.34

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS83	Mercury	2.00E-01		2.07		0.41	0.59	mg/kg dw	0.49	0.34
EPA SI	DR116 (682)	Mercury	1.90E-01		2.53		0.41	0.59	mg/kg dw	0.46	0.32
EPA SI	DR151 (717)	Mercury	1.80E-01		2.68		0.41	0.59	mg/kg dw	0.44	0.31
EPA SI	DR119 (685)	Mercury	1.70E-01		2.69		0.41	0.59	mg/kg dw	0.41	0.29
LDWRI-SurfaceSedimentRound1	LDW-SS87	Mercury	1.70E-01		2.18		0.41	0.59	mg/kg dw	0.41	0.29
EPA SI	DR114 (680)	Mercury	1.60E-01		2.51		0.41	0.59	mg/kg dw	0.39	0.27
EPA SI	DR170 (736)	Mercury	1.50E-01		2.04		0.41	0.59	mg/kg dw	0.37	0.25
EPA SI	DR174 (740)	Mercury	1.50E-01		1.59		0.41	0.59	mg/kg dw	0.37	0.25
EPA SI	DR149 (715)	Mercury	1.30E-01		2.01		0.41	0.59	mg/kg dw	0.32	0.22
EPA SI	DR175 (741)	Mercury	1.30E-01		1.74		0.41	0.59	mg/kg, dry wt.	0.32	0.22
EPA SI	DR150 (716)	Mercury	1.10E-01		2.18		0.41	0.59	mg/kg dw	0.27	0.19
EPA SI	DR213 (779)	Mercury	1.10E-01		1.25		0.41	0.59	mg/kg dw	0.27	0.19
EPA SI	DR115 (681)	Mercury	1.00E-01		1.3		0.41	0.59	mg/kg dw	0.24	0.17
EPA SI	DR212 (778)	Mercury	1.00E-01		1.5		0.41	0.59	mg/kg dw	0.24	0.17
LDWRI-SurfaceSedimentRound3	LDW-SS333	Mercury	1.00E-01		1.66		0.41	0.59	mg/kg dw	0.24	0.17
LDWRI-SurfaceSedimentRound1	LDW-SS92	Mercury	9.00E-02		1.27		0.41	0.59	mg/kg dw	0.22	0.15
LDWRI-SurfaceSedimentRound1	LDW-SS94	Mercury	9.00E-02		2.05		0.41	0.59	mg/kg dw	0.22	0.15
EPA SI	DR173 (739)	Mercury	7.00E-02		0.87		0.41	0.59	mg/kg dw	0.17	0.12
LDWRI-SurfaceSedimentRound1	LDW-SS94	Molybdenum	2.40E+00		2.05	1.17E+02					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Molybdenum	2.00E+00		2.47	8.10E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Molybdenum	2.00E+00		2.07	9.66E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS92	Molybdenum	1.50E+00		1.27	1.18E+02					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Molybdenum	1.30E+00		1.75	7.43E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS87	Molybdenum	1.00E+00		2.18	4.59E+01					
LDWRI-SurfaceSedimentRound1	LDW-SS89	Molybdenum	7.00E-01		1.02	6.86E+01					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Molybdenum	4.00E-01		1.66	2.41E+01					
EPA SI	DR151 (717)	Monobutyltin as ion	1.80E-02	J	2.68	6.72E-01					
EPA SI	DR174 (740)	Monobutyltin as ion	1.20E-02	J	1.59	7.55E-01					
EPA SI	DR174 (740)	Naphthalene	6.00E-02		1.59	3.77E+00	99	170	mg/kg OC	0.038	0.022
EPA SI	DR175 (741)	Naphthalene	3.00E-02		1.74	1.72E+00	99	170	mg/kg OC-dry	0.017	0.010
EPA SI	DR170 (736)	Nickel	2.50E+01		2.04		140	370	mg/kg dw	0.18	0.068
LDWRI-SurfaceSedimentRound2	LDW-SS81	Nickel	2.30E+01		2.47		140	370	mg/kg dw	0.16	0.062
LDWRI-SurfaceSedimentRound1	LDW-SS83	Nickel	2.30E+01		2.07		140	370	mg/kg dw	0.16	0.062
EPA SI	DR150 (716)	Nickel	2.20E+01		2.18		140	370	mg/kg dw	0.16	0.059
EPA SI	DR113 (679)	Nickel	2.15E+01		2.72		140	370	mg/kg, dry wt.	0.15	0.058
EPA SI	DR115 (681)	Nickel	2.10E+01		1.3		140	370	mg/kg dw	0.15	0.057

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR149 (715)	Nickel	2.10E+01		2.01		140	370	mg/kg dw	0.15	0.057
EPA SI	DR174 (740)	Nickel	2.10E+01		1.59		140	370	mg/kg dw	0.15	0.057
LDWRI-SurfaceSedimentRound1	LDW-SS87	Nickel	2.10E+01		2.18		140	370	mg/kg dw	0.15	0.057
EPA SI	DR114 (680)	Nickel	2.00E+01		2.51		140	370	mg/kg dw	0.14	0.054
EPA SI	DR117 (683)	Nickel	2.00E+01		2.6		140	370	mg/kg dw	0.14	0.054
EPA SI	DR118 (684)	Nickel	2.00E+01		2.8		140	370	mg/kg dw	0.14	0.054
EPA SI	DR119 (685)	Nickel	2.00E+01		2.69		140	370	mg/kg dw	0.14	0.054
EPA SI	DR116 (682)	Nickel	1.90E+01		2.53		140	370	mg/kg dw	0.14	0.051
LDWRI-SurfaceSedimentRound1	LDW-SS88	Nickel	1.90E+01		1.75		140	370	mg/kg dw	0.14	0.051
EPA SI	DR175 (741)	Nickel	1.84E+01		1.74		140	370	mg/kg, dry wt.	0.13	0.050
EPA SI	DR213 (779)	Nickel	1.60E+01		1.25		140	370	mg/kg dw	0.11	0.043
LDWRI-SurfaceSedimentRound1	LDW-SS94	Nickel	1.60E+01		2.05		140	370	mg/kg dw	0.11	0.043
LDWRI-SurfaceSedimentRound1	LDW-SS92	Nickel	1.50E+01		1.27		140	370	mg/kg dw	0.11	0.041
LDWRI-SurfaceSedimentRound3	LDW-SS333	Nickel	1.45E+01		1.66		140	370	mg/kg dw	0.10	0.039
EPA SI	DR151 (717)	Nickel	1.40E+01		2.68		140	370	mg/kg dw	0.10	0.038
EPA SI	DR212 (778)	Nickel	1.20E+01		1.5		140	370	mg/kg dw	0.086	0.032
EPA SI	DR173 (739)	Nickel	1.00E+01		0.87		140	370	mg/kg dw	0.071	0.027
LDWRI-SurfaceSedimentRound1	LDW-SS89	Nickel	1.00E+01		1.02		140	370	mg/kg dw	0.071	0.027
LDWRI-SurfaceSedimentRound3	LDW-SS334	Nickel	9.20E+00		0.909		140	370	mg/kg dw	0.066	0.025
EPA SI	DR172 (738)	Nickel	8.90E+00		0.24		140	370	mg/kg dw	0.064	0.024
LDWRI-SurfaceSedimentRound1	LDW-SS83	OCDD	9.95E-03		2.07	4.81E-01					
EPA SI	DR115 (681)	OCDD	2.60E-03		1.3	2.00E-01					
LDWRI-SurfaceSedimentRound1	LDW-SS83	OCDF	4.51E-04		2.07	2.18E-02					
EPA SI	DR115 (681)	OCDF	9.50E-05		1.3	7.31E-03					
LDWRI-SurfaceSedimentRound1	LDW-SS89	PCBs (total calc'd)	1.80E+00		1.02	1.76E+02	12	65	mg/kg OC	15	2.7
LDWRI-SurfaceSedimentRound1	LDW-SS92	PCBs (total calc'd)	9.70E-01		1.27	7.64E+01	12	65	mg/kg OC	6.4	1.2
LDWRI-SurfaceSedimentRound1	LDW-SS88	PCBs (total calc'd)	6.60E-01		1.75	3.77E+01	12	65	mg/kg OC	3.1	0.58
EPA SI	DR174 (740)	PCBs (total calc'd)	4.90E-01		1.59	3.08E+01	12	65	mg/kg OC	2.6	0.47
EPA SI	DR119 (685)	PCBs (total calc'd)	3.90E-01	J	2.69	1.45E+01	12	65	mg/kg OC	1.2	0.22
EPA SI	DR151 (717)	PCBs (total calc'd)	3.30E-01	J	2.68	1.23E+01	12	65	mg/kg OC	1.03	0.19
NOAA SiteChar	EST182 (172)	PCBs (total calc'd)	2.50E-01		1.84	1.36E+01	12	65	mg/kg OC	1.1	0.21
NOAA SiteChar	EST179 (169)	PCBs (total calc'd)	2.40E-01		0.98	2.45E+01	12	65	mg/kg OC	2.04	0.38
EPA SI	DR117 (683)	PCBs (total calc'd)	2.10E-01	J	2.6	8.08E+00	12	65	mg/kg OC	0.67	0.12
LDWRI-SurfaceSedimentRound2	LDW-SS81	PCBs (total calc'd)	2.10E-01		2.47	8.50E+00	12	65	mg/kg OC	0.71	0.13
NOAA SiteChar	EST177 (167)	PCBs (total calc'd)	2.00E-01		2.37	8.44E+00	12	65	mg/kg OC	0.70	0.13
NOAA SiteChar	EST178 (168)	PCBs (total calc'd)	2.00E-01		2.76	7.25E+00	12	65	mg/kg OC	0.60	0.11

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR114 (680)	PCBs (total calc'd)	1.90E-01	J	2.51	7.57E+00	12	65	mg/kg OC	0.63	0.12
NOAA SiteChar	EST186 (176)	PCBs (total calc'd)	1.80E-01		2.3	7.83E+00	12	65	mg/kg OC	0.65	0.12
NOAA SiteChar	EST188 (178)	PCBs (total calc'd)	1.70E-01		2.25	7.56E+00	12	65	mg/kg OC	0.63	0.12
LDWRI-SurfaceSedimentRound3	LDW-SS333	PCBs (total calc'd)	1.67E-01		1.66	1.01E+01	12	65	mg/kg OC	0.84	0.15
EPA SI	DR116 (682)	PCBs (total calc'd)	1.57E-01	J	2.53	6.21E+00	12	65	mg/kg OC	0.52	0.095
EPA SI	DR115 (681)	PCBs (total calc'd)	1.42E-01		1.3	1.09E+01	12	65	mg/kg OC	0.91	0.17
NOAA SiteChar	EST184 (174)	PCBs (total calc'd)	1.40E-01		2	7.00E+00	12	65	mg/kg OC	0.58	0.11
NOAA SiteChar	EST189 (179)	PCBs (total calc'd)	1.40E-01		2.24	6.25E+00	12	65	mg/kg OC	0.52	0.096
EPA SI	DR150 (716)	PCBs (total calc'd)	1.37E-01	J	2.18	6.28E+00	12	65	mg/kg OC	0.52	0.097
EPA SI	DR213 (779)	PCBs (total calc'd)	1.36E-01	J	1.25	1.09E+01	12	65	mg/kg OC	0.91	0.17
NOAA SiteChar	EIT075 (82)	PCBs (total calc'd)	1.20E-01		0.54	2.22E+01	12	65	mg/kg OC	1.85	0.34
NOAA SiteChar	EST176 (166)	PCBs (total calc'd)	1.20E-01		0.93	1.29E+01	12	65	mg/kg OC	1.08	0.20
NOAA SiteChar	EST183 (173)	PCBs (total calc'd)	1.20E-01		2.02	5.94E+00	12	65	mg/kg OC	0.50	0.091
NOAA SiteChar	EST181 (171)	PCBs (total calc'd)	1.10E-01		1.79	6.15E+00	12	65	mg/kg OC	0.51	0.095
NOAA SiteChar	EST185 (175)	PCBs (total calc'd)	1.10E-01		2.22	4.95E+00	12	65	mg/kg OC	0.41	0.076
NOAA SiteChar	EIT078 (84)	PCBs (total calc'd)	1.00E-01		0.21		130	1000	ug/kg dw	0.77	0.10
LDWRI-SurfaceSedimentRound1	LDW-SS83	PCBs (total calc'd)	9.70E-02	J	2.07	4.69E+00	12	65	mg/kg OC	0.39	0.072
EPA SI	DR149 (715)	PCBs (total calc'd)	9.50E-02	J	2.01	4.73E+00	12	65	mg/kg OC	0.39	0.073
EPA SI	DR212 (778)	PCBs (total calc'd)	7.70E-02	J	1.5	5.13E+00	12	65	mg/kg OC	0.43	0.079
LDWRI-SurfaceSedimentRound1	LDW-SS87	PCBs (total calc'd)	7.20E-02		2.18	3.30E+00	12	65	mg/kg OC	0.28	0.051
LDWRI-SurfaceSedimentRound1	LDW-SS94	PCBs (total calc'd)	7.20E-02		2.05	3.51E+00	12	65	mg/kg OC	0.29	0.054
EPA SI	DR173 (739)	PCBs (total calc'd)	6.20E-02	J	0.87	7.13E+00	12	65	mg/kg OC	0.59	0.11
EPA SI	DR118 (684)	PCBs (total calc'd)	5.30E-02	J	2.8	1.89E+00	12	65	mg/kg OC	0.16	0.029
EPA SI	DR170 (736)	PCBs (total calc'd)	5.10E-02	J	2.04	2.50E+00	12	65	mg/kg OC	0.21	0.038
LDWRI-SurfaceSedimentRound3	LDW-SS334	PCBs (total calc'd)	3.30E-02		0.909	3.63E+00	12	65	mg/kg OC	0.30	0.056
EPA SI	DR113 (679)	PCBs (total-calc'd)	2.03E+00	J	2.72	7.45E+01	12	65	mg/kg OC-dry	6.2	1.1
NOAA SiteChar	EIT074 (81)	PCBs (total-calc'd)	4.50E-01		0.76	5.92E+01	12	65	mg/kg OC-dry	4.9	0.91
NOAA SiteChar	EST180 (170)	PCBs (total-calc'd)	2.30E-01		1.53	1.50E+01	12	65	mg/kg OC-dry	1.3	0.23
EPA SI	DR175 (741)	PCBs (total-calc'd)	1.20E-01		1.74	6.90E+00	12	65	mg/kg OC-dry	0.57	0.11
EPA SI	DR175 (741)	Phenanthrene	1.60E+01		1.74	9.20E+02	100	480	mg/kg OC-dry	9.2	1.9
EPA SI	DR149 (715)	Phenanthrene	8.20E-01		2.01	4.08E+01	100	480	mg/kg OC	0.41	0.085
EPA SI	DR174 (740)	Phenanthrene	7.00E-01		1.59	4.40E+01	100	480	mg/kg OC	0.44	0.092
EPA SI	DR117 (683)	Phenanthrene	6.40E-01		2.6	2.46E+01	100	480	mg/kg OC	0.25	0.051
LDWRI-SurfaceSedimentRound1	LDW-SS83	Phenanthrene	4.00E-01		2.07	1.93E+01	100	480	mg/kg OC	0.19	0.040
EPA SI	DR118 (684)	Phenanthrene	3.70E-01		2.8	1.32E+01	100	480	mg/kg OC	0.13	0.028
EPA SI	DR151 (717)	Phenanthrene	3.10E-01		2.68	1.16E+01	100	480	mg/kg OC	0.12	0.024

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR114 (680)	Phenanthrene	3.00E-01		2.51	1.20E+01	100	480	mg/kg OC	0.12	0.025
EPA SI	DR115 (681)	Phenanthrene	2.40E-01		1.3	1.85E+01	100	480	mg/kg OC	0.18	0.038
EPA SI	DR116 (682)	Phenanthrene	2.40E-01		2.53	9.49E+00	100	480	mg/kg OC	0.095	0.020
EPA SI	DR119 (685)	Phenanthrene	2.20E-01		2.69	8.18E+00	100	480	mg/kg OC	0.082	0.017
EPA SI	DR213 (779)	Phenanthrene	2.00E-01		1.25	1.60E+01	100	480	mg/kg OC	0.16	0.033
LDWRI-SurfaceSedimentRound1	LDW-SS88	Phenanthrene	2.00E-01		1.75	1.14E+01	100	480	mg/kg OC	0.11	0.024
EPA SI	DR173 (739)	Phenanthrene	1.60E-01		0.87	1.84E+01	100	480	mg/kg OC	0.18	0.038
EPA SI	DR150 (716)	Phenanthrene	1.40E-01		2.18	6.42E+00	100	480	mg/kg OC	0.064	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS92	Phenanthrene	1.40E-01		1.27	1.10E+01	100	480	mg/kg OC	0.11	0.023
LDWRI-SurfaceSedimentRound3	LDW-SS333	Phenanthrene	1.20E-01		1.66	7.23E+00	100	480	mg/kg OC	0.072	0.015
LDWRI-SurfaceSedimentRound1	LDW-SS87	Phenanthrene	9.80E-02		2.18	4.50E+00	100	480	mg/kg OC	0.045	0.009
LDWRI-SurfaceSedimentRound2	LDW-SS81	Phenanthrene	9.00E-02		2.47	3.64E+00	100	480	mg/kg OC	0.036	0.008
LDWRI-SurfaceSedimentRound1	LDW-SS94	Phenanthrene	7.90E-02		2.05	3.85E+00	100	480	mg/kg OC	0.039	0.008
EPA SI	DR170 (736)	Phenanthrene	7.00E-02		2.04	3.43E+00	100	480	mg/kg OC	0.034	0.007
EPA SI	DR212 (778)	Phenanthrene	7.00E-02		1.5	4.67E+00	100	480	mg/kg OC	0.047	0.010
EPA SI	DR113 (679)	Phenanthrene	6.00E-02		2.72	2.21E+00	100	480	mg/kg OC-dry	0.022	0.005
LDWRI-SurfaceSedimentRound1	LDW-SS89	Phenanthrene	3.70E-02		1.02	3.63E+00	100	480	mg/kg OC	0.036	0.008
EPA SI	DR172 (738)	Phenanthrene	3.00E-02		0.24		1500	5400	ug/kg dw	0.020	0.006
EPA SI	DR173 (739)	Phenol	1.10E-01		0.87		420	1200	ug/kg dw	0.26	0.092
LDWRI-SurfaceSedimentRound2	LDW-SS81	Phenol	9.00E-02		2.47		420	1200	ug/kg dw	0.21	0.075
EPA SI	DR150 (716)	Phenol	5.00E-02		2.18		420	1200	ug/kg dw	0.12	0.042
EPA SI	DR113 (679)	Phenol	4.00E-02		2.72		420	1200	ug/kg, dry wt.	0.095	0.033
LDWRI-SurfaceSedimentRound3	LDW-SS333	Phenol	4.00E-02	J	1.66		420	1200	ug/kg dw	0.095	0.033
LDWRI-SurfaceSedimentRound1	LDW-SS88	Phenol	2.60E-02		1.75		420	1200	ug/kg dw	0.062	0.022
EPA SI	DR114 (680)	Phenol	2.00E-02		2.51		420	1200	ug/kg dw	0.048	0.017
EPA SI	DR175 (741)	Pyrene	1.10E+01		1.74	6.32E+02	1000	1400	mg/kg OC-dry	0.63	0.45
EPA SI	DR174 (740)	Pyrene	2.60E+00		1.59	1.64E+02	1000	1400	mg/kg OC	0.16	0.12
EPA SI	DR149 (715)	Pyrene	1.50E+00		2.01	7.46E+01	1000	1400	mg/kg OC	0.075	0.053
LDWRI-SurfaceSedimentRound1	LDW-SS83	Pyrene	1.40E+00		2.07	6.76E+01	1000	1400	mg/kg OC	0.068	0.048
EPA SI	DR117 (683)	Pyrene	1.10E+00		2.6	4.23E+01	1000	1400	mg/kg OC	0.042	0.030
EPA SI	DR118 (684)	Pyrene	8.10E-01		2.8	2.89E+01	1000	1400	mg/kg OC	0.029	0.021
EPA SI	DR115 (681)	Pyrene	7.60E-01		1.3	5.85E+01	1000	1400	mg/kg OC	0.058	0.042
EPA SI	DR151 (717)	Pyrene	7.20E-01		2.68	2.69E+01	1000	1400	mg/kg OC	0.027	0.019
EPA SI	DR116 (682)	Pyrene	7.00E-01		2.53	2.77E+01	1000	1400	mg/kg OC	0.028	0.020
EPA SI	DR114 (680)	Pyrene	6.80E-01		2.51	2.71E+01	1000	1400	mg/kg OC	0.027	0.019
LDWRI-SurfaceSedimentRound1	LDW-SS92	Pyrene	6.30E-01	J	1.27	4.96E+01	1000	1400	mg/kg OC	0.050	0.035

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR213 (779)	Pyrene	5.90E-01		1.25	4.72E+01	1000	1400	mg/kg OC	0.047	0.034
LDWRI-SurfaceSedimentRound1	LDW-SS88	Pyrene	5.20E-01		1.75	2.97E+01	1000	1400	mg/kg OC	0.030	0.021
EPA SI	DR119 (685)	Pyrene	5.00E-01		2.69	1.86E+01	1000	1400	mg/kg OC	0.019	0.013
EPA SI	DR113 (679)	Pyrene	4.20E-01		2.72	1.54E+01	1000	1400	mg/kg OC-dry	0.015	0.011
EPA SI	DR150 (716)	Pyrene	3.80E-01		2.18	1.74E+01	1000	1400	mg/kg OC	0.017	0.012
EPA SI	DR173 (739)	Pyrene	3.10E-01		0.87	3.56E+01	1000	1400	mg/kg OC	0.036	0.025
LDWRI-SurfaceSedimentRound3	LDW-SS333	Pyrene	2.70E-01		1.66	1.63E+01	1000	1400	mg/kg OC	0.016	0.012
LDWRI-SurfaceSedimentRound2	LDW-SS81	Pyrene	2.20E-01		2.47	8.91E+00	1000	1400	mg/kg OC	0.009	0.006
EPA SI	DR170 (736)	Pyrene	2.10E-01		2.04	1.03E+01	1000	1400	mg/kg OC	0.010	0.007
LDWRI-SurfaceSedimentRound1	LDW-SS94	Pyrene	1.90E-01		2.05	9.27E+00	1000	1400	mg/kg OC	0.009	0.007
LDWRI-SurfaceSedimentRound1	LDW-SS87	Pyrene	1.60E-01		2.18	7.34E+00	1000	1400	mg/kg OC	0.007	0.005
EPA SI	DR212 (778)	Pyrene	1.50E-01		1.5	1.00E+01	1000	1400	mg/kg OC	0.010	0.007
LDWRI-SurfaceSedimentRound3	LDW-SS334	Pyrene	1.30E-01		0.909	1.43E+01	1000	1400	mg/kg OC	0.014	0.010
LDWRI-SurfaceSedimentRound1	LDW-SS89	Pyrene	1.30E-01		1.02	1.27E+01	1000	1400	mg/kg OC	0.013	0.009
EPA SI	DR172 (738)	Pyrene	8.00E-02		0.24		2600	3300	ug/kg dw	0.031	0.024
EPA SI	DR113 (679)	Selenium	7.00E+00	J	2.72						
EPA SI	DR119 (685)	Selenium	7.00E+00		2.69						
EPA SI	DR170 (736)	Selenium	7.00E+00		2.04						
EPA SI	DR116 (682)	Selenium	6.00E+00		2.53						
EPA SI	DR117 (683)	Selenium	6.00E+00		2.6						
EPA SI	DR118 (684)	Selenium	6.00E+00		2.8						
EPA SI	DR150 (716)	Selenium	6.00E+00		2.18						
EPA SI	DR151 (717)	Selenium	6.00E+00		2.68						
EPA SI	DR114 (680)	Selenium	5.00E+00	J	2.51						
EPA SI	DR149 (715)	Selenium	5.00E+00	J	2.01						
EPA SI	DR173 (739)	Selenium	5.00E+00		0.87						
EPA SI	DR175 (741)	Selenium	5.00E+00		1.74						
EPA SI	DR174 (740)	Selenium	4.00E+00		1.59						
EPA SI	DR213 (779)	Selenium	4.00E+00		1.25						
EPA SI	DR172 (738)	Selenium	3.00E+00		0.24						
EPA SI	DR212 (778)	Selenium	3.00E+00		1.5						
EPA SI	DR113 (679)	Silver	1.33E+00		2.72		6.1	6.1	mg/kg, dry wt.	0.22	0.22
LDWRI-SurfaceSedimentRound1	LDW-SS88	Silver	9.00E-01		1.75		6.1	6.1	mg/kg dw	0.15	0.15
EPA SI	DR114 (680)	Silver	3.90E-01		2.51		6.1	6.1	mg/kg dw	0.064	0.064
EPA SI	DR119 (685)	Silver	3.60E-01		2.69		6.1	6.1	mg/kg dw	0.059	0.059
EPA SI	DR174 (740)	Silver	3.50E-01		1.59		6.1	6.1	mg/kg dw	0.057	0.057

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR118 (684)	Silver	3.40E-01		2.8		6.1	6.1	mg/kg dw	0.056	0.056
EPA SI	DR151 (717)	Silver	3.10E-01		2.68		6.1	6.1	mg/kg dw	0.051	0.051
EPA SI	DR116 (682)	Silver	3.00E-01		2.53		6.1	6.1	mg/kg dw	0.049	0.049
EPA SI	DR149 (715)	Silver	2.90E-01		2.01		6.1	6.1	mg/kg dw	0.048	0.048
EPA SI	DR117 (683)	Silver	2.80E-01		2.6		6.1	6.1	mg/kg dw	0.046	0.046
EPA SI	DR150 (716)	Silver	2.70E-01		2.18		6.1	6.1	mg/kg dw	0.044	0.044
EPA SI	DR212 (778)	Silver	2.40E-01		1.5		6.1	6.1	mg/kg dw	0.039	0.039
EPA SI	DR213 (779)	Silver	2.40E-01		1.25		6.1	6.1	mg/kg dw	0.039	0.039
EPA SI	DR172 (738)	Silver	2.30E-01		0.24		6.1	6.1	mg/kg dw	0.038	0.038
EPA SI	DR175 (741)	Silver	2.30E-01		1.74		6.1	6.1	mg/kg, dry wt.	0.038	0.038
EPA SI	DR115 (681)	Silver	1.90E-01		1.3		6.1	6.1	mg/kg dw	0.031	0.031
EPA SI	DR173 (739)	Silver	1.60E-01		0.87		6.1	6.1	mg/kg dw	0.026	0.026
EPA SI	DR170 (736)	Silver	1.50E-01		2.04		6.1	6.1	mg/kg dw	0.025	0.025
EPA SI	DR113 (679)	Thallium	1.30E-01	J	2.72	4.78E+00					
EPA SI	DR119 (685)	Thallium	1.20E-01		2.69	4.46E+00					
EPA SI	DR150 (716)	Thallium	1.00E-01		2.18	4.59E+00					
EPA SI	DR151 (717)	Thallium	1.00E-01		2.68	3.73E+00					
EPA SI	DR170 (736)	Thallium	1.00E-01		2.04	4.90E+00					
EPA SI	DR114 (680)	Thallium	9.00E-02	J	2.51	3.59E+00					
EPA SI	DR115 (681)	Thallium	9.00E-02	J	1.3	6.92E+00					
EPA SI	DR117 (683)	Thallium	9.00E-02		2.6	3.46E+00					
EPA SI	DR118 (684)	Thallium	9.00E-02		2.8	3.21E+00					
EPA SI	DR175 (741)	Thallium	9.00E-02		1.74	5.17E+00					
EPA SI	DR116 (682)	Thallium	8.00E-02		2.53	3.16E+00					
EPA SI	DR149 (715)	Thallium	8.00E-02	J	2.01	3.98E+00					
EPA SI	DR174 (740)	Thallium	8.00E-02		1.59	5.03E+00					
EPA SI	DR212 (778)	Thallium	8.00E-02		1.5	5.33E+00					
EPA SI	DR213 (779)	Thallium	8.00E-02		1.25	6.40E+00					
EPA SI	DR172 (738)	Thallium	4.00E-02		0.24	1.67E+01					
EPA SI	DR173 (739)	Thallium	1.00E-02	J	0.87	1.15E+00					
EPA SI	DR113 (679)	Tin	1.40E+01		2.72	5.15E+02					
EPA SI	DR114 (680)	Tin	4.00E+00		2.51	1.59E+02					
EPA SI	DR116 (682)	Tin	3.00E+00	J	2.53	1.19E+02					
EPA SI	DR117 (683)	Tin	3.00E+00	J	2.6	1.15E+02					
EPA SI	DR118 (684)	Tin	3.00E+00	J	2.8	1.07E+02					
EPA SI	DR119 (685)	Tin	3.00E+00	J	2.69	1.12E+02					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR149 (715)	Tin	3.00E+00		2.01	1.49E+02					
EPA SI	DR151 (717)	Tin	3.00E+00	J	2.68	1.12E+02					
EPA SI	DR172 (738)	Tin	3.00E+00	J	0.24	1.25E+03					
EPA SI	DR174 (740)	Tin	3.00E+00		1.59	1.89E+02					
EPA SI	DR175 (741)	Tin	3.00E+00		1.74	1.72E+02					
EPA SI	DR150 (716)	Tin	2.00E+00	J	2.18	9.17E+01					
EPA SI	DR173 (739)	Tin	2.00E+00	J	0.87	2.30E+02					
EPA SI	DR175 (741)	Total HPAH (calc'd)	4.12E+01		1.74	2.37E+03	960	5300	mg/kg OC-dry	2.5	0.45
EPA SI	DR174 (740)	Total HPAH (calc'd)	1.33E+01		1.59	8.36E+02	960	5300	mg/kg OC	0.87	0.16
LDWRI-SurfaceSedimentRound1	LDW-SS83	Total HPAH (calc'd)	7.50E+00	J	2.07	3.62E+02	960	5300	mg/kg OC	0.38	0.068
EPA SI	DR149 (715)	Total HPAH (calc'd)	6.80E+00		2.01	3.38E+02	960	5300	mg/kg OC	0.35	0.064
EPA SI	DR117 (683)	Total HPAH (calc'd)	4.50E+00		2.6	1.73E+02	960	5300	mg/kg OC	0.18	0.033
EPA SI	DR115 (681)	Total HPAH (calc'd)	4.30E+00		1.3	3.31E+02	960	5300	mg/kg OC	0.34	0.062
EPA SI	DR118 (684)	Total HPAH (calc'd)	3.78E+00		2.8	1.35E+02	960	5300	mg/kg OC	0.14	0.025
EPA SI	DR151 (717)	Total HPAH (calc'd)	3.62E+00		2.68	1.35E+02	960	5300	mg/kg OC	0.14	0.025
EPA SI	DR114 (680)	Total HPAH (calc'd)	3.57E+00		2.51	1.42E+02	960	5300	mg/kg OC	0.15	0.027
EPA SI	DR116 (682)	Total HPAH (calc'd)	3.51E+00		2.53	1.39E+02	960	5300	mg/kg OC	0.14	0.026
EPA SI	DR213 (779)	Total HPAH (calc'd)	3.45E+00		1.25	2.76E+02	960	5300	mg/kg OC	0.29	0.052
LDWRI-SurfaceSedimentRound1	LDW-SS92	Total HPAH (calc'd)	3.40E+00	J	1.27	2.68E+02	960	5300	mg/kg OC	0.28	0.051
EPA SI	DR119 (685)	Total HPAH (calc'd)	2.65E+00		2.69	9.85E+01	960	5300	mg/kg OC	0.10	0.019
LDWRI-SurfaceSedimentRound1	LDW-SS88	Total HPAH (calc'd)	2.14E+00	J	1.75	1.22E+02	960	5300	mg/kg OC	0.13	0.023
EPA SI	DR150 (716)	Total HPAH (calc'd)	2.10E+00		2.18	9.63E+01	960	5300	mg/kg OC	0.10	0.018
EPA SI	DR173 (739)	Total HPAH (calc'd)	1.86E+00		0.87	2.14E+02	960	5300	mg/kg OC	0.22	0.040
LDWRI-SurfaceSedimentRound2	LDW-SS81	Total HPAH (calc'd)	1.81E+00		2.47	7.33E+01	960	5300	mg/kg OC	0.076	0.014
LDWRI-SurfaceSedimentRound3	LDW-SS333	Total HPAH (calc'd)	1.55E+00		1.66	9.34E+01	960	5300	mg/kg OC	0.097	0.018
EPA SI	DR113 (679)	Total HPAH (calc'd)	1.10E+00		2.72	4.04E+01	960	5300	mg/kg OC-dry	0.042	0.008
EPA SI	DR170 (736)	Total HPAH (calc'd)	1.05E+00		2.04	5.15E+01	960	5300	mg/kg OC	0.054	0.010
EPA SI	DR212 (778)	Total HPAH (calc'd)	1.04E+00		1.5	6.93E+01	960	5300	mg/kg OC	0.072	0.013
LDWRI-SurfaceSedimentRound1	LDW-SS94	Total HPAH (calc'd)	8.60E-01		2.05	4.20E+01	960	5300	mg/kg OC	0.044	0.008
LDWRI-SurfaceSedimentRound1	LDW-SS87	Total HPAH (calc'd)	7.90E-01		2.18	3.62E+01	960	5300	mg/kg OC	0.038	0.007
LDWRI-SurfaceSedimentRound1	LDW-SS89	Total HPAH (calc'd)	6.00E-01		1.02	5.88E+01	960	5300	mg/kg OC	0.061	0.011
EPA SI	DR172 (738)	Total HPAH (calc'd)	5.80E-01		0.24		12000	17000	ug/kg dw	0.048	0.034
LDWRI-SurfaceSedimentRound3	LDW-SS334	Total HPAH (calc'd)	2.80E-01	J	0.909	3.08E+01	960	5300	mg/kg OC	0.032	0.006
EPA SI	DR115 (681)	Total HpCDD	9.00E-04		1.3	6.92E-02					
EPA SI	DR115 (681)	Total HpCDF	1.10E-04		1.3	8.46E-03					
EPA SI	DR115 (681)	Total HxCDD	9.70E-05		1.3	7.46E-03					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR115 (681)	Total HxCDF	2.80E-05		1.3	2.15E-03					
EPA SI	DR175 (741)	Total LPAH (calc'd)	2.00E+01		1.74	1.15E+03	370	780	mg/kg OC-dry	3.1	1.5
EPA SI	DR174 (740)	Total LPAH (calc'd)	1.35E+00		1.59	8.49E+01	370	780	mg/kg OC	0.23	0.11
EPA SI	DR149 (715)	Total LPAH (calc'd)	1.24E+00		2.01	6.17E+01	370	780	mg/kg OC	0.17	0.079
EPA SI	DR117 (683)	Total LPAH (calc'd)	1.14E+00		2.6	4.38E+01	370	780	mg/kg OC	0.12	0.056
EPA SI	DR114 (680)	Total LPAH (calc'd)	8.10E-01		2.51	3.23E+01	370	780	mg/kg OC	0.087	0.041
LDWRI-SurfaceSedimentRound1	LDW-SS83	Total LPAH (calc'd)	7.00E-01	J	2.07	3.38E+01	370	780	mg/kg OC	0.091	0.043
EPA SI	DR118 (684)	Total LPAH (calc'd)	6.10E-01		2.8	2.18E+01	370	780	mg/kg OC	0.059	0.028
EPA SI	DR151 (717)	Total LPAH (calc'd)	5.00E-01		2.68	1.87E+01	370	780	mg/kg OC	0.050	0.024
EPA SI	DR115 (681)	Total LPAH (calc'd)	4.00E-01		1.3	3.08E+01	370	780	mg/kg OC	0.083	0.039
EPA SI	DR116 (682)	Total LPAH (calc'd)	4.00E-01		2.53	1.58E+01	370	780	mg/kg OC	0.043	0.020
EPA SI	DR119 (685)	Total LPAH (calc'd)	3.30E-01		2.69	1.23E+01	370	780	mg/kg OC	0.033	0.016
EPA SI	DR213 (779)	Total LPAH (calc'd)	3.00E-01		1.25	2.40E+01	370	780	mg/kg OC	0.065	0.031
LDWRI-SurfaceSedimentRound1	LDW-SS88	Total LPAH (calc'd)	2.90E-01		1.75	1.66E+01	370	780	mg/kg OC	0.045	0.021
EPA SI	DR173 (739)	Total LPAH (calc'd)	2.20E-01		0.87	2.53E+01	370	780	mg/kg OC	0.068	0.032
LDWRI-SurfaceSedimentRound1	LDW-SS92	Total LPAH (calc'd)	2.00E-01	J	1.27	1.57E+01	370	780	mg/kg OC	0.043	0.020
EPA SI	DR150 (716)	Total LPAH (calc'd)	1.90E-01		2.18	8.72E+00	370	780	mg/kg OC	0.024	0.011
LDWRI-SurfaceSedimentRound3	LDW-SS333	Total LPAH (calc'd)	1.70E-01	J	1.66	1.02E+01	370	780	mg/kg OC	0.028	0.013
LDWRI-SurfaceSedimentRound2	LDW-SS81	Total LPAH (calc'd)	1.33E-01		2.47	5.38E+00	370	780	mg/kg OC	0.015	0.007
LDWRI-SurfaceSedimentRound1	LDW-SS87	Total LPAH (calc'd)	1.25E-01		2.18	5.73E+00	370	780	mg/kg OC	0.015	0.007
EPA SI	DR212 (778)	Total LPAH (calc'd)	1.20E-01		1.5	8.00E+00	370	780	mg/kg OC	0.022	0.010
LDWRI-SurfaceSedimentRound1	LDW-SS94	Total LPAH (calc'd)	1.05E-01		2.05	5.12E+00	370	780	mg/kg OC	0.014	0.007
EPA SI	DR113 (679)	Total LPAH (calc'd)	9.00E-02		2.72	3.31E+00	370	780	mg/kg OC-dry	0.009	0.004
EPA SI	DR170 (736)	Total LPAH (calc'd)	7.00E-02		2.04	3.43E+00	370	780	mg/kg OC	0.009	0.004
LDWRI-SurfaceSedimentRound1	LDW-SS89	Total LPAH (calc'd)	3.70E-02		1.02	3.63E+00	370	780	mg/kg OC	0.010	0.005
EPA SI	DR172 (738)	Total LPAH (calc'd)	3.00E-02		0.24		5200	13000	ug/kg dw	0.006	0.002
EPA SI	DR115 (681)	Total PeCDF	2.30E-05		1.3	1.77E-03					
EPA SI	DR115 (681)	Total TCDD	1.60E-06		1.3	1.23E-04					
EPA SI	DR115 (681)	Total TCDF	1.30E-05		1.3	1.00E-03					
EPA SI	DR116 (682)	Tributyltin as ion	4.80E-02		2.53	1.90E+00					
EPA SI	DR151 (717)	Tributyltin as ion	4.70E-02		2.68	1.75E+00					
EPA SI	DR174 (740)	Tributyltin as ion	4.60E-02		1.59	2.89E+00					
EPA SI	DR115 (681)	Tributyltin as ion	3.10E-02	J	1.3	2.38E+00					
LDWRI-SurfaceSedimentRound2	LDW-SS81	Vanadium	7.65E+01		2.47	3.10E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Vanadium	7.46E+01		2.07	3.60E+03					
EPA SI	DR113 (679)	Vanadium	7.40E+01		2.72	2.72E+03					

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
LDWRI-SurfaceSedimentRound1	LDW-SS87	Vanadium	6.81E+01		2.18	3.12E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS88	Vanadium	6.21E+01		1.75	3.55E+03					
EPA SI	DR115 (681)	Vanadium	6.10E+01		1.3	4.69E+03					
EPA SI	DR118 (684)	Vanadium	6.10E+01		2.8	2.18E+03					
EPA SI	DR119 (685)	Vanadium	6.00E+01		2.69	2.23E+03					
EPA SI	DR150 (716)	Vanadium	6.00E+01		2.18	2.75E+03					
EPA SI	DR117 (683)	Vanadium	5.90E+01		2.6	2.27E+03					
EPA SI	DR114 (680)	Vanadium	5.60E+01		2.51	2.23E+03					
EPA SI	DR116 (682)	Vanadium	5.60E+01		2.53	2.21E+03					
EPA SI	DR149 (715)	Vanadium	5.60E+01		2.01	2.79E+03					
EPA SI	DR151 (717)	Vanadium	5.50E+01		2.68	2.05E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS94	Vanadium	5.29E+01		2.05	2.58E+03					
EPA SI	DR170 (736)	Vanadium	5.00E+01		2.04	2.45E+03					
EPA SI	DR175 (741)	Vanadium	5.00E+01		1.74	2.87E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS92	Vanadium	4.87E+01		1.27	3.83E+03					
LDWRI-SurfaceSedimentRound3	LDW-SS333	Vanadium	4.50E+01		1.66	2.71E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS89	Vanadium	4.36E+01		1.02	4.27E+03					
EPA SI	DR213 (779)	Vanadium	4.30E+01		1.25	3.44E+03					
EPA SI	DR174 (740)	Vanadium	4.00E+01		1.59	2.52E+03					
EPA SI	DR212 (778)	Vanadium	3.90E+01		1.5	2.60E+03					
LDWRI-SurfaceSedimentRound3	LDW-SS334	Vanadium	3.50E+01		0.909	3.85E+03					
EPA SI	DR173 (739)	Vanadium	3.00E+01		0.87	3.45E+03					
EPA SI	DR172 (738)	Vanadium	1.50E+01		0.24	6.25E+03					
LDWRI-SurfaceSedimentRound1	LDW-SS83	Zinc	3.82E+02		2.07		410	960	mg/kg dw	0.93	0.40
LDWRI-SurfaceSedimentRound1	LDW-SS94	Zinc	2.18E+02		2.05		410	960	mg/kg dw	0.53	0.23
EPA SI	DR113 (679)	Zinc	1.59E+02		2.72		410	960	mg/kg, dry wt.	0.39	0.17
LDWRI-SurfaceSedimentRound2	LDW-SS81	Zinc	1.59E+02		2.47		410	960	mg/kg dw	0.39	0.17
LDWRI-SurfaceSedimentRound1	LDW-SS87	Zinc	1.43E+02		2.18		410	960	mg/kg dw	0.35	0.15
EPA SI	DR116 (682)	Zinc	1.30E+02		2.53		410	960	mg/kg dw	0.32	0.14
LDWRI-SurfaceSedimentRound1	LDW-SS88	Zinc	1.27E+02		1.75		410	960	mg/kg dw	0.31	0.13
EPA SI	DR114 (680)	Zinc	1.20E+02		2.51		410	960	mg/kg dw	0.29	0.13
EPA SI	DR118 (684)	Zinc	1.20E+02		2.8		410	960	mg/kg dw	0.29	0.13
EPA SI	DR119 (685)	Zinc	1.20E+02		2.69		410	960	mg/kg dw	0.29	0.13
EPA SI	DR115 (681)	Zinc	1.10E+02		1.3		410	960	mg/kg dw	0.27	0.11
EPA SI	DR117 (683)	Zinc	1.10E+02		2.6		410	960	mg/kg dw	0.27	0.11
EPA SI	DR151 (717)	Zinc	1.10E+02		2.68		410	960	mg/kg dw	0.27	0.11

Table A-1
Surface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
EPA SI	DR175 (741)	Zinc	1.02E+02		1.74		410	960	mg/kg, dry wt.	0.25	0.11
EPA SI	DR149 (715)	Zinc	1.00E+02		2.01		410	960	mg/kg dw	0.24	0.10
EPA SI	DR150 (716)	Zinc	9.60E+01		2.18		410	960	mg/kg dw	0.23	0.10
EPA SI	DR174 (740)	Zinc	9.20E+01		1.59		410	960	mg/kg dw	0.22	0.096
LDWRI-SurfaceSedimentRound1	LDW-SS92	Zinc	9.17E+01		1.27		410	960	mg/kg dw	0.22	0.096
EPA SI	DR213 (779)	Zinc	7.90E+01		1.25		410	960	mg/kg dw	0.19	0.082
LDWRI-SurfaceSedimentRound3	LDW-SS333	Zinc	7.80E+01		1.66		410	960	mg/kg dw	0.19	0.081
EPA SI	DR170 (736)	Zinc	7.60E+01		2.04		410	960	mg/kg dw	0.19	0.079
EPA SI	DR212 (778)	Zinc	6.80E+01		1.5		410	960	mg/kg dw	0.17	0.071
EPA SI	DR173 (739)	Zinc	6.00E+01		0.87		410	960	mg/kg dw	0.15	0.063
LDWRI-SurfaceSedimentRound1	LDW-SS89	Zinc	3.91E+01		1.02		410	960	mg/kg dw	0.095	0.041
LDWRI-SurfaceSedimentRound3	LDW-SS334	Zinc	3.90E+01		0.909		410	960	mg/kg dw	0.095	0.041
EPA SI	DR172 (738)	Zinc	2.80E+01		0.24		410	960	mg/kg dw	0.068	0.029

Table presents detections only.

a - Exceedance factors are the ratio of the detected concentration to the CSL or SQS; an exceedance factor greater than 1 indicates that the measured concentration is higher than the corresponding CSL or SQS.

DW - Dry weight

OC - Organic carbon normalized

TOC - Total organic carbon

Appendix A-2

Subsurface Sediment Sampling Results, RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,4,6,7,8-HpCDD	4.54E-04		2.65	1.71E-02					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,4,6,7,8-HpCDD	4.47E-04		2.26	1.98E-02					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,4,6,7,8-HpCDD	4.30E-04		2.39	1.80E-02					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,4,6,7,8-HpCDF	7.71E-05		2.39	3.23E-03					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,4,6,7,8-HpCDF	6.67E-05		2.65	2.52E-03					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,4,6,7,8-HpCDF	6.17E-05		2.26	2.73E-03					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,4,7,8,9-HpCDF	6.58E-06		2.39	2.75E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,4,7,8,9-HpCDF	5.17E-06		2.65	1.95E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,4,7,8,9-HpCDF	5.01E-06		2.26	2.22E-04					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,4,7,8-HxCDD	3.03E-06		2.39	1.27E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,4,7,8-HxCDD	2.98E-06		2.65	1.12E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,4,7,8-HxCDD	2.74E-06		2.26	1.21E-04					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,4,7,8-HxCDF	8.05E-06		2.39	3.37E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,4,7,8-HxCDF	6.82E-06		2.65	2.57E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,4,7,8-HxCDF	5.91E-06		2.26	2.62E-04					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,6,7,8-HxCDD	1.73E-05		2.39	7.24E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,6,7,8-HxCDD	1.60E-05		2.65	6.04E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,6,7,8-HxCDD	1.48E-05		2.26	6.55E-04					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,6,7,8-HxCDF	3.21E-06		2.39	1.34E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,6,7,8-HxCDF	2.89E-06		2.65	1.09E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,6,7,8-HxCDF	2.31E-06		2.26	1.02E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,7,8,9-HxCDD	1.08E-05		2.65	4.08E-04					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,7,8,9-HxCDD	9.39E-06		2.39	3.93E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,7,8,9-HxCDD	8.56E-06		2.26	3.79E-04					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,7,8,9-HxCDF	2.39E-07	J	2.26	1.06E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,7,8,9-HxCDF	2.17E-07	J	2.65	8.19E-06					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,7,8-PeCDD	1.99E-06		2.65	7.51E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,7,8-PeCDD	1.78E-06		2.39	7.45E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,7,8-PeCDD	1.65E-06		2.26	7.30E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	1,2,3,7,8-PeCDF	1.25E-06		2.65	4.72E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	1,2,3,7,8-PeCDF	1.20E-06		2.39	5.02E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	1,2,3,7,8-PeCDF	1.03E-06		2.26	4.56E-05					
RI Phase 2 Subsurface	LDW-SC41	4 - 6	1,4-Dichlorobenzene	3.90E-03	J	1.89	2.06E-01	3.1	9	mg/kg OC	0.067	0.023
RI Phase 2 Subsurface	LDW-SC41	0 - 1	2,3,4,6,7,8-HxCDF	2.31E-06		2.39	9.67E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	2,3,4,6,7,8-HxCDF	2.15E-06		2.65	8.11E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	2,3,4,6,7,8-HxCDF	2.12E-06		2.26	9.38E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	2,3,4,7,8-PeCDF	2.54E-06		2.39	1.06E-04					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	2,3,4,7,8-PeCDF	2.29E-06		2.65	8.64E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	2,3,4,7,8-PeCDF	2.02E-06		2.26	8.94E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	2,3,7,8-TCDD	5.86E-07		2.65	2.21E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	2,3,7,8-TCDD	5.35E-07		2.39	2.24E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	2,3,7,8-TCDF	1.21E-06		2.39	5.06E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	2,3,7,8-TCDF	1.17E-06		2.65	4.42E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	2,3,7,8-TCDF	9.58E-07		2.26	4.24E-05					
RI Phase 2 Subsurface	LDW-SC45	2 - 4	2-Methylphenol	4.70E-03	J	6.88		63	63	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	0 - 1	2-Methylphenol	3.50E-03	J	2.39		63	63	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Acenaphthene	1.90E-01		2.17	8.76E+00	16	57	mg/kg OC	0.55	0.15

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Acenaphthene	5.50E-02	J	6.88		500	730	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Anthracene	3.20E-01		2.17	1.47E+01	220	1200	mg/kg OC	0.067	0.012
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Anthracene	1.80E-01		6.88		960	4400	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Anthracene	9.60E-02		2.14	4.49E+00	220	1200	mg/kg OC	0.020	0.004
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Anthracene	7.90E-02		1.89	4.18E+00	220	1200	mg/kg OC	0.019	0.003
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Anthracene	5.40E-02	J	2.39	2.26E+00	220	1200	mg/kg OC	0.010	0.002
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Anthracene	4.50E-02	J	2.65	1.70E+00	220	1200	mg/kg OC	0.008	0.001
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Anthracene	3.50E-02	J	1.9	1.84E+00	220	1200	mg/kg OC	0.008	0.002
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Anthracene	3.10E-02	J	1.48	2.09E+00	220	1200	mg/kg OC	0.010	0.002
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Anthracene	1.40E-02	J	2.26	6.19E-01	220	1200	mg/kg OC	0.003	0.001
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Aroclor-1242	9.80E-02		1.89	5.19E+00					
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Aroclor-1242	2.10E-02	J	2.14	9.81E-01					
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Aroclor-1242	1.30E-02	J	2.17	5.99E-01					
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Aroclor-1242	1.20E-02		1.77	6.78E-01					
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Aroclor-1248	1.00E-01	J	2.39	4.18E+00					
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Aroclor-1248	7.50E-02		6.88	1.09E+00					
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Aroclor-1248	6.50E-02		2.26	2.88E+00					
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Aroclor-1248	5.80E-02		2.65	2.19E+00					
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Aroclor-1248	4.90E-02	J	1.48	3.31E+00					
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Aroclor-1248	4.10E-02		1.4	2.93E+00					
RI Phase 2 Subsurface	LDW-SC41	6	-	7.9	Aroclor-1248	3.90E-02		1.38	2.83E+00					
RI Phase 2 Subsurface	LDW-SC44	0.5	-	1	Aroclor-1254	5.80E-01		1.68	3.45E+01					
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Aroclor-1254	3.30E-01		6.88	4.80E+00					
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Aroclor-1254	2.40E-01		1.59	1.51E+01					
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Aroclor-1254	1.90E-01		1.89	1.01E+01					
RI Phase 2 Subsurface	LDW-SC44	0	-	0.5	Aroclor-1254	1.80E-01		1.68	1.07E+01					
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Aroclor-1254	1.50E-01	J	2.39	6.28E+00					
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Aroclor-1254	1.30E-01		1.4	9.29E+00					
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Aroclor-1254	1.10E-01		1.48	7.43E+00					
RI Phase 2 Subsurface	LDW-SC44	1	-	1.5	Aroclor-1254	1.00E-01		1.65	6.06E+00					
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Aroclor-1254	9.90E-02		2.65	3.74E+00					
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Aroclor-1254	9.70E-02		2.26	4.29E+00					
RI Phase 2 Subsurface	LDW-SC45	5	-	6	Aroclor-1254	9.40E-02		0.272	3.46E+01					
RI Phase 2 Subsurface	LDW-SC44	2	-	2.5	Aroclor-1254	8.70E-02		1.94	4.48E+00					
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Aroclor-1254	8.50E-02		1.9	4.47E+00					
RI Phase 2 Subsurface	LDW-SC41	6	-	7.9	Aroclor-1254	7.30E-02		1.38	5.29E+00					
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Aroclor-1254	7.00E-02		2.14	3.27E+00					
RI Phase 2 Subsurface	LDW-SC44	1.5	-	2	Aroclor-1254	7.00E-02		1.93	3.63E+00					
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Aroclor-1254	4.40E-02		2.17	2.03E+00					
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Aroclor-1254	4.10E-02		1.77	2.32E+00					
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Aroclor-1260	3.60E-01		1.9	1.89E+01					
RI Phase 2 Subsurface	LDW-SC44	0.5	-	1	Aroclor-1260	3.00E-01	J	1.68	1.79E+01					
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Aroclor-1260	2.70E-01		1.59	1.70E+01					
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Aroclor-1260	2.20E-01		1.89	1.16E+01					
RI Phase 2 Subsurface	LDW-SC44	2	-	2.5	Aroclor-1260	1.80E-01		1.94	9.28E+00					
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Aroclor-1260	1.60E-01		6.88	2.33E+00					
RI Phase 2 Subsurface	LDW-SC44	2.5	-	3	Aroclor-1260	1.50E-01		1.68	8.93E+00					

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Aroclor-1260	1.20E-01	J	2.39	5.02E+00					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Aroclor-1260	1.10E-01		2.65	4.15E+00					
RI Phase 2 Subsurface	LDW-SC44	1 - 1.5	Aroclor-1260	9.90E-02		1.65	6.00E+00					
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Aroclor-1260	9.60E-02		1.4	6.86E+00					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Aroclor-1260	9.40E-02		2.26	4.16E+00					
RI Phase 2 Subsurface	LDW-SC44	0 - 0.5	Aroclor-1260	7.90E-02		1.68	4.70E+00					
RI Phase 2 Subsurface	LDW-SC41	6 - 7.9	Aroclor-1260	7.80E-02		1.38	5.65E+00					
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Aroclor-1260	7.20E-02	J	2.14	3.36E+00					
RI Phase 2 Subsurface	LDW-SC44	1.5 - 2	Aroclor-1260	7.00E-02		1.93	3.63E+00					
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Aroclor-1260	6.90E-02		1.48	4.66E+00					
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Aroclor-1260	5.40E-02		1.77	3.05E+00					
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Aroclor-1260	3.10E-02		2.17	1.43E+00					
RI Phase 2 Subsurface	LDW-SC45	5 - 6	Aroclor-1260	2.80E-02		0.272	1.03E+01					
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Arsenic	2.50E+01		6.88		57	93	mg/kg dw	0.44	0.27
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Arsenic	2.00E+01		2.39		57	93	mg/kg dw	0.35	0.22
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Arsenic	1.90E+01		1.9		57	93	mg/kg dw	0.33	0.20
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Arsenic	1.60E+01		2.26		57	93	mg/kg dw	0.28	0.17
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Arsenic	1.60E+01		2.65		57	93	mg/kg dw	0.28	0.17
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Arsenic	1.60E+01		1.59		57	93	mg/kg dw	0.28	0.17
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Arsenic	1.50E+01		1.48		57	93	mg/kg dw	0.26	0.16
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Arsenic	1.30E+01		2.14		57	93	mg/kg dw	0.23	0.14
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Arsenic	1.30E+01		2.17		57	93	mg/kg dw	0.23	0.14
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Arsenic	1.30E+01		1.4		57	93	mg/kg dw	0.23	0.14
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Arsenic	1.00E+01		1.77		57	93	mg/kg dw	0.18	0.11
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Arsenic	9.00E+00		0.889		57	93	mg/kg dw	0.16	0.097
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Benzo(a)anthracene	7.70E-01		6.88		1300	1600	ug/kg dw	0.001	0.000
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Benzo(a)anthracene	3.60E-01		2.17	1.66E+01	110	270	mg/kg OC	0.15	0.061
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Benzo(a)anthracene	2.60E-01		1.89	1.38E+01	110	270	mg/kg OC	0.13	0.051
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Benzo(a)anthracene	2.40E-01		2.14	1.12E+01	110	270	mg/kg OC	0.10	0.042
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Benzo(a)anthracene	2.00E-01		2.39	8.37E+00	110	270	mg/kg OC	0.076	0.031
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Benzo(a)anthracene	1.60E-01		1.48	1.08E+01	110	270	mg/kg OC	0.098	0.040
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Benzo(a)anthracene	1.30E-01		2.65	4.91E+00	110	270	mg/kg OC	0.045	0.018
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Benzo(a)anthracene	9.20E-02		1.4	6.57E+00	110	270	mg/kg OC	0.060	0.024
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Benzo(a)anthracene	9.10E-02		1.9	4.79E+00	110	270	mg/kg OC	0.044	0.018
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Benzo(a)anthracene	8.70E-02		1.77	4.92E+00	110	270	mg/kg OC	0.045	0.018
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Benzo(a)anthracene	6.30E-02		1.59	3.96E+00	110	270	mg/kg OC	0.036	0.015
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Benzo(a)anthracene	4.00E-02	J	2.26	1.77E+00	110	270	mg/kg OC	0.016	0.007
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Benzo(a)anthracene	1.40E-02	J	0.675	2.07E+00	110	270	mg/kg OC	0.019	0.008
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Benzo(a)pyrene	7.00E-01		6.88		1600	3000	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Benzo(a)pyrene	3.90E-01		2.14	1.82E+01	99	210	mg/kg OC	0.18	0.087
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Benzo(a)pyrene	3.10E-01		1.89	1.64E+01	99	210	mg/kg OC	0.17	0.078
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Benzo(a)pyrene	3.00E-01		2.17	1.38E+01	99	210	mg/kg OC	0.14	0.066
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Benzo(a)pyrene	1.80E-01		2.39	7.53E+00	99	210	mg/kg OC	0.076	0.036
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Benzo(a)pyrene	1.80E-01		2.65	6.79E+00	99	210	mg/kg OC	0.069	0.032
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Benzo(a)pyrene	1.60E-01		1.48	1.08E+01	99	210	mg/kg OC	0.11	0.051
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Benzo(a)pyrene	1.10E-01		1.4	7.86E+00	99	210	mg/kg OC	0.079	0.037
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Benzo(a)pyrene	1.00E-01		1.77	5.65E+00	99	210	mg/kg OC	0.057	0.027

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Benzo(a)pyrene	7.20E-02		1.9	3.79E+00	99	210	mg/kg OC	0.038	0.018
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Benzo(a)pyrene	5.90E-02	J	1.59	3.71E+00	99	210	mg/kg OC	0.037	0.018
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzo(a)pyrene	5.10E-02	J	2.26	2.26E+00	99	210	mg/kg OC	0.023	0.011
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Benzo(b)fluoranthene	1.00E+00		6.88	1.45E+01	230	450	mg/kg OC	0.063	0.032
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Benzo(b)fluoranthene	6.60E-01		2.14	3.08E+01	230	450	mg/kg OC	0.13	0.069
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Benzo(b)fluoranthene	4.30E-01		1.89	2.28E+01	230	450	mg/kg OC	0.099	0.051
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Benzo(b)fluoranthene	4.30E-01		2.17	1.98E+01	230	450	mg/kg OC	0.086	0.044
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzo(b)fluoranthene	3.60E-01		2.39	1.51E+01	230	450	mg/kg OC	0.065	0.033
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzo(b)fluoranthene	3.20E-01		2.65	1.21E+01	230	450	mg/kg OC	0.053	0.027
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Benzo(b)fluoranthene	2.80E-01		1.48	1.89E+01	230	450	mg/kg OC	0.082	0.042
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Benzo(b)fluoranthene	1.80E-01		1.4	1.29E+01	230	450	mg/kg OC	0.056	0.029
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Benzo(b)fluoranthene	1.40E-01		1.77	7.91E+00	230	450	mg/kg OC	0.034	0.018
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Benzo(b)fluoranthene	1.30E-01		1.9	6.84E+00	230	450	mg/kg OC	0.030	0.015
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Benzo(b)fluoranthene	1.10E-01		1.59	6.92E+00	230	450	mg/kg OC	0.030	0.015
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzo(b)fluoranthene	9.20E-02	J	2.26	4.07E+00	230	450	mg/kg OC	0.018	0.009
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Benzo(b)fluoranthene	1.90E-02	J	0.675	2.81E+00	230	450	mg/kg OC	0.012	0.006
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Benzo(g,h,i)perylene	1.40E-01		1.89	7.41E+00	31	78	mg/kg OC	0.24	0.095
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Benzo(g,h,i)perylene	1.40E-01		6.88	2.03E+00	31	78	mg/kg OC	0.066	0.026
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Benzo(g,h,i)perylene	8.00E-02		2.14	3.74E+00	31	78	mg/kg OC	0.12	0.048
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzo(g,h,i)perylene	7.00E-02		2.39	2.93E+00	31	78	mg/kg OC	0.094	0.038
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzo(g,h,i)perylene	6.20E-02		2.65	2.34E+00	31	78	mg/kg OC	0.075	0.030
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Benzo(g,h,i)perylene	5.40E-02		2.17	2.49E+00	31	78	mg/kg OC	0.080	0.032
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Benzo(g,h,i)perylene	4.50E-02	J	1.48	3.04E+00	31	78	mg/kg OC	0.098	0.039
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Benzo(g,h,i)perylene	4.20E-02		1.77	2.37E+00	31	78	mg/kg OC	0.077	0.030
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Benzo(g,h,i)perylene	3.50E-02	J	1.4	2.50E+00	31	78	mg/kg OC	0.081	0.032
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzo(g,h,i)perylene	2.00E-02	J	2.26	8.85E-01	31	78	mg/kg OC	0.029	0.011
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Benzo(k)fluoranthene	9.80E-01		6.88	1.42E+01	230	450	mg/kg OC	0.062	0.032
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Benzo(k)fluoranthene	4.80E-01		2.14	2.24E+01	230	450	mg/kg OC	0.098	0.050
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Benzo(k)fluoranthene	4.20E-01		2.17	1.94E+01	230	450	mg/kg OC	0.084	0.043
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Benzo(k)fluoranthene	3.40E-01		1.89	1.80E+01	230	450	mg/kg OC	0.078	0.040
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzo(k)fluoranthene	2.80E-01		2.65	1.06E+01	230	450	mg/kg OC	0.046	0.023
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzo(k)fluoranthene	2.40E-01		2.39	1.00E+01	230	450	mg/kg OC	0.044	0.022
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Benzo(k)fluoranthene	2.00E-01		1.48	1.35E+01	230	450	mg/kg OC	0.059	0.030
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Benzo(k)fluoranthene	2.00E-01		1.4	1.43E+01	230	450	mg/kg OC	0.062	0.032
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Benzo(k)fluoranthene	1.50E-01		1.77	8.47E+00	230	450	mg/kg OC	0.037	0.019
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Benzo(k)fluoranthene	9.20E-02		1.9	4.84E+00	230	450	mg/kg OC	0.021	0.011
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Benzo(k)fluoranthene	8.20E-02		1.59	5.16E+00	230	450	mg/kg OC	0.022	0.011
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzo(k)fluoranthene	7.40E-02	J	2.26	3.27E+00	230	450	mg/kg OC	0.014	0.007
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Benzo(k)fluoranthene	1.50E-02	J	0.675	2.22E+00	230	450	mg/kg OC	0.010	0.005
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Benzofluoranthenes (total-calc'd)	2.00E+00		6.88		3200	3600	ug/kg dw	0.001	0.001
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Benzofluoranthenes (total-calc'd)	1.14E+00		2.14		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Benzofluoranthenes (total-calc'd)	8.50E-01		2.17		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Benzofluoranthenes (total-calc'd)	7.70E-01		1.89		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzofluoranthenes (total-calc'd)	6.00E-01		2.39		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzofluoranthenes (total-calc'd)	6.00E-01		2.65		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Benzofluoranthenes (total-calc'd)	4.80E-01		1.48		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Benzofluoranthenes (total-calc'd)	3.80E-01		1.4		3200	3600	ug/kg dw		

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Benzofluoranthenes (total-calc'd)	2.90E-01		1.77		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Benzofluoranthenes (total-calc'd)	2.20E-01		1.9		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Benzofluoranthenes (total-calc'd)	1.90E-01		1.59		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzofluoranthenes (total-calc'd)	1.66E-01	J	2.26		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Benzofluoranthenes (total-calc'd)	3.40E-02	J	0.675		3200	3600	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzoic acid	2.90E-01	J	2.39		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Benzoic acid	1.50E-01		2.14		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Benzoic acid	1.50E-01	J	0.675		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Benzoic acid	1.50E-01	J	1.48		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzoic acid	1.40E-01	J	2.26		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Benzoic acid	1.40E-01		1.77		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzoic acid	1.30E-01	J	2.65		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC43	2	-	4	Benzoic acid	1.30E-01	J	0.443		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Benzoic acid	1.30E-01	J	6.88		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Benzoic acid	1.20E-01	J	2.17		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Benzoic acid	1.00E-01	J	1.4		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Benzoic acid	8.10E-02	J	1.9		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Benzoic acid	8.00E-02	J	1.59		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Benzoic acid	4.80E-02	J	0.889		650	650	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Benzyl alcohol	3.60E-02		2.26		57	73	ug/kg dw	0.001	
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Benzyl alcohol	2.50E-02	J	2.39		57	73	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Benzyl alcohol	2.10E-02	J	2.65		57	73	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Bis(2-ethylhexyl)phthalate	4.80E-01		2.39	2.01E+01	47	78	mg/kg OC	0.43	0.26
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Bis(2-ethylhexyl)phthalate	4.30E-01		1.89	2.28E+01	47	78	mg/kg OC	0.48	0.29
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Bis(2-ethylhexyl)phthalate	2.40E-01		2.65	9.06E+00	47	78	mg/kg OC	0.19	0.12
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Bis(2-ethylhexyl)phthalate	2.20E-01		1.48	1.49E+01	47	78	mg/kg OC	0.32	0.19
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Bis(2-ethylhexyl)phthalate	1.70E-01		6.88		1300	1900	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Bis(2-ethylhexyl)phthalate	1.20E-01		1.4	8.57E+00	47	78	mg/kg OC	0.18	0.11
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Bis(2-ethylhexyl)phthalate	6.90E-02	J	2.26	3.05E+00	47	78	mg/kg OC	0.065	0.039
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Bis(2-ethylhexyl)phthalate	3.50E-02	J	1.59	2.20E+00	47	78	mg/kg OC	0.047	0.028
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Bis(2-ethylhexyl)phthalate	1.20E-02	J	0.675	1.78E+00	47	78	mg/kg OC	0.038	0.023
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Butyl benzyl phthalate	5.50E-02		2.39	2.30E+00	4.9	64	mg/kg OC	0.47	0.036
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Butyl benzyl phthalate	3.30E-02	J	1.48	2.23E+00	4.9	64	mg/kg OC	0.46	0.035
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Butyl benzyl phthalate	3.20E-02		1.89	1.69E+00	4.9	64	mg/kg OC	0.35	0.026
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Butyl benzyl phthalate	2.60E-02		6.88		63	900	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Butyl benzyl phthalate	2.40E-02		1.4	1.71E+00	4.9	64	mg/kg OC	0.35	0.027
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Butyl benzyl phthalate	1.80E-02		2.65	6.79E-01	4.9	64	mg/kg OC	0.14	0.011
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Butyl benzyl phthalate	1.50E-02		2.26	6.64E-01	4.9	64	mg/kg OC	0.14	0.010
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Cadmium	1.40E+00		1.9		5.1	6.7	mg/kg dw	0.27	0.21
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Cadmium	1.30E+00		2.65		5.1	6.7	mg/kg dw	0.25	0.19
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Cadmium	8.00E-01		1.59		5.1	6.7	mg/kg dw	0.16	0.12
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Cadmium	5.00E-01		6.88		5.1	6.7	mg/kg dw	0.098	0.075
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Cadmium	4.00E-01		2.26		5.1	6.7	mg/kg dw	0.078	0.060
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Cadmium	4.00E-01		2.17		5.1	6.7	mg/kg dw	0.078	0.060
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Chromium	5.10E+01		1.9		260	270	mg/kg dw	0.20	0.19
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Chromium	4.79E+01		1.59		260	270	mg/kg dw	0.18	0.18
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Chromium	3.40E+01		2.39		260	270	mg/kg dw	0.13	0.13

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Chromium	3.30E+01		2.26		260	270	mg/kg dw	0.13	0.12
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Chromium	3.27E+01		2.17		260	270	mg/kg dw	0.13	0.12
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Chromium	3.22E+01		2.65		260	270	mg/kg dw	0.12	0.12
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Chromium	2.79E+01		1.48		260	270	mg/kg dw	0.11	0.10
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Chromium	2.70E+01		1.4		260	270	mg/kg dw	0.10	0.10
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Chromium	2.65E+01		6.88		260	270	mg/kg dw	0.10	0.098
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Chromium	2.64E+01		1.77		260	270	mg/kg dw	0.10	0.098
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Chromium	2.47E+01		2.14		260	270	mg/kg dw	0.095	0.091
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Chromium	1.59E+01		0.675		260	270	mg/kg dw	0.061	0.059
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Chromium	1.54E+01		0.889		260	270	mg/kg dw	0.059	0.057
RI Phase 2 Subsurface	LDW-SC43	2 - 4	Chromium	1.14E+01		0.443		260	270	mg/kg dw	0.044	0.042
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Chrysene	9.20E-01		6.88		1400	2800	ug/kg dw	0.001	0.000
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Chrysene	4.70E-01		2.17	2.17E+01	110	460	mg/kg OC	0.20	0.047
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Chrysene	4.20E-01		2.14	1.96E+01	110	460	mg/kg OC	0.18	0.043
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Chrysene	3.90E-01		1.89	2.06E+01	110	460	mg/kg OC	0.19	0.045
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Chrysene	3.20E-01		2.39	1.34E+01	110	460	mg/kg OC	0.12	0.029
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Chrysene	2.30E-01		2.65	8.68E+00	110	460	mg/kg OC	0.079	0.019
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Chrysene	2.00E-01		1.48	1.35E+01	110	460	mg/kg OC	0.12	0.029
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Chrysene	1.30E-01		1.77	7.34E+00	110	460	mg/kg OC	0.067	0.016
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Chrysene	1.20E-01		1.4	8.57E+00	110	460	mg/kg OC	0.078	0.019
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Chrysene	1.10E-01		1.9	5.79E+00	110	460	mg/kg OC	0.053	0.013
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Chrysene	7.50E-02	J	2.26	3.32E+00	110	460	mg/kg OC	0.030	0.007
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Chrysene	7.40E-02		1.59	4.65E+00	110	460	mg/kg OC	0.042	0.010
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Chrysene	1.40E-02	J	0.675	2.07E+00	110	460	mg/kg OC	0.019	0.005
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Cobalt	1.09E+01		2.17	5.02E+02					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Cobalt	1.00E+01		2.26	4.42E+02					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Cobalt	1.00E+01		2.65	3.77E+02					
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Cobalt	9.30E+00		1.77	5.25E+02					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Cobalt	9.20E+00		2.39	3.85E+02					
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Cobalt	8.70E+00		6.88	1.26E+02					
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Cobalt	8.60E+00		1.59	5.41E+02					
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Cobalt	8.60E+00		1.4	6.14E+02					
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Cobalt	8.50E+00		1.48	5.74E+02					
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Cobalt	7.70E+00		2.14	3.60E+02					
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Cobalt	7.40E+00		1.9	3.89E+02					
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Cobalt	5.30E+00		0.675	7.85E+02					
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Cobalt	4.70E+00		0.889	5.29E+02					
RI Phase 2 Subsurface	LDW-SC43	2 - 4	Cobalt	4.30E+00		0.443	9.71E+02					
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Copper	7.65E+01		6.88		390	390	mg/kg dw	0.20	0.20
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Copper	7.24E+01		2.39		390	390	mg/kg dw	0.19	0.19
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Copper	6.88E+01		2.26		390	390	mg/kg dw	0.18	0.18
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Copper	6.19E+01		2.65		390	390	mg/kg dw	0.16	0.16
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Copper	5.29E+01		2.14		390	390	mg/kg dw	0.14	0.14
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Copper	5.00E+01		1.48		390	390	mg/kg dw	0.13	0.13
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Copper	4.95E+01		2.17		390	390	mg/kg dw	0.13	0.13
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Copper	4.84E+01		1.59		390	390	mg/kg dw	0.12	0.12
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Copper	4.53E+01		1.9		390	390	mg/kg dw	0.12	0.12

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Copper	4.29E+01		1.4		390	390	mg/kg dw	0.11	0.11
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Copper	4.12E+01		1.77		390	390	mg/kg dw	0.11	0.11
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Copper	2.15E+01		0.675		390	390	mg/kg dw	0.055	0.055
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Copper	1.77E+01		0.889		390	390	mg/kg dw	0.045	0.045
RI Phase 2 Subsurface	LDW-SC43	2	-	4	Copper	1.34E+01		0.443		390	390	mg/kg dw	0.034	0.034
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Dibenzo(a,h)anthracene	9.60E-02		1.89	5.08E+00	12	33	mg/kg OC	0.42	0.15
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Dibenzo(a,h)anthracene	4.30E-02	J	6.88		230	540	ug/kg dw	0.000	0.000
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dibenzo(a,h)anthracene	4.20E-02	J	2.39	1.76E+00	12	33	mg/kg OC	0.15	0.053
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dibenzo(a,h)anthracene	3.00E-02	J	2.65	1.13E+00	12	33	mg/kg OC	0.094	0.034
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Dibenzofuran	5.60E-02		2.17	2.58E+00	15	58	mg/kg OC	0.17	0.044
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dimethyl phthalate	4.90E-02	J	2.65	1.85E+00	53	53	mg/kg OC	0.035	0.035
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Dimethyl phthalate	2.00E-02		1.89	1.06E+00	53	53	mg/kg OC	0.020	0.020
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dimethyl phthalate	1.60E-02	J	2.26	7.08E-01	53	53	mg/kg OC	0.013	0.013
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Di-n-butyl phthalate	9.40E-02		1.9	4.95E+00	220	1700	mg/kg OC	0.022	0.003
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Di-n-butyl phthalate	8.00E-02		0.889	9.00E+00	220	1700	mg/kg OC	0.041	0.005
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Di-n-butyl phthalate	3.50E-02	J	1.48	2.36E+00	220	1700	mg/kg OC	0.011	0.001
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dioxin/furan TEQ - Bird - Half DL	1.04E-05								
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dioxin/furan TEQ - Bird - Half DL	1.03E-05	J							
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dioxin/furan TEQ - Bird - Half DL	8.63E-06	J							
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dioxin/furan TEQ - Fish Sheboygan - Half DL	8.83E-06								
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dioxin/furan TEQ - Fish Sheboygan - Half DL	8.46E-06	J							
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dioxin/furan TEQ - Fish Sheboygan - Half DL	7.24E-06	J							
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dioxin/furan TEQ - Fish WHO - Half DL	8.48E-06								
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dioxin/furan TEQ - Fish WHO - Half DL	8.35E-06	J							
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dioxin/furan TEQ - Fish WHO - Half DL	7.12E-06	J							
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dioxin/furan TEQ - Mammal WHO 1998 - Half DL	1.37E-05	J							
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dioxin/furan TEQ - Mammal WHO 1998 - Half DL	1.36E-05								
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dioxin/furan TEQ - Mammal WHO 1998 - Half DL	1.22E-05	J							
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Dioxin/furan TEQ - Mammal WHO 2005 - Half DL	1.40E-05	J							
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Dioxin/furan TEQ - Mammal WHO 2005 - Half DL	1.38E-05								
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Dioxin/furan TEQ - Mammal WHO 2005 - Half DL	1.25E-05	J							
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Fluoranthene	1.40E+00		6.88		1700	2500	ug/kg dw	0.82	0.56
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Fluoranthene	1.40E+00		2.17	4.61E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Fluoranthene	6.10E-01		1.89	5.29E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Fluoranthene	5.30E-01		2.14	4.67E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Fluoranthene	4.20E-01		1.48	6.76E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Fluoranthene	2.50E-01		1.77	5.65E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Fluoranthene	2.50E-01		2.39	4.18E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Fluoranthene	1.80E-01		1.4	7.14E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Fluoranthene	1.30E-01		2.65	3.77E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Fluoranthene	1.20E-01		1.9	5.26E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Fluoranthene	8.40E-02		1.59	6.29E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Fluoranthene	4.20E-02	J	2.26	4.42E-02	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Fluoranthene	1.30E-02	J	0.675	1.48E-01	160	1200	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Fluorene	1.20E-01		2.17	4.61E-02	23	79	mg/kg OC	0.002	0.001
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Fluorene	6.20E-02		6.88		540	1000	ug/kg dw	0.11	0.062
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Indeno(1,2,3-cd)pyrene	1.70E-01		6.88		600	690	ug/kg dw	0.28	0.25

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Indeno(1,2,3-cd)pyrene	1.20E-01		1.89	5.29E-02	34	88	mg/kg OC	0.002	0.001
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Indeno(1,2,3-cd)pyrene	8.70E-02		2.14	4.67E-02	34	88	mg/kg OC	0.001	0.001
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Indeno(1,2,3-cd)pyrene	7.70E-02		2.39	4.18E-02	34	88	mg/kg OC	0.001	0.000
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Indeno(1,2,3-cd)pyrene	7.30E-02		2.65	3.77E-02	34	88	mg/kg OC	0.001	0.000
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Indeno(1,2,3-cd)pyrene	6.40E-02		2.17	4.61E-02	34	88	mg/kg OC	0.001	0.001
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Indeno(1,2,3-cd)pyrene	4.10E-02	J	1.4	7.14E-02	34	88	mg/kg OC	0.002	0.001
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Indeno(1,2,3-cd)pyrene	4.10E-02	J	1.48	6.76E-02	34	88	mg/kg OC	0.002	0.001
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Indeno(1,2,3-cd)pyrene	2.10E-02	J	2.26	4.42E-02	34	88	mg/kg OC	0.001	0.001
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Lead	7.40E+01		1.9		450	530	mg/kg dw	0.16	0.14
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Lead	5.20E+01		6.88		450	530	mg/kg dw	0.12	0.098
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Lead	4.20E+01		2.39		450	530	mg/kg dw	0.093	0.079
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Lead	3.80E+01	J	2.14		450	530	mg/kg dw	0.084	0.072
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Lead	3.50E+01		2.65		450	530	mg/kg dw	0.078	0.066
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Lead	3.30E+01	J	2.17		450	530	mg/kg dw	0.073	0.062
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Lead	3.30E+01		1.59		450	530	mg/kg dw	0.073	0.062
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Lead	3.10E+01		2.26		450	530	mg/kg dw	0.069	0.058
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Lead	2.50E+01		1.48		450	530	mg/kg dw	0.056	0.047
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Lead	2.10E+01		1.4		450	530	mg/kg dw	0.047	0.040
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Lead	2.00E+01	J	1.77		450	530	mg/kg dw	0.044	0.038
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Lead	9.00E+00		0.889		450	530	mg/kg dw	0.020	0.017
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Lead	4.00E+00		0.675		450	530	mg/kg dw	0.009	0.008
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Mercury	3.60E-01		1.59		0.41	0.59	mg/kg dw	0.88	0.61
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Mercury	2.30E-01		1.9		0.41	0.59	mg/kg dw	0.56	0.39
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Mercury	2.00E-01		2.39		0.41	0.59	mg/kg dw	0.49	0.34
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Mercury	1.90E-01		2.14		0.41	0.59	mg/kg dw	0.46	0.32
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Mercury	1.70E-01		2.65		0.41	0.59	mg/kg dw	0.41	0.29
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Mercury	1.70E-01		1.77		0.41	0.59	mg/kg dw	0.41	0.29
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Mercury	1.70E-01		6.88		0.41	0.59	mg/kg dw	0.41	0.29
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Mercury	1.60E-01		2.26		0.41	0.59	mg/kg dw	0.39	0.27
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Mercury	1.50E-01		2.17		0.41	0.59	mg/kg dw	0.37	0.25
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Mercury	1.40E-01		1.4		0.41	0.59	mg/kg dw	0.34	0.24
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Mercury	1.30E-01		1.48		0.41	0.59	mg/kg dw	0.32	0.22
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Mercury	7.00E-02		0.889		0.41	0.59	mg/kg dw	0.17	0.12
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Molybdenum	1.80E+00		1.9	5.26E+01					
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Molybdenum	1.60E+00		6.88	1.45E+01					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Molybdenum	1.00E+00		2.39	4.18E+01					
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Molybdenum	9.00E-01		2.14	4.67E+01					
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Molybdenum	8.00E-01		1.59	6.29E+01					
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Molybdenum	8.00E-01		0.889	1.12E+02					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Naphthalene	5.50E-02	J	2.65	3.77E-02	99	170	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Nickel	2.60E+01		2.26		140	370	mg/kg dw	0.19	0.070
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Nickel	2.60E+01		2.17		140	370	mg/kg dw	0.19	0.070
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Nickel	2.50E+01		2.65		140	370	mg/kg dw	0.18	0.068
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Nickel	2.40E+01		2.39		140	370	mg/kg dw	0.17	0.065
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Nickel	2.30E+01		1.77		140	370	mg/kg dw	0.16	0.062
RI Phase 2 Subsurface	LDW-SC44	0 - 2	Nickel	2.00E+01		1.59		140	370	mg/kg dw	0.14	0.054
RI Phase 2 Subsurface	LDW-SC45	1 - 2	Nickel	2.00E+01		1.4		140	370	mg/kg dw	0.14	0.054

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Nickel	1.90E+01		2.14		140	370	mg/kg dw	0.14	0.051
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Nickel	1.90E+01		1.9		140	370	mg/kg dw	0.14	0.051
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Nickel	1.90E+01		1.48		140	370	mg/kg dw	0.14	0.051
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Nickel	1.80E+01		6.88		140	370	mg/kg dw	0.13	0.049
RI Phase 2 Subsurface	LDW-SC43	0 - 2	Nickel	1.10E+01		0.675		140	370	mg/kg dw	0.079	0.030
RI Phase 2 Subsurface	LDW-SC44	3.2 - 4	Nickel	1.00E+01		0.889		140	370	mg/kg dw	0.071	0.027
RI Phase 2 Subsurface	LDW-SC43	2 - 4	Nickel	7.00E+00		0.443		140	370	mg/kg dw	0.050	0.019
RI Phase 2 Subsurface	LDW-SC41	2 - 4	OCDD	3.54E-03		2.65	3.77E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	OCDD	3.39E-03		2.26	4.42E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	OCDD	3.30E-03		2.39	4.18E-05					
RI Phase 2 Subsurface	LDW-SC41	1 - 2	OCDF	2.28E-04		2.26	4.42E-05					
RI Phase 2 Subsurface	LDW-SC41	0 - 1	OCDF	2.25E-04		2.39	4.18E-05					
RI Phase 2 Subsurface	LDW-SC41	2 - 4	OCDF	1.91E-04		2.65	3.77E-05					
RI Phase 2 Subsurface	LDW-SC44	0.5 - 1	PCBs (total calc'd)	8.80E-01	J	1.68	5.95E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC45	2 - 4	PCBs (total calc'd)	5.70E-01		6.88		130	1000	ug/kg dw	4.4	0.57
RI Phase 2 Subsurface	LDW-SC44	0 - 2	PCBs (total calc'd)	5.10E-01		1.59	6.29E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC41	4 - 6	PCBs (total calc'd)	5.10E-01		1.89	5.29E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	PCBs (total calc'd)	4.50E-01		1.9	5.26E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC41	0 - 1	PCBs (total calc'd)	3.70E-01	J	2.39	4.18E-02	12	65	mg/kg OC	0.003	0.001
RI Phase 2 Subsurface	LDW-SC45	1 - 2	PCBs (total calc'd)	2.70E-01		1.4	7.14E-02	12	65	mg/kg OC	0.006	0.001
RI Phase 2 Subsurface	LDW-SC44	2 - 2.5	PCBs (total calc'd)	2.70E-01		1.94	5.15E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC41	2 - 4	PCBs (total calc'd)	2.70E-01		2.65	3.77E-02	12	65	mg/kg OC	0.003	0.001
RI Phase 2 Subsurface	LDW-SC44	0 - 0.5	PCBs (total calc'd)	2.60E-01		1.68	5.95E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC41	1 - 2	PCBs (total calc'd)	2.56E-01		2.26	4.42E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC45	0 - 1	PCBs (total calc'd)	2.30E-01	J	1.48	6.76E-02	12	65	mg/kg OC	0.006	0.001
RI Phase 2 Subsurface	LDW-SC44	1 - 1.5	PCBs (total calc'd)	2.00E-01		1.65	6.06E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC41	6 - 7.9	PCBs (total calc'd)	1.90E-01		1.38	7.25E-02	12	65	mg/kg OC	0.006	0.001
RI Phase 2 Subsurface	LDW-SC42	1 - 2	PCBs (total calc'd)	1.63E-01	J	2.14	4.67E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC44	2.5 - 3	PCBs (total calc'd)	1.50E-01		1.68	5.95E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC44	1.5 - 2	PCBs (total calc'd)	1.40E-01		1.93	5.18E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC45	5 - 6	PCBs (total calc'd)	1.22E-01		0.272		130	1000	ug/kg dw	0.94	0.12
RI Phase 2 Subsurface	LDW-SC42	0 - 1	PCBs (total calc'd)	1.07E-01		1.77	5.65E-02	12	65	mg/kg OC	0.005	0.001
RI Phase 2 Subsurface	LDW-SC42	2 - 4	PCBs (total calc'd)	8.80E-02	J	2.17	4.61E-02	12	65	mg/kg OC	0.004	0.001
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Pentachlorophenol	8.50E-02		6.88		360	690	ug/kg dw	0.24	0.12
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Pentachlorophenol	4.00E-02		1.89		360	690	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Pentachlorophenol	2.30E-02	J	2.39		360	690	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Pentachlorophenol	1.80E-02	J	2.65		360	690	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	1 - 2	Pentachlorophenol	1.70E-02	J	2.26		360	690	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC45	2 - 4	Phenanthrene	6.00E-01		6.88		1500	5400	ug/kg dw	0.40	0.11
RI Phase 2 Subsurface	LDW-SC42	2 - 4	Phenanthrene	3.40E-01		2.17	4.61E-02	100	480	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	4 - 6	Phenanthrene	2.00E-01		1.89	5.29E-02	100	480	mg/kg OC	0.001	
RI Phase 2 Subsurface	LDW-SC42	1 - 2	Phenanthrene	1.70E-01		2.14	4.67E-02	100	480	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0 - 1	Phenanthrene	1.20E-01		2.39	4.18E-02	100	480	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	2 - 4	Phenanthrene	9.00E-02		2.65	3.77E-02	100	480	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	0 - 1	Phenanthrene	7.90E-02		1.77	5.65E-02	100	480	mg/kg OC	0.001	
RI Phase 2 Subsurface	LDW-SC45	0 - 1	Phenanthrene	7.50E-02		1.48	6.76E-02	100	480	mg/kg OC	0.001	
RI Phase 2 Subsurface	LDW-SC44	2 - 3.2	Phenanthrene	7.00E-02		1.9	5.26E-02	100	480	mg/kg OC	0.001	

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Phenanthrene	5.50E-02	J	1.4	7.14E-02	100	480	mg/kg OC	0.001	
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Phenanthrene	4.60E-02	J	1.59	6.29E-02	100	480	mg/kg OC	0.001	
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Phenanthrene	2.80E-02	J	2.26	4.42E-02	100	480	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Phenol	1.80E-01		2.39		420	1200	ug/kg dw	0.43	0.15
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Phenol	1.50E-01		1.77		420	1200	ug/kg dw	0.36	0.13
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Phenol	2.80E-02	J	2.26		420	1200	ug/kg dw		
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Pyrene	1.80E+00		1.89	5.29E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Pyrene	1.50E+00		6.88		2600	3300	ug/kg dw	0.58	0.45
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Pyrene	9.50E-01		2.14	4.67E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Pyrene	8.30E-01	J	2.17	4.61E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Pyrene	5.10E-01	J	2.65	3.77E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Pyrene	4.80E-01	J	2.39	4.18E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Pyrene	4.00E-01		1.48	6.76E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Pyrene	3.00E-01	J	1.9	5.26E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Pyrene	2.70E-01		1.4	7.14E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Pyrene	2.40E-01		1.77	5.65E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Pyrene	2.20E-01	J	1.59	6.29E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Pyrene	1.50E-01	J	2.26	4.42E-02	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Pyrene	2.10E-02	J	0.889	1.12E-01	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Pyrene	1.70E-02	J	0.675	1.48E-01	1000	1400	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Silver	6.00E-01		1.59		6.1	6.1	mg/kg dw	0.098	0.098
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Total HPAH (calc'd)	7.60E+00	J	6.88		12000	17000	ug/kg dw	0.63	0.45
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Total HPAH (calc'd)	4.50E+00		1.89	5.29E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Total HPAH (calc'd)	4.30E+00	J	2.17	4.61E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Total HPAH (calc'd)	3.84E+00		2.14	4.67E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Total HPAH (calc'd)	2.22E+00	J	2.39	4.18E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Total HPAH (calc'd)	1.95E+00	J	2.65	3.77E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Total HPAH (calc'd)	1.91E+00	J	1.48	6.76E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Total HPAH (calc'd)	1.23E+00	J	1.4	7.14E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Total HPAH (calc'd)	1.14E+00		1.77	5.65E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Total HPAH (calc'd)	9.20E-01	J	1.9	5.26E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Total HPAH (calc'd)	6.90E-01	J	1.59	6.29E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Total HPAH (calc'd)	5.70E-01	J	2.26	4.42E-02	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Total HPAH (calc'd)	9.20E-02	J	0.675	1.48E-01	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Total HPAH (calc'd)	2.10E-02	J	0.889	1.12E-01	960	5300	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Total LPAH (calc'd)	9.70E-01		2.17	4.61E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Total LPAH (calc'd)	9.00E-01	J	6.88		5200	13000	ug/kg dw	0.17	0.069
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Total LPAH (calc'd)	2.80E-01		1.89	5.29E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Total LPAH (calc'd)	2.70E-01		2.14	4.67E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Total LPAH (calc'd)	1.90E-01	J	2.65	3.77E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Total LPAH (calc'd)	1.70E-01	J	2.39	4.18E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Total LPAH (calc'd)	1.06E-01	J	1.48	6.76E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Total LPAH (calc'd)	1.05E-01	J	1.9	5.26E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Total LPAH (calc'd)	7.90E-02		1.77	5.65E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Total LPAH (calc'd)	5.50E-02	J	1.4	7.14E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Total LPAH (calc'd)	4.60E-02	J	1.59	6.29E-02	370	780	mg/kg OC		
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Total LPAH (calc'd)	4.20E-02	J	2.26	4.42E-02	370	780	mg/kg OC		

Table A-2
Subsurface Sediment Sampling Results
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)

Sampling Event	Sample Location	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)		TOC % dw	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor[a]	CSL Exceedance Factor[a]
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Total PAH (calc'd)	8.50E+00	J	6.88	1.45E-02					
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Total PAH (calc'd)	5.30E+00	J	2.17	4.61E-02					
RI Phase 2 Subsurface	LDW-SC41	4	-	6	Total PAH (calc'd)	4.80E+00		1.89	5.29E-02					
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Total PAH (calc'd)	4.10E+00		2.14	4.67E-02					
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Total PAH (calc'd)	2.39E+00	J	2.39	4.18E-02					
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Total PAH (calc'd)	2.14E+00	J	2.65	3.77E-02					
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Total PAH (calc'd)	2.01E+00	J	1.48	6.76E-02					
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Total PAH (calc'd)	1.28E+00	J	1.4	7.14E-02					
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Total PAH (calc'd)	1.22E+00		1.77	5.65E-02					
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Total PAH (calc'd)	1.02E+00	J	1.9	5.26E-02					
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Total PAH (calc'd)	7.40E-01	J	1.59	6.29E-02					
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Total PAH (calc'd)	6.10E-01	J	2.26	4.42E-02					
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Total PAH (calc'd)	9.20E-02	J	0.675	1.48E-01					
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Total PAH (calc'd)	2.10E-02	J	0.889	1.12E-01					
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Vanadium	7.46E+01		2.17	4.61E+01					
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Vanadium	7.31E+01		2.26	4.42E+01					
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Vanadium	7.31E+01		2.65	3.77E+01					
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Vanadium	7.02E+01		2.39	4.18E+01					
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Vanadium	6.70E+01		1.59	6.29E+01					
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Vanadium	6.54E+01		1.48	6.76E+01					
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Vanadium	6.51E+01		1.9	5.26E+01					
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Vanadium	6.37E+01		1.4	7.14E+01					
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Vanadium	6.22E+01		1.77	5.65E+01					
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Vanadium	6.21E+01		6.88	1.45E+01					
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Vanadium	5.86E+01		2.14	4.67E+01					
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Vanadium	5.02E+01		0.675	1.48E+02					
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Vanadium	4.69E+01		0.889	1.12E+02					
RI Phase 2 Subsurface	LDW-SC43	2	-	4	Vanadium	4.36E+01		0.443	2.26E+02					
RI Phase 2 Subsurface	LDW-SC41	0	-	1	Zinc	1.60E+02		2.39		410	960	mg/kg dw	0.39	0.17
RI Phase 2 Subsurface	LDW-SC45	2	-	4	Zinc	1.52E+02		6.88		410	960	mg/kg dw	0.37	0.16
RI Phase 2 Subsurface	LDW-SC41	1	-	2	Zinc	1.41E+02		2.26		410	960	mg/kg dw	0.34	0.15
RI Phase 2 Subsurface	LDW-SC41	2	-	4	Zinc	1.31E+02		2.65		410	960	mg/kg dw	0.32	0.14
RI Phase 2 Subsurface	LDW-SC44	2	-	3.2	Zinc	1.23E+02		1.9		410	960	mg/kg dw	0.30	0.13
RI Phase 2 Subsurface	LDW-SC44	0	-	2	Zinc	1.19E+02		1.59		410	960	mg/kg dw	0.29	0.12
RI Phase 2 Subsurface	LDW-SC42	1	-	2	Zinc	1.05E+02		2.14		410	960	mg/kg dw	0.26	0.11
RI Phase 2 Subsurface	LDW-SC45	0	-	1	Zinc	9.80E+01		1.48		410	960	mg/kg dw	0.24	0.10
RI Phase 2 Subsurface	LDW-SC42	2	-	4	Zinc	9.50E+01		2.17		410	960	mg/kg dw	0.23	0.099
RI Phase 2 Subsurface	LDW-SC45	1	-	2	Zinc	8.30E+01		1.4		410	960	mg/kg dw	0.20	0.086
RI Phase 2 Subsurface	LDW-SC42	0	-	1	Zinc	7.70E+01		1.77		410	960	mg/kg dw	0.19	0.080
RI Phase 2 Subsurface	LDW-SC44	3.2	-	4	Zinc	3.69E+01		0.889		410	960	mg/kg dw	0.090	0.038
RI Phase 2 Subsurface	LDW-SC43	0	-	2	Zinc	3.30E+01		0.675		410	960	mg/kg dw	0.080	0.034
RI Phase 2 Subsurface	LDW-SC43	2	-	4	Zinc	2.26E+01		0.443		410	960	mg/kg dw	0.055	0.024

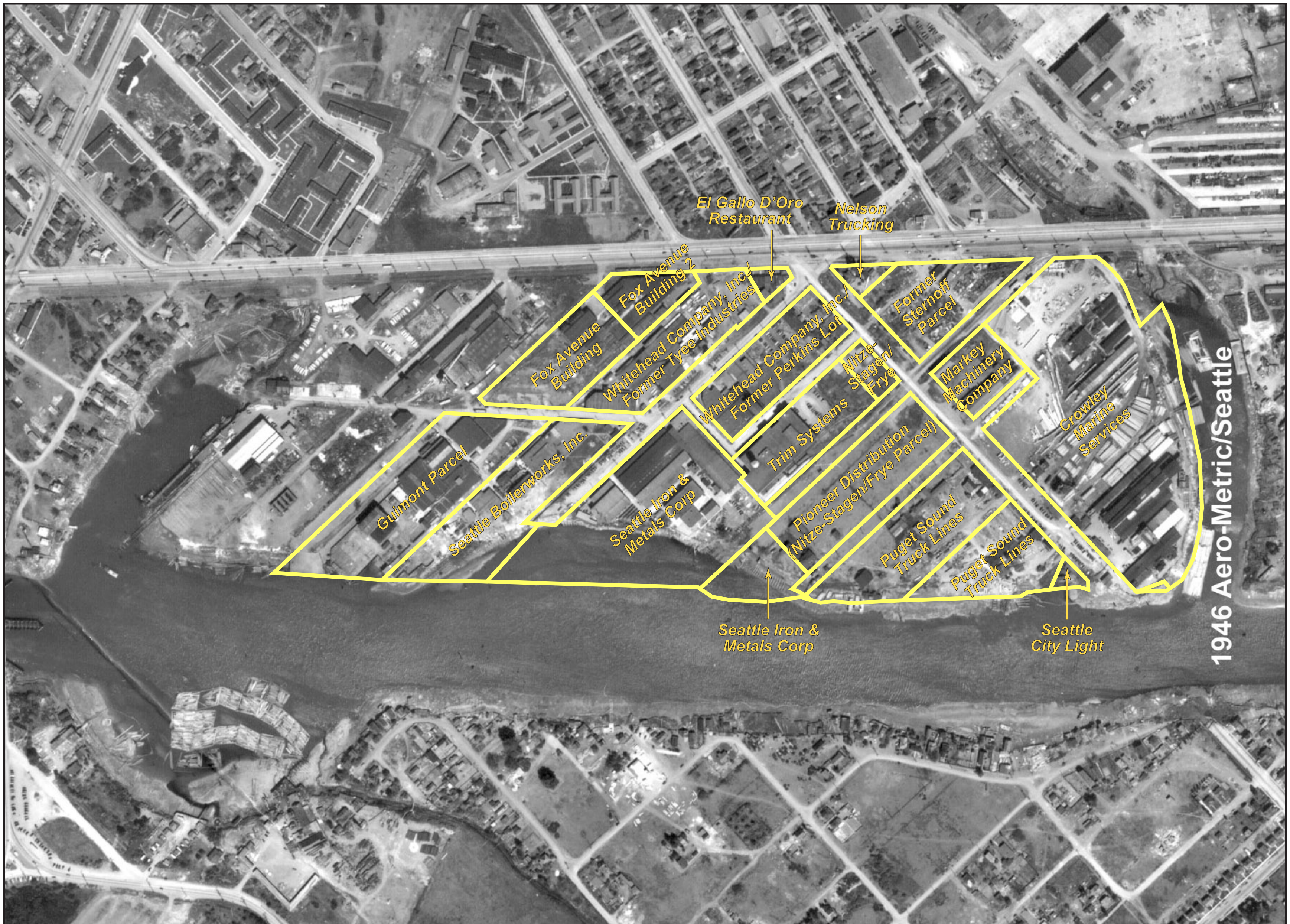
Table presents detections only.
a - Exceedance factors are the ratio of the detected concentration to the CSL or SQS; an exceedance factor greater than 1 indicates that the measured concentration is higher than the corresponding CSL or SQS.
DW - Dry weight

OC - Organic carbon normalized
TOC - Total organic carbon

Appendix B
Aerial Photographs

SAIC From Science to Solutions

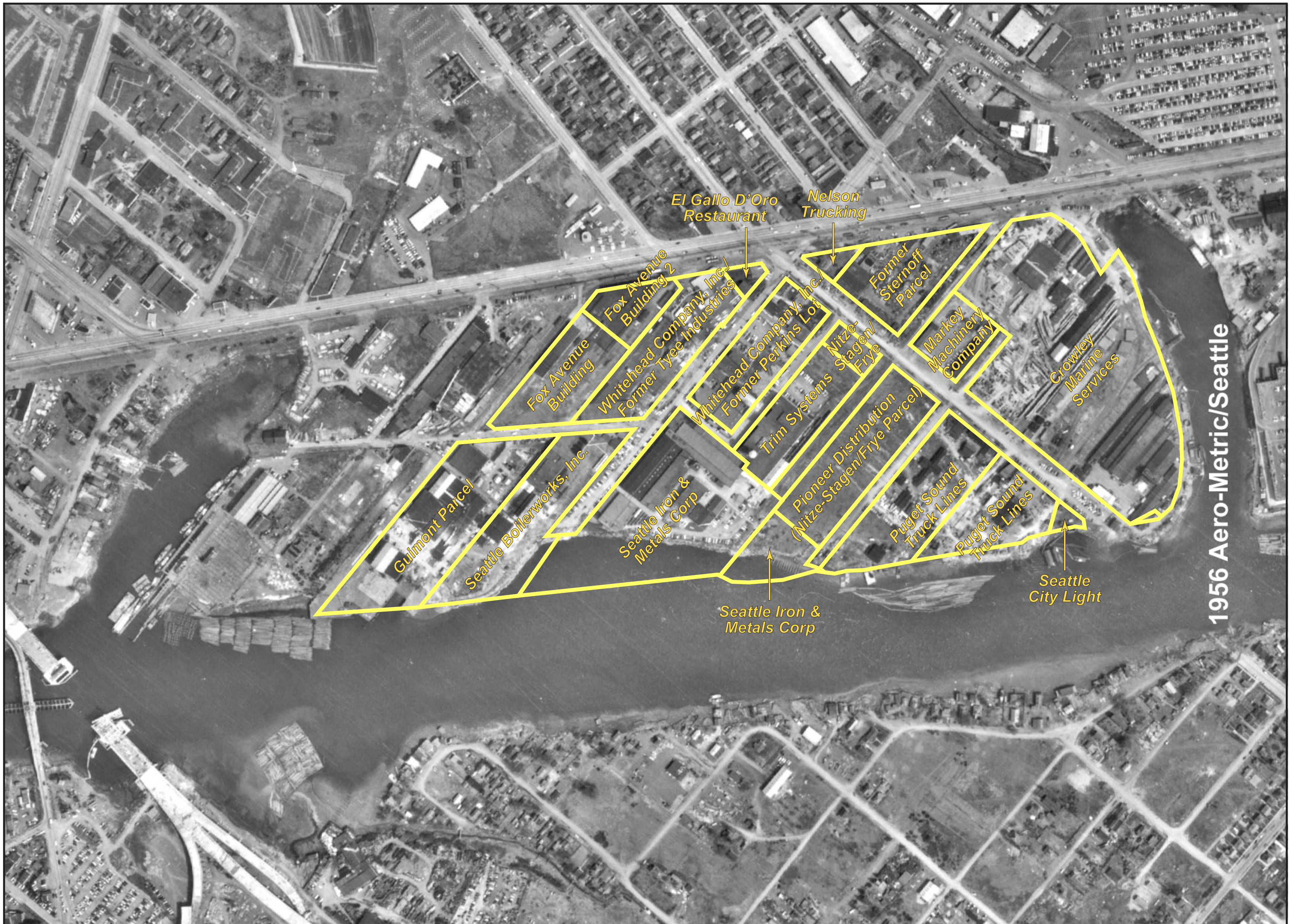
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1936 Aerial Photo



SAIC From Science to Solutions®

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1946 Aerial Photo

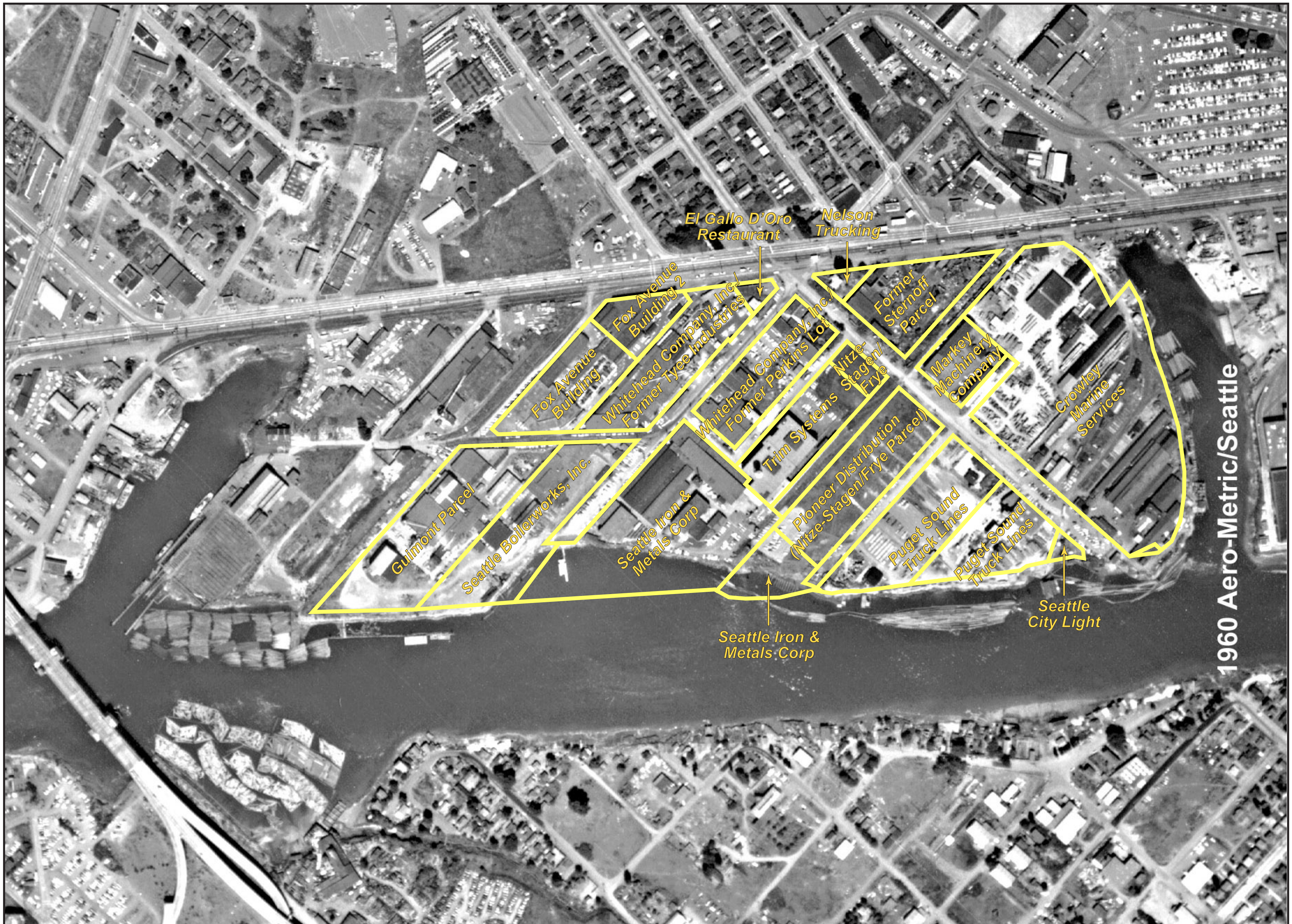
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1956 Aerial Photo

Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

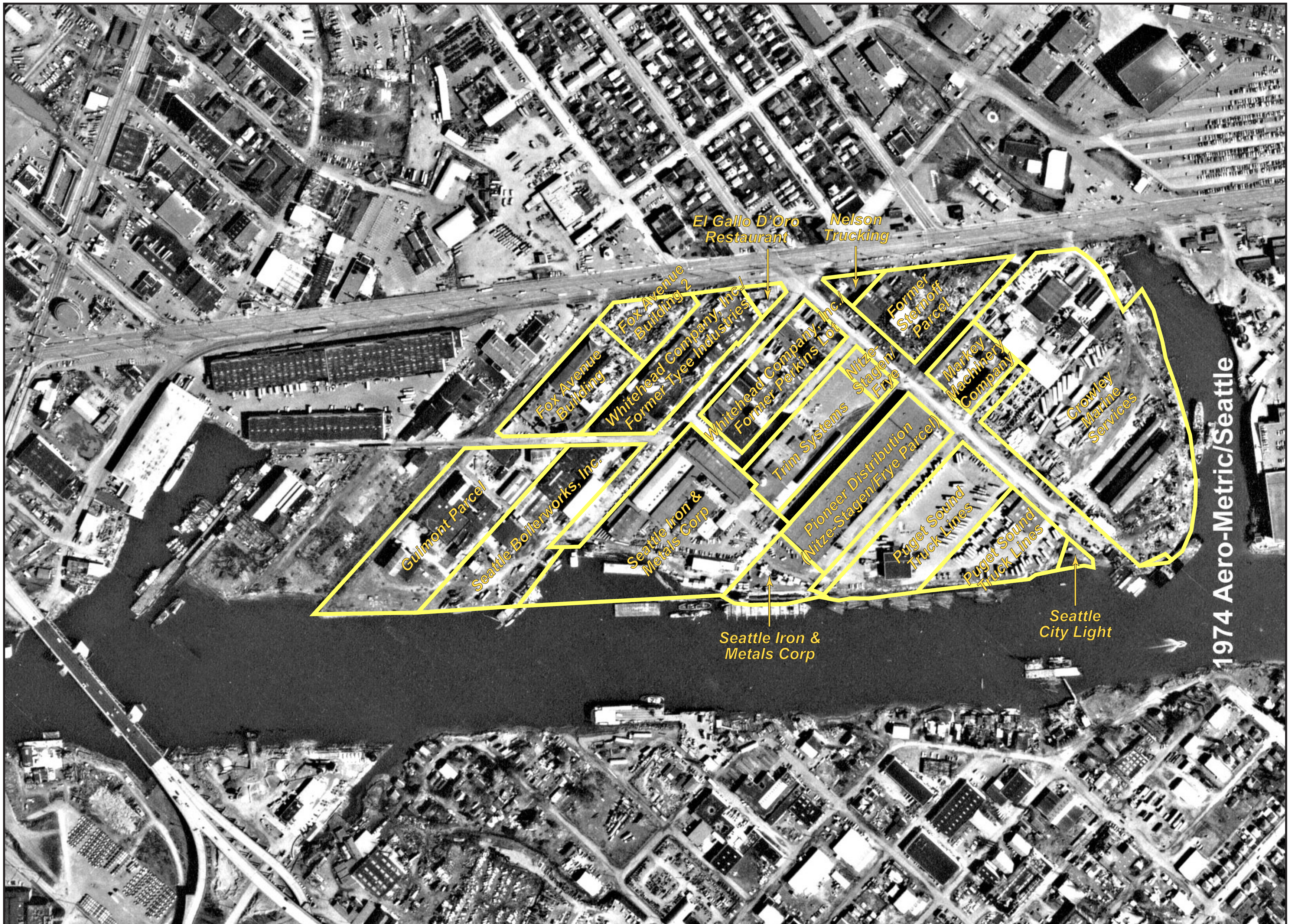
RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1960 Aerial Photo

Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).

SAIC®
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1969 Aerial Photo

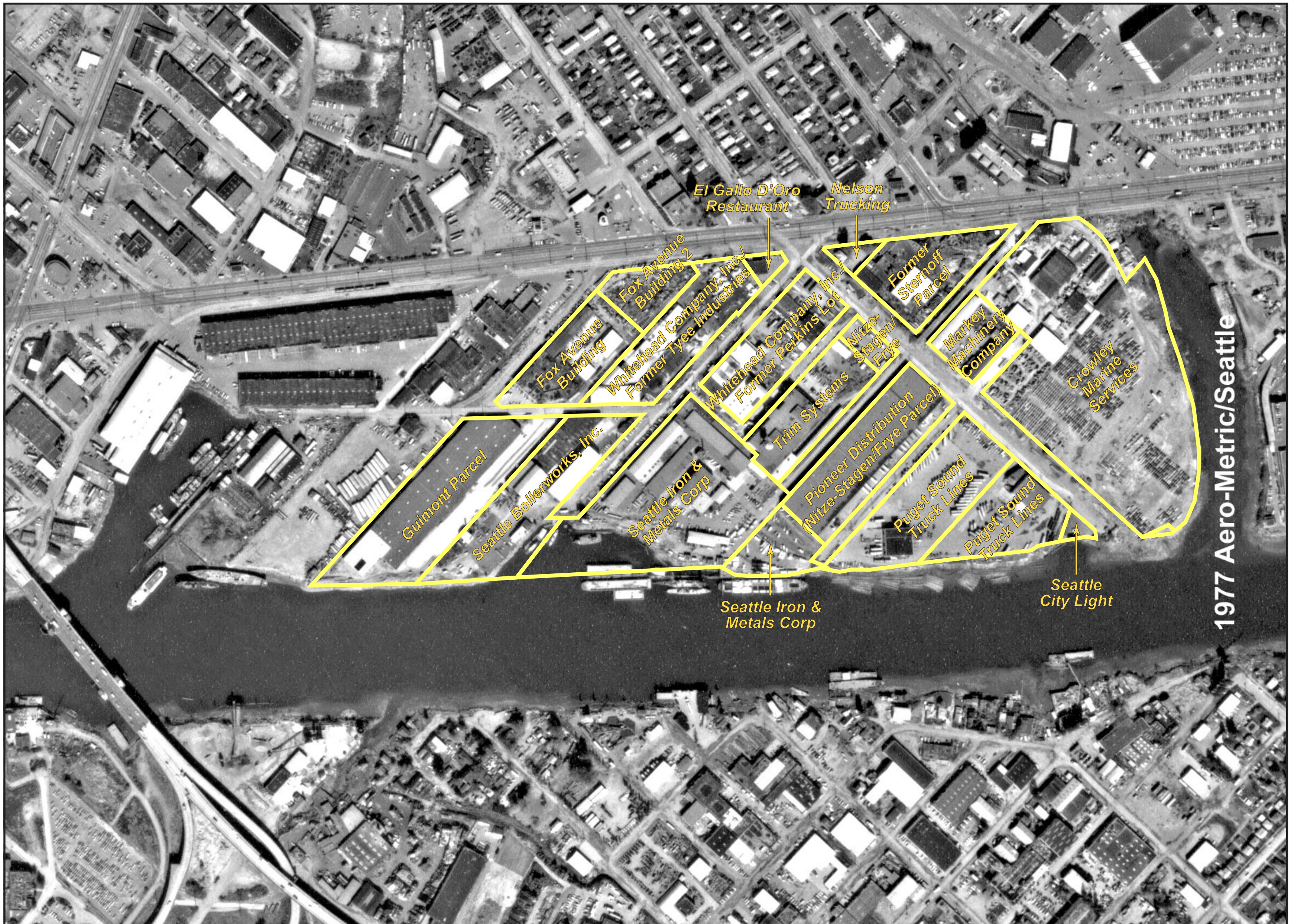
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1974 Aerial Photo

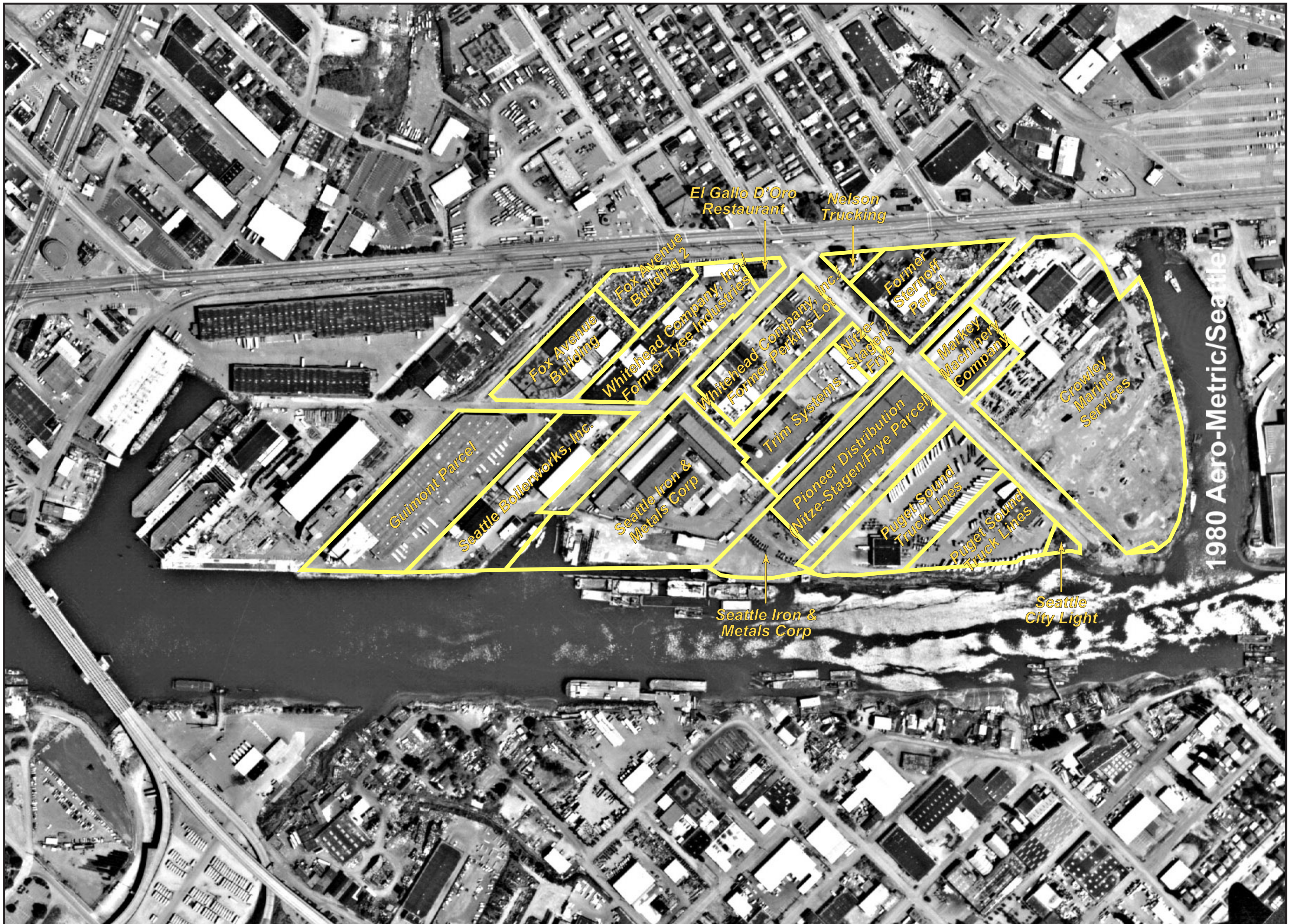
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1977 Aerial Photo

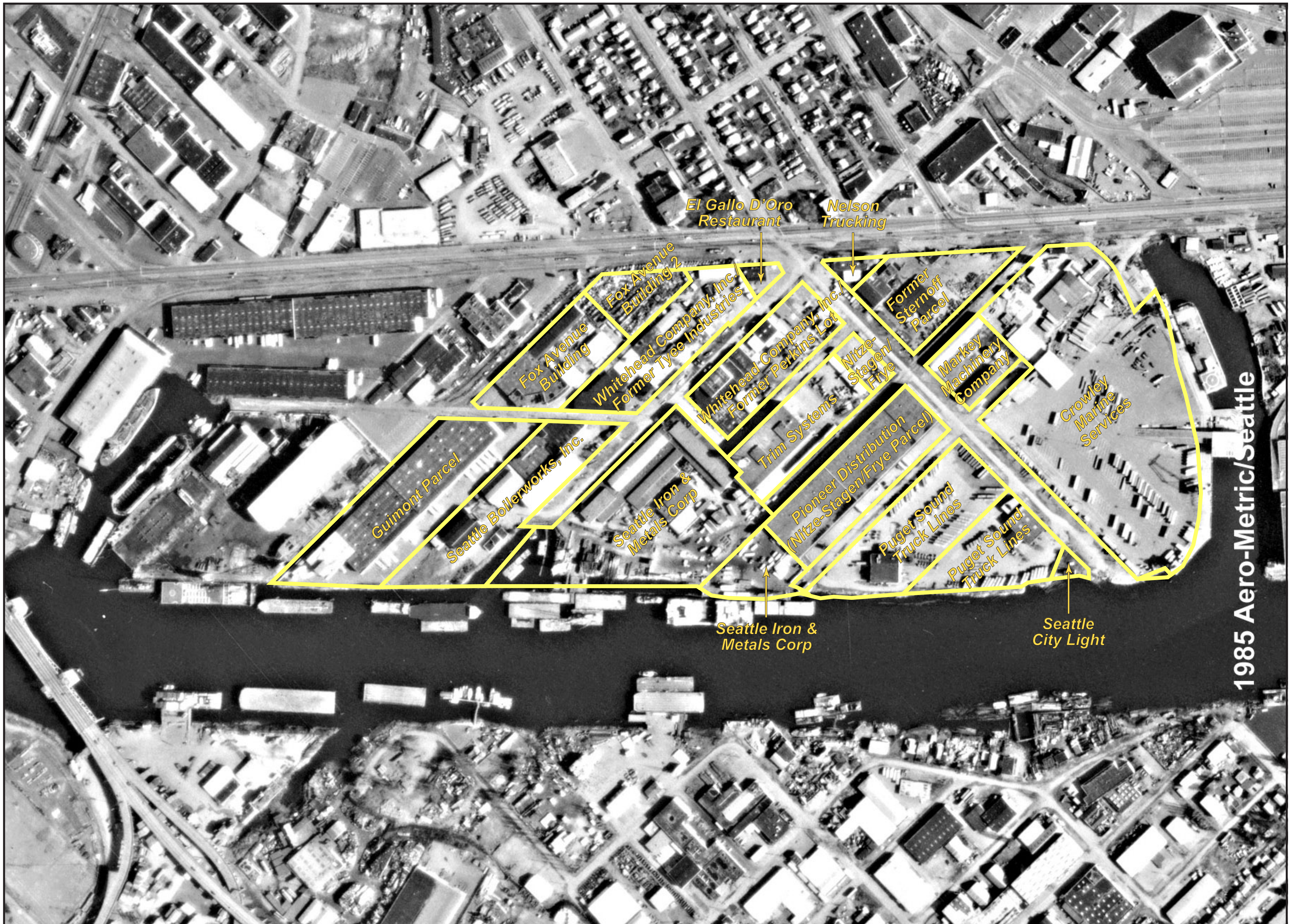
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1980 Aerial Photo

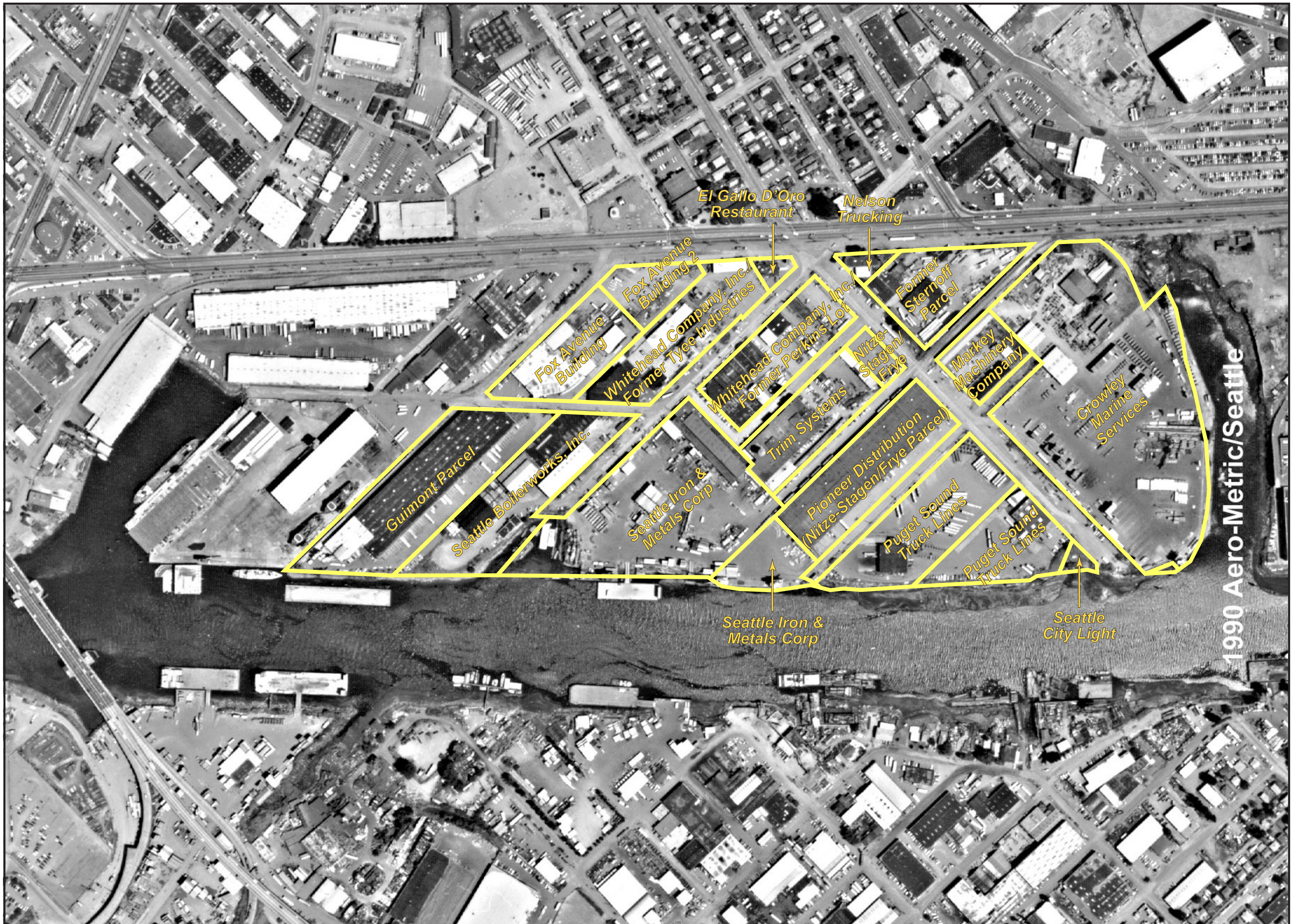
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1985 Aerial Photo

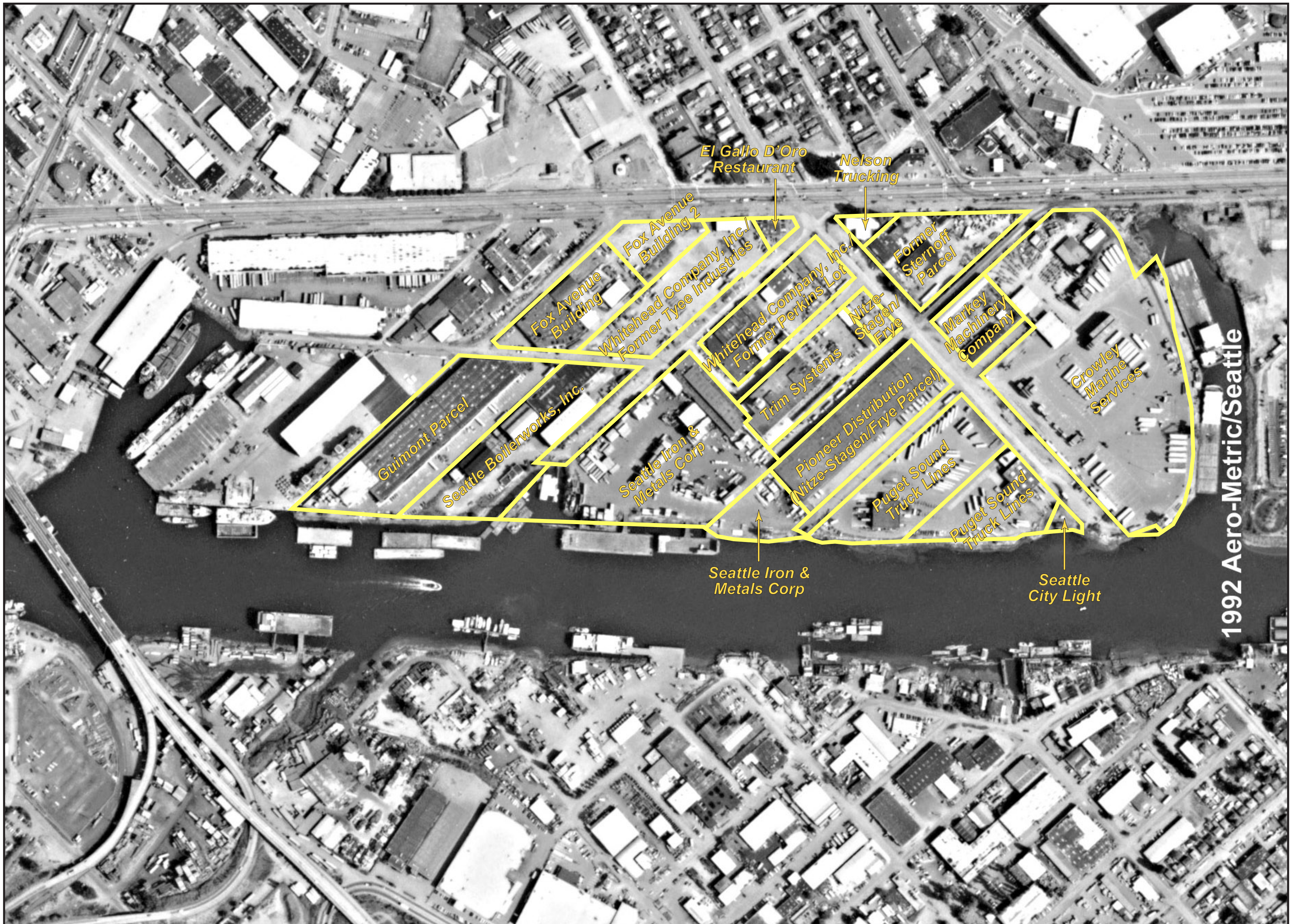
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1990 Aerial Photo

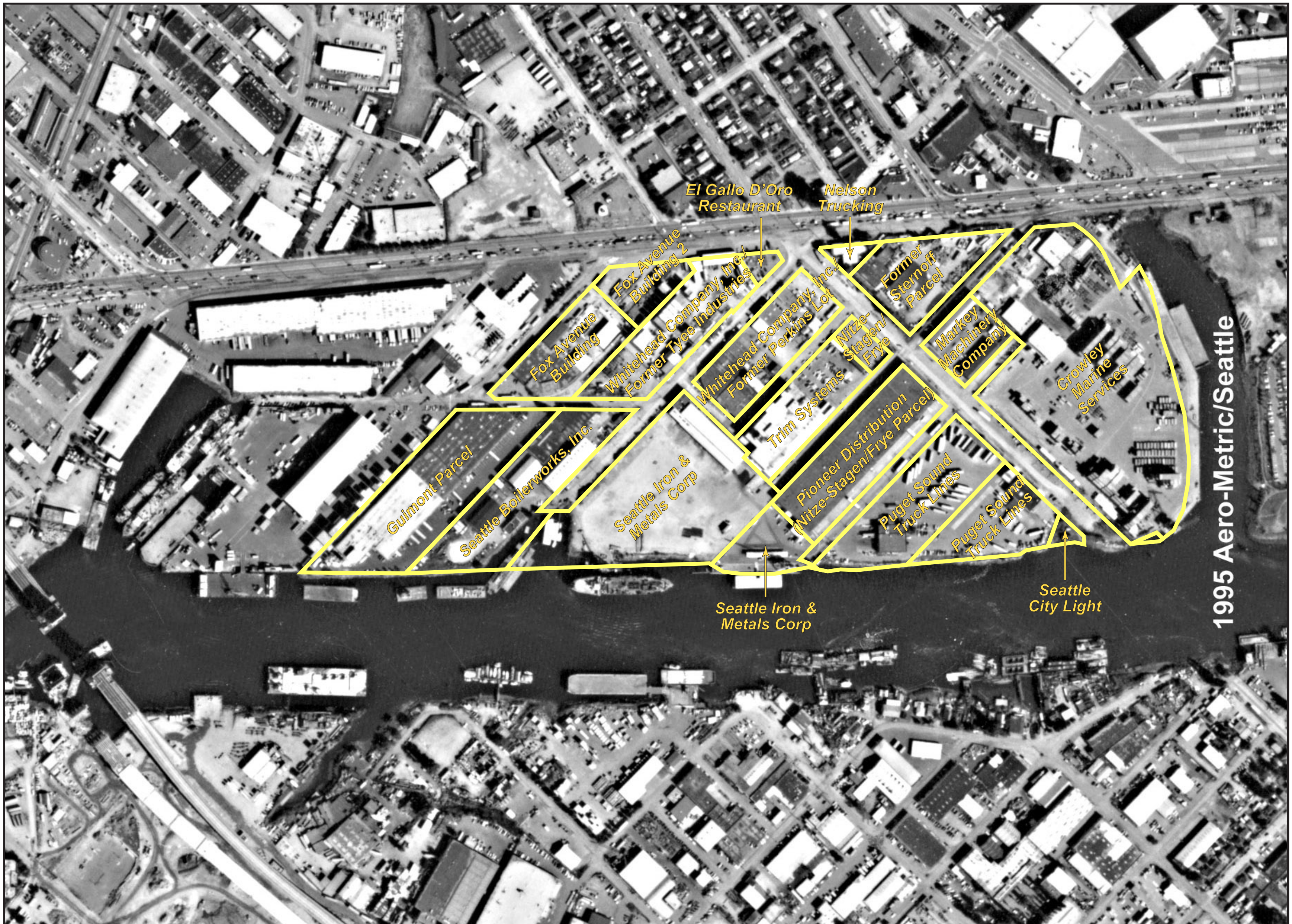
Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1992 Aerial Photo

Parcel boundaries are based on December 2007 King County Parcel Map data (King County Parcel Viewer).



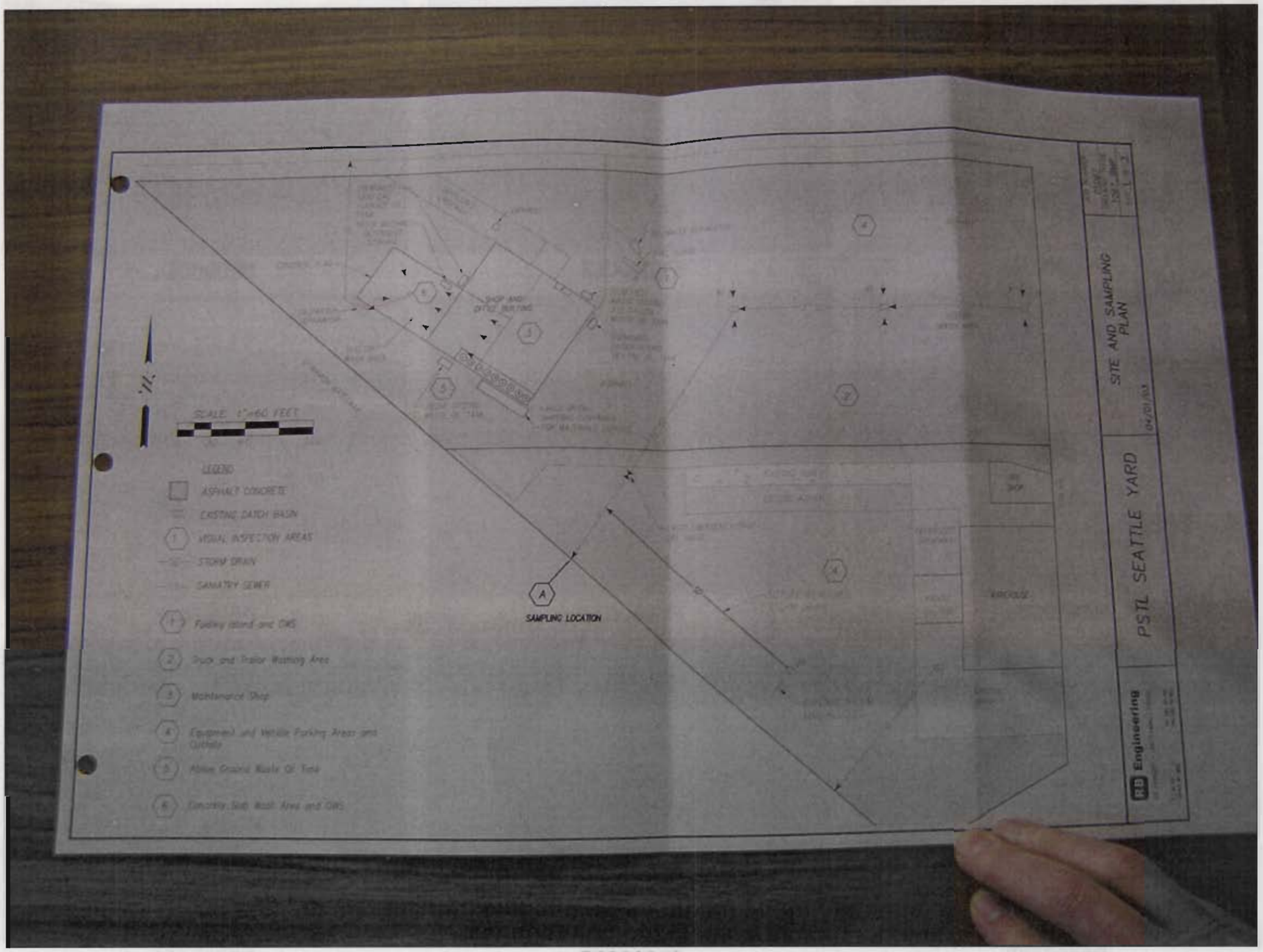
SAIC
From Science to Solutions

RM 2.3-2.8 East (Seattle Boiler Works to Slip 4)
1995 Aerial Photo

Appendix C

Puget Sound Truck Lines, Site Plan, June 9, 2005

PHOTO ADDENDUM B



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Appendix D
Crowley Marine Services Historical Data

Appendix D

Appendix D-1

Table D-1: Chemicals Detected in Soil, Crowley Marine Services

Table D-2: Chemicals Detected in Groundwater, Crowley Marine Services

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	FB5	11	1,1-DCA	0.0011	J	8,000		0.0
Landau 1990	**1990**	**DB12**	**11.5**	**1,4-Dichlorobenzene**	**0.79**	**M**	**42**	**0.015**	**53**
Landau 1990	1990	DB6	7	2,3,4,6-Tetrachlorophenol	0.027		2,400		0.0
Landau 1990	1990	DB6	2	2,3,4,6-Tetrachlorophenol	0.02		2,400		0.0
Landau 1990	1990	DB2	7	2,3,4,6-Tetrachlorophenol	0.02		2,400		0.0
Landau 1990	1990	DB5	2	2,3,4,6-Tetrachlorophenol	0.0089		2,400		0.0
Landau 1990	1990	DB6	2	2,3,5,6-Tetrachlorophenol	0.024				
Landau 1990	1990	DB6	7	2,3,5,6-Tetrachlorophenol	0.0077				
Landau 1990	1990	DB5	2	2,3,5,6-Tetrachlorophenol	0.005				
Landau 1990	1990	DB7	11.5	2,3,5,6-Tetrachlorophenol	0.0043	J			
Landau 1990	1990	FB5	8	2-Butanone	0.043		48,000		0.0
Landau 1990	1990	DB9	8	2-Butanone	0.016		48,000		0.0
Landau 1990	1990	DB3	9	2-Butanone	0.016		48,000		0.0
Landau 1990	1990	DB10	5	2-Butanone	0.013		48,000		0.0
Landau 1990	1990	DB8	8	2-Butanone	0.013		48,000		0.0
Landau 1990	1990	DB6	10	2-Butanone	0.0096		48,000		0.0
Landau 1990	1990	DB2	4.5	2-Butanone	0.0083		48,000		0.0
Landau 1990	1990	DB5	2	2-Butanone	0.0075	J	48,000		0.0
Landau 1990	1990	DB9	5	2-Butanone	0.0064	J	48,000		0.0
Landau 1990	1990	DB2	7	2-Butanone	0.0063	J	48,000		0.0
Landau 1990	1990	DB9	11	2-Butanone	0.005	M	48,000		0.0
Landau 1990	1990	DB12	11.5	2-Butanone	0.0047	M	48,000		0.0
Landau 1990	1990	DB14	9.5	2-Butanone	0.0045	M	48,000		0.0
Landau 1990	1990	DB8	11	2-Butanone	0.0044	J	48,000		0.0
Landau 1990	1990	DB3	3.5	2-Butanone	0.0036	J	48,000		0.0
Landau 1990	1990	DB8	5	2-Butanone	0.0032	M	48,000		0.0
Landau 1990	1990	FB4	8	2-Butanone	0.0031	M	48,000		0.0
Landau 1990	1990	DB12	5	2-Butanone	0.0029	M	48,000		0.0
Landau 1990	1990	DB7	8.5	2-Butanone	0.0029	J	48,000		0.0
Landau 1990	1990	DB6	4.5	2-Dimethylphenol	9.3				
Landau 1990	1990	DB6	7	2-Dimethylphenol	2.5				
Landau 1990	1990	DB11	8	2-Dimethylphenol	2.2	M			
Landau 1990	1990	DB11	9.5	2-Dimethylphenol	0.34	J			
Landau 1990	1990	DB9	5	2-Dimethylphenol	0.13				
Landau 1990	1990	DB6	13	2-Dimethylphenol	0.073	J			
Landau 1990	1990	DB7	6	2-Hexanone	0.0011	J			
Landau 1990	**1990**	**DB11**	**8**	**2-Methylnaphthalene**	**640**		**320**	**0.073**	**8,767**
Landau 1990	**1990**	**DB6**	**4.5**	**2-Methylnaphthalene**	**540**		**320**	**1.4**	**386**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**2-Methylnaphthalene**	**200**		**320**	**0.073**	**2,740**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB11**	**9.5**	**2-Methylnaphthalene**	**120**		**320**	**0.073**	**1,644**
Landau 1990	**1990**	**DB6**	**7**	**2-Methylnaphthalene**	**51**		**320**	**0.073**	**699**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**2-Methylnaphthalene**	**19**		**320**	**0.073**	**260**
Hart Crowser 1990b	Aug-90	HC-106	5.3	2-Methylnaphthalene	11		320	1.4	7.9
Landau 1990	**1990**	**DB6**	**13**	**2-Methylnaphthalene**	**6.4**		**320**	**0.073**	**88**
Landau 1990	**1990**	**DB2**	**7**	**2-Methylnaphthalene**	**4.6**		**320**	**0.073**	**63**
Landau 1990	1990	DB6	2	2-Methylnaphthalene	3		320	1.4	2.1
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**2-Methylnaphthalene**	**1.9**		**320**	**0.073**	**26**
Landau 1990	**1990**	**DB3**	**17**	**2-Methylnaphthalene**	**1.6**		**320**	**0.073**	**22**
Landau 1990	**1990**	**DB2**	**9.5**	**2-Methylnaphthalene**	**1.4**		**320**	**0.073**	**19**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**2-Methylnaphthalene**	**1.4**		**320**	**0.073**	**19**
Landau 1990	**1990**	**DB12**	**11.5**	**2-Methylnaphthalene**	**1.2**	**J**	**320**	**0.073**	**16**
Landau 1990	**1990**	**DB6**	**16**	**2-Methylnaphthalene**	**1**		**320**	**0.073**	**14**
Landau 1990	1990	DB5	2	2-Methylnaphthalene	0.93		320	1.4	0.7
Landau 1990	**1990**	**DB7**	**11.5**	**2-Methylnaphthalene**	**0.73**		**320**	**0.073**	**10**
Landau 1990	1990	DB3	13.5	2-Methylnaphthalene	0.67		320	0.073	9.2
Landau 1990	1990	DB7	8.5	2-Methylnaphthalene	0.25		320	0.073	3.4
Landau 1990	1990	DB3	3.5	2-Methylnaphthalene	0.17	M	320	1.4	0.1
Landau 1990	1990	DB6	10	2-Methylnaphthalene	0.16		320	0.073	2.2
Hart Crowser 1990b	Aug-90	HC-110	8.9	2-Methylnaphthalene	0.15		320	0.073	2.1
Landau 1990	1990	DB2	4.5	2-Methylnaphthalene	0.1	J	320	1.4	0.1
Landau 1990	1990	DB9	5	2-Methylnaphthalene	0.062		320	1.4	0.0
Landau 1990	1990	DB8	5	2-Methylnaphthalene	0.057	J	320	1.4	0.0
Landau 1990	1990	DB12	5	2-Methylnaphthalene	0.055	J	320	1.4	0.0
Landau 1990	1990	DB13	11	2-Methylnaphthalene	0.024	J	320	0.073	0.3
Landau 1990	**1990**	**DB6**	**4.5**	**2-Methylphenol**	**6**			**0.091**	**66**
Landau 1990	**1990**	**DB6**	**7**	**2-Methylphenol**	**0.86**			**0.0052**	**165**
Landau 1990	**1990**	**DB11**	**8**	**2-Methylphenol**	**0.44**	**M**		**0.0052**	**85**
Landau 1990	**1990**	**DB6**	**13**	**2-Methylphenol**	**0.099**			**0.0052**	**19**
Landau 1990	1990	DB9	5	2-Methylphenol	0.066			0.091	0.7
Landau 1990	1990	DB2	7	3,4,5-Trichlorophenol	0.046				
Landau 1990	1990	FSS2	0-0.5	4-Chloro-3-Methylphenol	63				
Landau 1990	1990	DB6	4.5	4-Methyl-pentanone	0.66	J			
Landau 1990	1990	DB6	7	4-Methyl-pentanone	0.29				
Landau 1990	1990	DB2	9.5	4-Methyl-pentanone	0.0022	M			
Landau 1990	1990	DB7	11.5	4-Methyl-pentanone	0.0021	J			
Landau 1990	1990	DB7	6	4-Methyl-pentanone	0.0008	M			
Landau 1990	**1990**	**DB6**	**4.5**	**4-Methylphenol**	**15**			**0.98**	**15**
Landau 1990	**1990**	**DB6**	**7**	**4-Methylphenol**	**2.7**			**0.056**	**48**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB6**	**13**	**4-Methylphenol**	**0.33**			**0.056**	**5.9**
Landau 1990	1990	DB9	5	4-Methylphenol	0.066			0.98	0.1
Landau 1990	**1990**	**DB11**	**8**	**Acenaphthene**	**860**	**B**	**4,800**	**0.060**	**14,333**
Landau 1990	**1990**	**DB6**	**4.5**	**Acenaphthene**	**570**	**B**	**4,800**	**1.2**	**475**
Landau 1990	**1990**	**DB11**	**9.5**	**Acenaphthene**	**190**	**B**	**4,800**	**0.060**	**3,167**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Acenaphthene**	**130**		**4,800**	**0.060**	**2,167**
Landau 1990	**1990**	**DB6**	**7**	**Acenaphthene**	**43**	**B**	**4,800**	**0.060**	**717**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Acenaphthene**	**30**		**4,800**	**0.060**	**500**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**5.3**	**Acenaphthene**	**17**		**4,800**	**1.2**	**14**
Landau 1990	1990	DB5	2	Acenaphthene	8.6	B	4,800	1.2	7.2
Landau 1990	**1990**	**DB6**	**13**	**Acenaphthene**	**8.5**		**4,800**	**0.060**	**142**
Landau 1990	1990	DB6	2	Acenaphthene	4.9	B	4,800	1.2	4.1
Landau 1990	**1990**	**DB2**	**7**	**Acenaphthene**	**4**	**B**	**4,800**	**0.060**	**67**
Landau 1990	**1990**	**DB3**	**17**	**Acenaphthene**	**3.5**		**4,800**	**0.060**	**58**
Landau 1990	**1990**	**DB2**	**9.5**	**Acenaphthene**	**2.7**		**4,800**	**0.060**	**45**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Acenaphthene**	**1.5**		**4,800**	**0.060**	**25**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Acenaphthene**	**1.5**		**4,800**	**0.060**	**25**
Landau 1990	1990	DB4	6	Acenaphthene	1.4	B	4,800	1.2	1.2
Landau 1990	**1990**	**DB3**	**13.5**	**Acenaphthene**	**1.3**		**4,800**	**0.060**	**22**
Landau 1990	**1990**	**DB6**	**16**	**Acenaphthene**	**1.2**		**4,800**	**0.060**	**20**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Acenaphthene**	**1.1**		**4,800**	**0.060**	**18**
Landau 1990	**1990**	**DB7**	**11.5**	**Acenaphthene**	**0.96**	**B**	**4,800**	**0.060**	**16**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Acenaphthene	0.67		4,800	1.2	0.6
Landau 1990	1990	DB3	3.5	Acenaphthene	0.42	B	4,800	1.2	0.4
Landau 1990	1990	DB12	5	Acenaphthene	0.39		4,800	1.2	0.3
Landau 1990	1990	DB7	8.5	Acenaphthene	0.31	B	4,800	0.060	5.2
Landau 1990	1990	DB4	8.5	Acenaphthene	0.29	B	4,800	0.060	4.8
Landau 1990	1990	DB6	10	Acenaphthene	0.23		4,800	0.060	3.8
Landau 1990	1990	DB2	4.5	Acenaphthene	0.2	JB	4,800	1.2	0.2
Hart Crowser 1990b	Aug-90	HC-106	3.5	Acenaphthene	0.17		4,800	1.2	0.1
Landau 1990	1990	DB6	18.5	Acenaphthene	0.11		4,800	0.060	1.8
Landau 1990	1990	DB8	5	Acenaphthene	0.061	JB	4,800	1.2	0.1
Landau 1990	1990	DB10	5	Acenaphthene	0.058	J	4,800	1.2	0.0
Landau 1990	1990	DB9	5	Acenaphthene	0.053		4,800	1.2	0.0
Landau 1990	1990	DB13	11	Acenaphthene	0.041	J	4,800	0.060	0.7
Landau 1990	**1990**	**DB11**	**8**	**Acenaphthylene**	**24**			**0.069**	**348**
Landau 1990	1990	DB6	4.5	Acenaphthylene	13			1.4	9.3
Landau 1990	**1990**	**DB11**	**9.5**	**Acenaphthylene**	**2.6**			**0.069**	**38**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Acenaphthylene**	**2.2**			**0.069**	**32**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB3	3.5	Acenaphthylene	1.4			1.4	1.0
Landau 1990	**1990**	**DB6**	**7**	**Acenaphthylene**	**1.3**			**0.069**	**19**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Acenaphthylene**	**0.87**			**0.069**	**13**
Landau 1990	1990	DB2	4.5	Acenaphthylene	0.52			1.4	0.4
Hart Crowser 1990b	Aug-90	HC-103	8.5	Acenaphthylene	0.5			0.069	7.2
Hart Crowser 1990b	Aug-90	HC-106	5.3	Acenaphthylene	0.32			1.4	0.2
Landau 1990	1990	DB2	7	Acenaphthylene	0.25			0.069	3.6
Landau 1990	1990	DB6	13	Acenaphthylene	0.19			0.069	2.8
Landau 1990	1990	DB8	5	Acenaphthylene	0.1			1.4	0.1
Landau 1990	1990	DB9	5	Acenaphthylene	0.033			1.4	0.0
Landau 1990	1990	DB7	8.5	Acenaphthylene	0.027	J		0.069	0.4
Landau 1990	1990	DB6	4.5	Acetone	4		8,000		0.0
Landau 1990	1990	FB5	8	Acetone	0.24		8,000		0.0
Landau 1990	1990	DB11	9.5	Acetone	0.14	B	8,000		0.0
Landau 1990	1990	DB2	7	Acetone	0.086		8,000		0.0
Landau 1990	1990	DB9	8	Acetone	0.083		8,000		0.0
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Acetone	0.077		8,000		0.0
Landau 1990	1990	DB10	5	Acetone	0.075		8,000		0.0
Landau 1990	1990	DB3	9	Acetone	0.073	B	8,000		0.0
Landau 1990	1990	DB8	8	Acetone	0.07		8,000		0.0
Landau 1990	1990	DB5	2	Acetone	0.052		8,000		0.0
Landau 1990	1990	DB9	5	Acetone	0.051		8,000		0.0
Landau 1990	1990	DB5	8	Acetone	0.049		8,000		0.0
Landau 1990	1990	DB2	9.5	Acetone	0.041		8,000		0.0
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Acetone	0.041		8,000		0.0
Landau 1990	1990	DB12	5	Acetone	0.038		8,000		0.0
Landau 1990	1990	DB12	11.5	Acetone	0.035		8,000		0.0
Landau 1990	1990	DB10	8	Acetone	0.03		8,000		0.0
Landau 1990	1990	DB8	5	Acetone	0.029		8,000		0.0
Landau 1990	1990	DB7	8.5	Acetone	0.029		8,000		0.0
Landau 1990	1990	DB14	9.5	Acetone	0.029		8,000		0.0
Landau 1990	1990	DB9	11	Acetone	0.029		8,000		0.0
Landau 1990	1990	DB3	3.5	Acetone	0.027		8,000		0.0
Landau 1990	1990	DB8	11	Acetone	0.027		8,000		0.0
Landau 1990	1990	FB5	2	Acetone	0.025		8,000		0.0
Landau 1990	1990	FB4	8	Acetone	0.025		8,000		0.0
Landau 1990	1990	DB3	7.5	Acetone	0.024	B	8,000		0.0
Landau 1990	1990	DB7	11.5	Acetone	0.023		8,000		0.0
Landau 1990	1990	DB3	17	Acetone	0.023	B	8,000		0.0

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB2	4.5	Acetone	0.022		8,000		0.0
Landau 1990	1990	DB10	11	Acetone	0.022		8,000		0.0
Landau 1990	1990	FB5	11	Acetone	0.022		8,000		0.0
Landau 1990	1990	DB3	13.5	Acetone	0.021	B	8,000		0.0
Landau 1990	1990	DB6	18.5	Acetone	0.021	J	8,000		0.0
Landau 1990	1990	DB1	6.5	Acetone	0.017		8,000		0.0
Landau 1990	1990	FB3	13.5	Acetone	0.017	B	8,000		0.0
Landau 1990	1990	DB2	12	Acetone	0.016		8,000		0.0
Landau 1990	1990	FB2	18.5	Acetone	0.016		8,000		0.0
Landau 1990	1990	FB4	11	Acetone	0.015		8,000		0.0
Landau 1990	1990	FB1	13	Acetone	0.015	B	8,000		0.0
Landau 1990	1990	FB2	2	Acetone	0.014		8,000		0.0
Landau 1990	1990	DB6	16	Acetone	0.014	J	8,000		0.0
Landau 1990	1990	DB2	18	Acetone	0.014		8,000		0.0
Landau 1990	1990	DB6	13	Acetone	0.013		8,000		0.0
Landau 1990	1990	DB5	11	Acetone	0.012		8,000		0.0
Landau 1990	1990	FB4	2	Acetone	0.011		8,000		0.0
Landau 1990	1990	FB2	8	Acetone	0.011		8,000		0.0
Landau 1990	1990	DB6	10	Acetone	0.011		8,000		0.0
Landau 1990	1990	DB13	11	Acetone	0.01		8,000		0.0
Landau 1990	1990	DB7	6	Acetone	0.009		8,000		0.0
Landau 1990	1990	FB2	5.5	Acetone	0.0072		8,000		0.0
Landau 1990	1990	DB4	11	Acetone	0.007		8,000		0.0
Landau 1990	1990	DB4	8.5	Acetone	0.0063		8,000		0.0
Landau 1990	1990	DB11	6.5	Acetone	0.005		8,000		0.0
Landau 1990	1990	DB1	5	Acetone	0.0042		8,000		0.0
Landau 1990	1990	DB2	3.5	Acetone	0.0036		8,000		0.0
Landau 1990	1990	FB3	5.5	Acetone	0.0025	JB	8,000		0.0
Landau 1990	**1990**	**DB6**	**4.5**	**Anthracene**	**910**	**B**	**2,400**	**24**	**38**
Landau 1990	**1990**	**DB11**	**8**	**Anthracene**	**420**	**B**	**2,400**	**1.2**	**350**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Anthracene**	**360**		**2,400**	**1.2**	**300**
Landau 1990	**1990**	**DB6**	**7**	**Anthracene**	**110**	**B**	**2,400**	**1.2**	**92**
Landau 1990	**1990**	**DB11**	**9.5**	**Anthracene**	**97**	**B**	**2,400**	**1.2**	**81**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Anthracene	33		2,400	24	1.4
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Anthracene**	**28**		**2,400**	**1.2**	**23**
Landau 1990	1990	DB6	2	Anthracene	16	B	2,400	24	0.7
Landau 1990	1990	DB5	2	Anthracene	13	B	2,400	24	0.5
Landau 1990	1990	DB6	13	Anthracene	11		2,400	1.2	9.2
Landau 1990	1990	DB3	3.5	Anthracene	8.1	B	2,400	24	0.3

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB2	7	Anthracene	6.2	B	2,400	1.2	5.2
Landau 1990	1990	DB4	6	Anthracene	5.1	B	2,400	24	0.2
Hart Crowser 1990b	Aug-90	HC-110	8.9	Anthracene	4.8		2,400	1.2	4.0
Hart Crowser 1990b	Aug-90	HC-107	3.1	Anthracene	4.5		2,400	24	0.2
Landau 1990	1990	DB2	4.5	Anthracene	3.7	B	2,400	24	0.2
Landau 1990	1990	DB6	16	Anthracene	2.5		2,400	1.2	2.1
Landau 1990	1990	DB7	11.5	Anthracene	2.1	B	2,400	1.2	1.8
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Anthracene	1.4		2,400	1.2	1.2
Landau 1990	1990	DB3	17	Anthracene	1.2		2,400	1.2	1.0
Landau 1990	1990	DB12	5	Anthracene	1		2,400	24	0.0
Landau 1990	1990	DB4	8.5	Anthracene	0.93	B	2,400	1.2	0.8
Landau 1990	1990	DB2	9.5	Anthracene	0.87		2,400	1.2	0.7
Hart Crowser 1990b	Aug-90	HC-103	10.8	Anthracene	0.78		2,400	1.2	0.7
Landau 1990	1990	DB8	5	Anthracene	0.7	B	2,400	24	0.0
Landau 1990	1990	DB6	10	Anthracene	0.67		2,400	1.2	0.6
Landau 1990	1990	DB6	18.5	Anthracene	0.63		2,400	1.2	0.5
Landau 1990	1990	DB7	8.5	Anthracene	0.57	B	2,400	1.2	0.5
Hart Crowser 1990b	Aug-90	HC-106	3.5	Anthracene	0.46		2,400	24	0.0
Hart Crowser 1990b	Aug-90	HC-102	8.5	Anthracene	0.33		2,400	1.2	0.3
Landau 1990	1990	DB9	5	Anthracene	0.2		2,400	24	0.0
Landau 1990	1990	DB10	5	Anthracene	0.13		2,400	24	0.0
Hart Crowser 1990b	Aug-90	HC-105	6.0	Anthracene	0.13		2,400	24	0.0
Landau 1990	1990	DB13	11	Anthracene	0.087		2,400	1.2	0.1
Landau 1990	1990	DB11	6.5	Anthracene	0.084		2,400	24	0.0
Hart Crowser 1990b	Aug-90	HC-110	3.5	Anthracene	0.082	J	2,400	24	0.0
Hart Crowser 1990b	Aug-90	HC-110	6.8	Anthracene	0.065	J	2,400	24	0.0
Hart Crowser 1990b	Aug-90	HC-103	6.5	Anthracene	0.06	J	2,400	24	0.0
Landau 1990	1990	DB2	3.5	Anthracene	0.039	J	2,400	24	0.0
Hart Crowser 1989a	Nov-88	SS-5	0-0.5	Aroclor 1248	0.89			1.3	0.7
Landau 1990	1990	DB6	4.5	Aroclor 1254	2.5			1.3	1.9
Landau 1990	1990	DB6	2	Aroclor 1254	0.32			1.3	0.2
Landau 1990	1990	DB7	11.5	Aroclor 1254	0.21			0.065	3.2
Landau 1990	1990	DB11	6.5	Aroclor 1254	0.13			1.3	0.1
Hart Crowser 1989a	Nov-88	SS-4	0-0.5	Aroclor 1254	0.12			1.3	0.1
Landau 1990	1990	DB7	8.5	Aroclor 1254	0.076			0.065	1.2
Landau 1990	1990	DB9	5	Aroclor 1254	0.07			1.3	0.1
Landau 1990	1990	DB10	5	Aroclor 1260	0.13			1.3	0.1
Landau 1990	1990	DB9	5	Aroclor 1260	0.05			1.3	0.0
Landau 1990	**1990**	**DB6**	**4.5**	**Arsenic**	**1,760**		**20**	**12,000**	**88**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB6**	**7**	**Arsenic**	**1,220**		**20**	**590**	**61**
Landau 1990	**1990**	**DB7**	**11.5**	**Arsenic**	**1,090**		**20**	**590**	**55**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**5.3**	**Arsenic**	**860**		**20**	**12,000**	**43**
Landau 1990	**1990**	**DB6**	**2**	**Arsenic**	**590**		**20**	**12,000**	**30**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**3.5**	**Arsenic**	**330**		**20**	**12,000**	**17**
Landau 1990	**1990**	**DB2**	**7**	**Arsenic**	**241**		**20**	**590**	**12**
Landau 1990	**1990**	**DB5**	**2**	**Arsenic**	**205**		**20**	**12,000**	**10**
Landau 1990	1990	DB2	4.5	Arsenic	144		20	12,000	7.2
Landau 1990	1990	DB10	5	Arsenic	133		20	12,000	6.7
Landau 1990	1990	DB7	8.5	Arsenic	107		20	590	5.4
Hart Crowser 1990b	Aug-90	HC-103	8.5	Arsenic	75		20	590	3.8
Hart Crowser 1990b	Aug-90	HC-107	3.1	Arsenic	74		20	12,000	3.7
Hart Crowser 1990b	Aug-90	HC-109	6.5	Arsenic	53		20	12,000	2.7
Landau 1990	1990	DB6	13	Arsenic	38		20	590	1.9
Hart Crowser 1990b	Aug-90	HC-104	5.2	Arsenic	26		20	12,000	1.3
Landau 1990	1990	DB2	3.5	Arsenic	25		20	12,000	1.3
Landau 1990	1990	DB3	3.5	Arsenic	21.0		20	12,000	1.1
Landau 1990	1990	DB8	5	Arsenic	18.0		20	12,000	0.9
Hart Crowser 1990b	Aug-90	HC-110	3.5	Arsenic	17		20	12,000	0.9
Landau 1990	1990	FB2	2	Arsenic	14.8		20	12,000	0.7
Landau 1990	1990	DB6	16	Arsenic	14.2		20	590	0.7
Landau 1990	1990	DB4	8.5	Arsenic	13.9		20	590	0.7
Landau 1990	1990	DB1	6.5	Arsenic	13.1		20	12,000	0.7
Landau 1990	1990	DB9	5	Arsenic	9.7		20	12,000	0.5
Landau 1990	1990	FB4	11	Arsenic	9.7		20	590	0.5
Landau 1990	1990	DB10	11	Arsenic	9.1		20	590	0.5
Landau 1990	1990	DB2	18	Arsenic	9.10		20	590	0.5
Hart Crowser 1990b	Aug-90	HC-104	8.5	Arsenic	8.6		20	590	0.4
Landau 1990	1990	DB4	6	Arsenic	8.5		20	12,000	0.4
Landau 1990	1990	DB11	8	Arsenic	6.8		20	590	0.3
Landau 1990	1990	DB1	5	Arsenic	6.57		20	12,000	0.3
Landau 1990	1990	DB3	2	Arsenic	6.5		20	12,000	0.3
Landau 1990	1990	DB2	12	Arsenic	6.50		20	590	0.3
Landau 1990	1990	DB3	17	Arsenic	5.51		20	590	0.3
Hart Crowser 1990b	Aug-90	HC-106 DUP	7.5	Arsenic	5.5		20	590	0.3
Landau 1990	1990	DB13	11	Arsenic	5.30		20	590	0.3
Landau 1990	1990	FB1	7	Arsenic	4.7		20	590	0.2
Landau 1990	1990	DB11	6.5	Arsenic	4.66		20	12,000	0.2
Landau 1990	1990	DB2	9.5	Arsenic	4.0		20	590	0.2

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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	11	Arsenic	4.0		20	590	0.2
Landau 1990	1990	FB2	18.5	Arsenic	3.9		20	590	0.2
Landau 1990	1990	DB7	6	Arsenic	4		20	12,000	0.2
Landau 1990	1990	DB9	8	Arsenic	3.30		20	590	0.2
Landau 1990	1990	DB6	10	Arsenic	3.3		20	590	0.2
Landau 1990	1990	FB1	13	Arsenic	3.2		20	590	0.2
Landau 1990	1990	FB4	8	Arsenic	3.10		20	590	0.2
Landau 1990	1990	DB1	9.5	Arsenic	3.1		20	590	0.2
Landau 1990	1990	FB5	2	Arsenic	3.02		20	12,000	0.2
Landau 1990	1990	DB8	8	Arsenic	2.8		20	590	0.1
Landau 1990	1990	DB3	7.5	Arsenic	2.79		20	590	0.1
Landau 1990	1990	DB3	9	Arsenic	2.5		20	590	0.1
Landau 1990	1990	DB12	5	Arsenic	2.35		20	12,000	0.1
Landau 1990	1990	DB5	11	Arsenic	2.33		20	590	0.1
Landau 1990	1990	FB3	5.5	Arsenic	2.28		20	12,000	0.1
Landau 1990	1990	DB8	11	Arsenic	2.22		20	590	0.1
Landau 1990	1990	DB14	9.5	Arsenic	2.1		20	590	0.1
Landau 1990	1990	DB11	9.5	Arsenic	2.06		20	590	0.1
Landau 1990	1990	DB9	11	Arsenic	2.03		20	590	0.1
Landau 1990	1990	DB12	11.5	Arsenic	1.99		20	590	0.1
Landau 1990	1990	FB3	3	Arsenic	1.98		20	12,000	0.1
Landau 1990	1990	FB3	13.5	Arsenic	1.91		20	590	0.1
Landau 1990	1990	DB10	8	Arsenic	1.82		20	590	0.1
Landau 1990	1990	FB5	8	Arsenic	1.82		20	590	0.1
Landau 1990	1990	DB3	13.5	Arsenic	1.78		20	590	0.1
Landau 1990	1990	FB2	8	Arsenic	1.64		20	590	0.1
Landau 1990	1990	DB6	18.5	Arsenic	1.57		20	590	0.1
Landau 1990	1990	FB4	2	Arsenic	1.5		20	12,000	0.1
Landau 1990	1990	DB3	6	Arsenic	1.5		20	12,000	0.1
Landau 1990	1990	FB1	2	Arsenic	1.34		20	12,000	0.1
Landau 1990	1990	FB2	5.5	Arsenic	1.33		20	12,000	0.1
Landau 1990	1990	FB5	11	Arsenic	1.31		20	590	0.1
Landau 1990	1990	DB5	8	Arsenic	1.16		20	590	0.1
Hart Crowser 1989b	**Feb-89**	**HC-14**	**3.4-4.0**	**Arsenic (total)**	**2,800**		**20**	**12,000**	**140**
Hart Crowser 1989b	**Jan-89**	**HC-13**	**3.7-4.1**	**Arsenic (total)**	**2,200**		**20**	**12,000**	**110**
Hart Crowser 1989b	**Nov-88**	**HC-1**	**2.5-3.75**	**Arsenic (total)**	**1,600**		**20**	**12,000**	**80**
Hart Crowser 1989b	**Feb-89**	**HC-16**	**3.5-3.7**	**Arsenic (total)**	**770**		**20**	**12,000**	**39**
Hart Crowser 1989b	Jan-89	HC-10	2.5-4.0	Arsenic (total)	82		20	12,000	4.1
Hart Crowser 1989b	Feb-89	HC-17	4.0-4.33	Arsenic (total)	68		20	12,000	3.4

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Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1989b	Jan-89	HC-13	4.1-5.5	Arsenic (total)	35		20	12,000	1.8
Hart Crowser 1989b	Nov-88	HC-1A	15.0-16.5	Arsenic (total)	23		20	590	1.2
Hart Crowser 1989b	Jan-89	HC-11	2.5-4.0	Arsenic (total)	19		20	12,000	1.0
Hart Crowser 1989b	Jan-89	HC-9	2.5-4.0	Arsenic (total)	17		20	12,000	0.9
Hart Crowser 1989b	Jun-89	HC-19	3.0-4.0	Arsenic (total)	16		20	12,000	0.8
Hart Crowser 1989b	Nov-88	HC-1	5.0-6.5	Arsenic (total)	16		20	12,000	0.8
Hart Crowser 1989b	Jan-89	HC-8	2.5-4.0	Arsenic (total)	14		20	12,000	0.7
Hart Crowser 1989b	Jan-89	HC-5	0.5-1.0	Arsenic (total)	11		20	12,000	0.6
Hart Crowser 1989b	Nov-88	HC-1A	7.5-9.0	Arsenic (total)	9.5		20	590	0.5
Hart Crowser 1989b	Jan-89	HC-13	6.5-8.0	Arsenic (total)	7.8		20	590	0.4
Hart Crowser 1989b	Jan-89	HC-12	2.5-4.0	Arsenic (total)	6.8		20	12,000	0.3
Hart Crowser 1989b	Feb-89	HC-17	3.1-4.0	Arsenic (total)	6.0		20	12,000	0.3
Hart Crowser 1989b	Jan-89	HC-6	2.5-4.0	Arsenic (total)	5.4		20	12,000	0.3
Hart Crowser 1989b	Feb-89	HC-15A	4.15-5.15	Arsenic (total)	4.5		20	12,000	0.2
Hart Crowser 1989b	Jun-89	HC-20	5.5-6.5	Arsenic (total)	4.3		20	12,000	0.2
Hart Crowser 1989b	Jun-89	HC-19	5.5-6.5	Arsenic (total)	3.8		20	12,000	0.2
Hart Crowser 1989b	Feb-89	HC-18	4.25-5.5	Arsenic (total)	3.4		20	12,000	0.2
Hart Crowser 1989b	Jun-89	HC-20	3.0-4.0	Arsenic (total)	3.0		20	12,000	0.2
Hart Crowser 1989b	Jan-89	HC-11	4.0-5.5	Arsenic (total)	3.0		20	12,000	0.2
Hart Crowser 1989b	Jan-89	HC-13	2.5-4.0	Arsenic (total)	2.9		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-8	6.5-7.75	Arsenic (total)	2.5		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-11	6.5-8.0	Arsenic (total)	2.5		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-6	4.0-5.5	Arsenic (total)	2.2		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-8	4.0-5.5	Arsenic (total)	2.2		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-7	4.0-5.5	Arsenic (total)	2.0		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-6	8.5-9.5	Arsenic (total)	2.0		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-5	3.0-3.75	Arsenic (total)	1.9		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-10	6.5-8.0	Arsenic (total)	1.9		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-9	4.0-5.5	Arsenic (total)	1.8		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-12	4.0-5.5	Arsenic (total)	1.8		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-7	6.5-8.0	Arsenic (total)	1.8		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-12	6.5-8.0	Arsenic (total)	1.8		20	590	0.1
Hart Crowser 1989b	Jan-89	HC-7	2.5-4.0	Arsenic (total)	1.6		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-10	4.0-5.5	Arsenic (total)	1.6		20	12,000	0.1
Hart Crowser 1989b	Jan-89	HC-6	6.5-8.0	Arsenic (total)	1.6		20	590	0.1
Landau 1990	1990	DB12	11.5	Benzene	0.0021	M	0.03		0.1
Landau 1990	1990	DB10	5	Benzene	0.0016		0.03		0.1
Landau 1990	1990	DB7	11.5	Benzene	0.0011	J	0.03		0.0
Landau 1990	1990	DB4	6	Benzene	0.0007	J	0.03		0.0

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Crowley Marine Services

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Landau 1990	1990	DB6	13	Benzene	0.0005	M	0.03		0.0
Landau 1990	1990	DB9	5	Benzene	0.0004	J	0.03		0.0
Landau 1990	1990	DB7	8.5	Benzene	0.0003	M	0.03		0.0
Landau 1990	**1990**	**DB11**	**8**	**Benzo(a)anthracene**	**280**			**0.27**	**1,037**
Landau 1990	**1990**	**DB6**	**4.5**	**Benzo(a)anthracene**	**120**			**5.4**	**22**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzo(a)anthracene**	**86**			**0.27**	**319**
Landau 1990	**1990**	**DB6**	**7**	**Benzo(a)anthracene**	**25**			**0.27**	**93**
Landau 1990	1990	DB3	3.5	Benzo(a)anthracene	19			5.4	3.5
Landau 1990	1990	DB5	2	Benzo(a)anthracene	18			5.4	3.3
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(a)anthracene	18			5.4	3.3
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(a)anthracene**	**14**			**0.27**	**52**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(a)anthracene	14			5.4	2.6
Landau 1990	1990	DB4	6	Benzo(a)anthracene	13			5.4	2.4
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(a)anthracene**	**11**			**0.27**	**41**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(a)anthracene**	**9.9**			**0.27**	**37**
Landau 1990	1990	DB2	4.5	Benzo(a)anthracene	7.3			5.4	1.4
Landau 1990	1990	DB6	2	Benzo(a)anthracene	4.8			5.4	0.9
Landau 1990	**1990**	**DB6**	**13**	**Benzo(a)anthracene**	**3.1**			**0.27**	**11**
Landau 1990	**1990**	**DB2**	**7**	**Benzo(a)anthracene**	**2.8**			**0.27**	**10**
Landau 1990	1990	DB4	8.5	Benzo(a)anthracene	2.6			0.27	9.6
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(a)anthracene	1.7			0.27	6.3
Landau 1990	1990	DB8	5	Benzo(a)anthracene	1.6			5.4	0.3
Hart Crowser 1990b	Aug-90	HC-106	3.5	Benzo(a)anthracene	1.4			5.4	0.3
Landau 1990	1990	DB7	11.5	Benzo(a)anthracene	1.3			0.27	4.8
Landau 1990	1990	DB12	5	Benzo(a)anthracene	1.2			5.4	0.2
Landau 1990	1990	DB2	9.5	Benzo(a)anthracene	0.92			0.27	3.4
Landau 1990	1990	DB10	5	Benzo(a)anthracene	0.8			5.4	0.1
Hart Crowser 1990b	Aug-90	HC-106	7.5	Benzo(a)anthracene	0.53			0.27	2.0
Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(a)anthracene	0.53			5.4	0.1
Landau 1990	1990	DB7	8.5	Benzo(a)anthracene	0.5			0.27	1.9
Landau 1990	1990	DB9	5	Benzo(a)anthracene	0.5			5.4	0.1
Landau 1990	1990	DB6	16	Benzo(a)anthracene	0.39			0.27	1.4
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(a)anthracene	0.38			5.4	0.1
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(a)anthracene	0.25			5.4	0.0
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Benzo(a)anthracene	0.24			0.27	0.9
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(a)anthracene	0.23			5.4	0.0
Hart Crowser 1990b	Aug-90	HC-103	10.8	Benzo(a)anthracene	0.15			0.27	0.6
Landau 1990	1990	DB11	6.5	Benzo(a)anthracene	0.12			5.4	0.0
Landau 1990	1990	DB6	10	Benzo(a)anthracene	0.1	M		0.27	0.4

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Chemicals Detected in Soil
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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	18.5	Benzo(a)anthracene	0.08	M		0.27	0.3
Landau 1990	1990	DB13	11	Benzo(a)anthracene	0.041	M		0.27	0.2
Landau 1990	1990	DB2	3.5	Benzo(a)anthracene	0.027	J		5.4	0.0
Landau 1990	**1990**	**DB11**	**8**	**Benzo(a)pyrene**	**140**		**0.1**	**0.21**	**1,400**
Landau 1990	**1990**	**DB6**	**4.5**	**Benzo(a)pyrene**	**53**		**0.1**	**4.2**	**530**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzo(a)pyrene**	**26**		**0.1**	**0.21**	**260**
Landau 1990	**1990**	**DB3**	**3.5**	**Benzo(a)pyrene**	**25**		**0.1**	**4.2**	**250**
Landau 1990	**1990**	**DB2**	**4.5**	**Benzo(a)pyrene**	**18**		**0.1**	**4.2**	**180**
Landau 1990	**1990**	**DB6**	**7**	**Benzo(a)pyrene**	**13**		**0.1**	**0.21**	**130**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(a)pyrene**	**12**		**0.1**	**0.21**	**120**
Hart Crowser 1990b	**Aug-90**	**HC-107**	**3.1**	**Benzo(a)pyrene**	**8.6**		**0.1**	**4.2**	**86**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**5.3**	**Benzo(a)pyrene**	**8.6**		**0.1**	**4.2**	**86**
Landau 1990	**1990**	**DB5**	**2**	**Benzo(a)pyrene**	**7.7**		**0.1**	**4.2**	**77**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(a)pyrene**	**7.2**		**0.1**	**0.21**	**72**
Landau 1990	**1990**	**DB4**	**6**	**Benzo(a)pyrene**	**5.2**		**0.1**	**4.2**	**52**
Landau 1990	**1990**	**DB2**	**7**	**Benzo(a)pyrene**	**4.6**		**0.1**	**0.21**	**46**
Landau 1990	**1990**	**DB8**	**5**	**Benzo(a)pyrene**	**3.2**		**0.1**	**4.2**	**32**
Landau 1990	**1990**	**DB6**	**2**	**Benzo(a)pyrene**	**2.6**		**0.1**	**4.2**	**26**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(a)pyrene**	**2.5**		**0.1**	**0.21**	**25**
Landau 1990	**1990**	**DB6**	**13**	**Benzo(a)pyrene**	**1.8**		**0.1**	**0.21**	**18**
Landau 1990	**1990**	**DB10**	**5**	**Benzo(a)pyrene**	**1.2**		**0.1**	**4.2**	**12**
Landau 1990	**1990**	**DB7**	**8.5**	**Benzo(a)pyrene**	**1.2**		**0.1**	**0.21**	**12**
Hart Crowser 1990b	**Aug-90**	**HC-106**	**3.5**	**Benzo(a)pyrene**	**1.1**		**0.1**	**4.2**	**11**
Landau 1990	**1990**	**DB4**	**8.5**	**Benzo(a)pyrene**	**1.1**		**0.1**	**0.21**	**11**
Hart Crowser 1990b	**Aug-90**	**HC-102**	**8.5**	**Benzo(a)pyrene**	**1.1**		**0.1**	**0.21**	**11**
Landau 1990	1990	DB9	5	Benzo(a)pyrene	0.99		0.1	4.2	9.9
Landau 1990	1990	DB2	9.5	Benzo(a)pyrene	0.74		0.1	0.21	7.4
Landau 1990	1990	DB7	11.5	Benzo(a)pyrene	0.71		0.1	0.21	7.1
Landau 1990	1990	DB12	5	Benzo(a)pyrene	0.54		0.1	4.2	5.4
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(a)pyrene	0.32		0.1	4.2	3.2
Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(a)pyrene	0.26		0.1	4.2	2.6
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(a)pyrene	0.22		0.1	4.2	2.2
Landau 1990	1990	DB6	16	Benzo(a)pyrene	0.2		0.1	0.21	2.0
Landau 1990	1990	DB11	6.5	Benzo(a)pyrene	0.17		0.1	4.2	1.7
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(a)pyrene	0.16		0.1	4.2	1.6
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Benzo(a)pyrene	0.065	J	0.1	0.21	0.7
Landau 1990	1990	DB2	3.5	Benzo(a)pyrene	0.038	J	0.1	4.2	0.4
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(b)fluoranthene**	**17**			**0.45**	**38**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(b)fluoranthene	17			9.0	1.9

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(b)fluoranthene	16			9.0	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(b)fluoranthene**	**14**			**0.45**	**31**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(b)fluoranthene**	**5.2**			**0.45**	**12**
Hart Crowser 1990b	Aug-90	HC-106	3.5	Benzo(b)fluoranthene	2.3			9.0	0.3
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(b)fluoranthene	2			0.45	4.4
Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(b)fluoranthene	0.63			9.0	0.1
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(b)fluoranthene	0.58			9.0	0.1
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(b)fluoranthene	0.43			9.0	0.0
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(b)fluoranthene	0.34			9.0	0.0
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Benzo(b)fluoranthene	0.13			0.45	0.3
Hart Crowser 1990b	Aug-90	HC-103	10.8	Benzo(b)fluoranthene	0.085	J		0.45	0.2
Landau 1990	**1990**	**DB11**	**8**	**Benzo(g,h,i)perylene**	**20**			**0.078**	**256**
Landau 1990	1990	DB6	4.5	Benzo(g,h,i)perylene	9.2			1.6	5.8
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(g,h,i)perylene**	**6.5**			**0.078**	**83**
Landau 1990	**1990**	**DB6**	**7**	**Benzo(g,h,i)perylene**	**6.3**			**0.078**	**81**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzo(g,h,i)perylene**	**5.3**			**0.078**	**68**
Landau 1990	1990	DB3	3.5	Benzo(g,h,i)perylene	4.1			1.6	2.6
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(g,h,i)perylene	3.5			1.6	2.2
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(g,h,i)perylene	3.4			1.6	2.1
Landau 1990	1990	DB2	4.5	Benzo(g,h,i)perylene	2.8			1.6	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(g,h,i)perylene**	**1.8**			**0.078**	**23**
Landau 1990	**1990**	**DB2**	**7**	**Benzo(g,h,i)perylene**	**0.88**			**0.078**	**11**
Landau 1990	1990	DB9	5	Benzo(g,h,i)perylene	0.86			1.6	0.5
Landau 1990	1990	DB7	8.5	Benzo(g,h,i)perylene	0.76			0.078	9.7
Hart Crowser 1990b	Aug-90	HC-106	3.5	Benzo(g,h,i)perylene	0.62			1.6	0.4
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(g,h,i)perylene	0.59			0.078	7.6
Landau 1990	1990	DB6	13	Benzo(g,h,i)perylene	0.59			0.078	7.6
Landau 1990	1990	DB8	5	Benzo(g,h,i)perylene	0.57			1.6	0.4
Hart Crowser 1990b	Aug-90	HC-103	8.5	Benzo(g,h,i)perylene	0.51			0.078	6.5
Landau 1990	1990	DB6	2	Benzo(g,h,i)perylene	0.44			1.6	0.3
Landau 1990	1990	DB5	2	Benzo(g,h,i)perylene	0.26	J		1.6	0.2
Landau 1990	1990	DB2	9.5	Benzo(g,h,i)perylene	0.25			0.078	3.2
Landau 1990	1990	DB10	5	Benzo(g,h,i)perylene	0.25			1.6	0.2
Landau 1990	1990	DB11	6.5	Benzo(g,h,i)perylene	0.23			1.6	0.1
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(g,h,i)perylene	0.18			1.6	0.1
Landau 1990	1990	DB4	6	Benzo(g,h,i)perylene	0.15	M		1.6	0.1
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(g,h,i)perylene	0.15			1.6	0.1
Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(g,h,i)perylene	0.097	J		1.6	0.1
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(g,h,i)perylene	0.083	J		1.6	0.1

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Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	8.5	Benzo(g,h,i)perylene	0.076	M		0.078	1.0
Landau 1990	1990	DB2	3.5	Benzo(g,h,i)perylene	0.054	J		1.6	0.0
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Benzo(k)fluoranthene**	**18**			**0.45**	**40**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Benzo(k)fluoranthene	18			9.0	2.0
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Benzo(k)fluoranthene**	**17**			**0.45**	**38**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Benzo(k)fluoranthene	16			9.0	1.8
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Benzo(k)fluoranthene**	**6.5**			**0.45**	**14**
Hart Crowser 1990b	Aug-90	HC-102	8.5	Benzo(k)fluoranthene	2.5			0.45	5.6
Hart Crowser 1990b	Aug-90	HC-106	3.5	Benzo(k)fluoranthene	2.3			9.0	0.3
Hart Crowser 1990b	Aug-90	HC-105	6.0	Benzo(k)fluoranthene	0.65			9.0	0.1
Hart Crowser 1990b	Aug-90	HC-110	6.8	Benzo(k)fluoranthene	0.60			9.0	0.1
Hart Crowser 1990b	Aug-90	HC-103	6.5	Benzo(k)fluoranthene	0.53			9.0	0.1
Hart Crowser 1990b	Aug-90	HC-110	3.5	Benzo(k)fluoranthene	0.34			9.0	0.0
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Benzo(k)fluoranthene	0.13			0.45	0.3
Hart Crowser 1990b	Aug-90	HC-103	10.8	Benzo(k)fluoranthene	0.11			0.45	0.2
Landau 1990	**1990**	**DB11**	**8**	**Benzofluoranthenes**	**510**			**0.45**	**1,133**
Landau 1990	**1990**	**DB11**	**9.5**	**Benzofluoranthenes**	**159**			**0.45**	**353**
Landau 1990	1990	DB6	4.5	Benzofluoranthenes	65			9.0	7.2
Landau 1990	1990	DB3	3.5	Benzofluoranthenes	64			9.0	7.1
Landau 1990	1990	DB2	4.5	Benzofluoranthenes	36			9.0	4.0
Landau 1990	1990	DB5	2	Benzofluoranthenes	19			9.0	2.1
Landau 1990	**1990**	**DB6**	**7**	**Benzofluoranthenes**	**16**			**0.45**	**36**
Landau 1990	1990	DB4	6	Benzofluoranthenes	16			9.0	1.8
Landau 1990	**1990**	**DB2**	**7**	**Benzofluoranthenes**	**9.3**			**0.45**	**21**
Landau 1990	1990	DB8	5	Benzofluoranthenes	8.1			9.0	0.9
Landau 1990	1990	DB6	2	Benzofluoranthenes	6.9			9.0	0.8
Landau 1990	1990	DB10	5	Benzofluoranthenes	3.2			9.0	0.4
Landau 1990	1990	DB6	13	Benzofluoranthenes	3			0.45	6.7
Landau 1990	1990	DB4	8.5	Benzofluoranthenes	2.90			0.45	6.4
Landau 1990	1990	DB9	5	Benzofluoranthenes	2.9			9.0	0.3
Landau 1990	1990	DB7	11.5	Benzofluoranthenes	2.3			0.45	5.1
Landau 1990	1990	DB12	5	Benzofluoranthenes	1.7			9.0	0.2
Landau 1990	1990	DB7	8.5	Benzofluoranthenes	1.2			0.45	2.7
Landau 1990	1990	DB2	9.5	Benzofluoranthenes	1.2			0.45	2.7
Landau 1990	1990	DB6	16	Benzofluoranthenes	0.4			0.45	0.9
Landau 1990	1990	DB11	6.5	Benzofluoranthenes	0.33			9.0	0.0
Landau 1990	1990	DB1	5	Benzofluoranthenes	0.086			9.0	0.0
Landau 1990	1990	DB13	11	Benzofluoranthenes	0.061			0.45	0.1
Landau 1990	1990	DB2	3.5	Benzofluoranthenes	0.032	J		9.0	0.0

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Crowley Marine Services

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Landau 1990	1990	DB6	4.5	Bis(2-Ethylhexyl)phthalate	3.2	MB	71	1.6	2.0
Landau 1990	**1990**	**DB11**	**8**	**Bis(2-Ethylhexyl)phthalate**	**2.6**	**B**	**71**	**0.078**	**33**
Landau 1990	1990	DB1	6.5	Bis(2-Ethylhexyl)phthalate	1	B	71	1.6	0.6
Landau 1990	1990	DB1	5	Bis(2-Ethylhexyl)phthalate	0.99	B	71	1.6	0.6
Landau 1990	**1990**	**DB11**	**9.5**	**Bis(2-Ethylhexyl)phthalate**	**0.87**	**B**	**71**	**0.078**	**11**
Landau 1990	1990	DB3	3.5	Bis(2-Ethylhexyl)phthalate	0.85	B	71	1.6	0.5
Landau 1990	1990	DB11	6.5	Bis(2-Ethylhexyl)phthalate	0.79	B	71	1.6	0.5
Landau 1990	1990	DB2	4.5	Bis(2-Ethylhexyl)phthalate	0.76	B	71	1.6	0.5
Landau 1990	1990	DB7	11.5	Bis(2-Ethylhexyl)phthalate	0.62	B	71	0.078	7.9
Landau 1990	1990	DB3	2	Bis(2-Ethylhexyl)phthalate	0.62	B	71	1.6	0.4
Landau 1990	1990	DB3	7.5	Bis(2-Ethylhexyl)phthalate	0.51	B	71	0.078	6.5
Landau 1990	1990	DB7	8.5	Bis(2-Ethylhexyl)phthalate	0.49	B	71	0.078	6.3
Landau 1990	1990	DB1	9.5	Bis(2-Ethylhexyl)phthalate	0.49	B	71	0.078	6.3
Landau 1990	1990	DB2	18	Bis(2-Ethylhexyl)phthalate	0.45		71	0.078	5.8
Landau 1990	1990	DB5	2	Bis(2-Ethylhexyl)phthalate	0.45	B	71	1.6	0.3
Landau 1990	1990	DB3	13.5	Bis(2-Ethylhexyl)phthalate	0.41	B	71	0.078	5.3
Landau 1990	1990	DB6	2	Bis(2-Ethylhexyl)phthalate	0.39	B	71	1.6	0.2
Landau 1990	1990	DB3	9	Bis(2-Ethylhexyl)phthalate	0.38	B	71	0.078	4.9
Landau 1990	1990	DB2	9.5	Bis(2-Ethylhexyl)phthalate	0.37	B	71	0.078	4.7
Landau 1990	1990	DB3	17	Bis(2-Ethylhexyl)phthalate	0.37	B	71	0.078	4.7
Landau 1990	1990	DB2	3.5	Bis(2-Ethylhexyl)phthalate	0.34	B	71	1.6	0.2
Landau 1990	1990	DB5	8	Bis(2-Ethylhexyl)phthalate	0.28	B	71	0.078	3.6
Landau 1990	1990	DB2	12	Bis(2-Ethylhexyl)phthalate	0.27	B	71	0.078	3.5
Landau 1990	1990	DB3	6	Bis(2-Ethylhexyl)phthalate	0.16	B	71	1.6	0.1
Landau 1990	1990	FB4	11	Bis(2-Ethylhexyl)phthalate	0.15		71	0.078	1.9
Landau 1990	1990	DB7	6	Bis(2-Ethylhexyl)phthalate	0.13	B	71	1.6	0.1
Landau 1990	1990	DB5	11	Bis(2-Ethylhexyl)phthalate	0.11	B	71	0.078	1.4
Landau 1990	1990	DB9	5	Bis(2-Ethylhexyl)phthalate	0.06		71	1.6	0.0
Landau 1990	1990	DB8	5	Bis(2-Ethylhexyl)phthalate	0.043	MB	71	1.6	0.0
Landau 1990	1990	DB6	4.5	Cadmium	4.9		2	34	2.5
Landau 1990	1990	DB6	7	Cadmium	4.1		2	1.7	2.1
Landau 1990	1990	DB7	11.5	Cadmium	3.6		2	1.7	1.8
Landau 1990	1990	DB6	2	Cadmium	2.1		2	34	1.1
Landau 1990	1990	FB2	2	Cadmium	1.4		2	34	0.7
Landau 1990	1990	DB5	2	Cadmium	1.2		2	34	0.6
Landau 1990	1990	DB2	4.5	Cadmium	1.2		2	34	0.6
Landau 1990	1990	DB2	7	Cadmium	1.0		2	1.7	0.5
Landau 1990	1990	DB10	5	Cadmium	0.8		2	34	0.4
Landau 1990	1990	DB3	3.5	Cadmium	0.6		2	34	0.3

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Landau 1990	1990	DB2	9.5	Cadmium	0.6		2	1.7	0.3
Landau 1990	1990	DB8	5	Cadmium	0.5		2	34	0.3
Landau 1990	1990	DB9	5	Cadmium	0.5		2	34	0.3
Landau 1990	1990	DB6	13	Cadmium	0.5		2	1.7	0.3
Landau 1990	1990	DB2	3.5	Cadmium	0.4		2	34	0.2
Landau 1990	1990	FB3	5.5	Cadmium	0.4		2	34	0.2
Landau 1990	1990	DB7	6	Cadmium	0.4		2	34	0.2
Landau 1990	1990	DB11	8	Cadmium	0.4		2	1.7	0.2
Landau 1990	1990	DB7	8.5	Cadmium	0.4		2	1.7	0.2
Landau 1990	1990	DB14	9.5	Cadmium	0.4		2	1.7	0.2
Landau 1990	1990	DB6	10	Cadmium	0.4		2	1.7	0.2
Landau 1990	1990	DB3	2	Cadmium	0.3		2	34	0.2
Landau 1990	1990	DB1	5	Cadmium	0.3		2	34	0.2
Landau 1990	1990	DB12	5	Cadmium	0.3		2	34	0.2
Landau 1990	1990	DB4	6	Cadmium	0.3		2	34	0.2
Landau 1990	1990	DB1	6.5	Cadmium	0.3		2	34	0.2
Landau 1990	1990	DB5	8	Cadmium	0.3		2	1.7	0.2
Landau 1990	1990	DB4	8.5	Cadmium	0.3		2	1.7	0.2
Landau 1990	1990	DB3	9	Cadmium	0.3		2	1.7	0.2
Landau 1990	1990	DB2	12	Cadmium	0.3		2	1.7	0.2
Landau 1990	1990	DB11	6.5	Cadmium	0.2		2	34	0.1
Landau 1990	1990	DB1	9.5	Cadmium	0.2		2	1.7	0.1
Landau 1990	1990	DB3	17	Cadmium	0.2		2	1.7	0.1
Landau 1990	1990	DB2	18	Cadmium	0.2		2	1.7	0.1
Hart Crowser 1989a	Nov-88	SS-5	0-0.5	Cadmium	0.01		2	1.7	0.0
Landau 1990	1990	DB6	2	Carbon Disulfide	0.0061	J	8,000		0.0
Landau 1990	1990	DB7	11.5	Carbon Disulfide	0.0033		8,000		0.0
Landau 1990	1990	DB6	10	Carbon Disulfide	0.0026		8,000		0.0
Landau 1990	1990	DB10	5	Carbon Disulfide	0.0016	J	8,000		0.0
Landau 1990	1990	DB12	5	Carbon Disulfide	0.0016	J	8,000		0.0
Landau 1990	1990	DB5	2	Carbon Disulfide	0.001	M	8,000		0.0
Landau 1990	1990	DB9	8	Carbon Disulfide	0.0007	J	8,000		0.0
Landau 1990	1990	FB2	18.5	Carbon Disulfide	0.0007	J	8,000		0.0
Landau 1990	1990	DB6	7	Chlorobenzene	0.097	M	1,600		0.0
Landau 1990	1990	DB12	11.5	Chlorobenzene	0.0087		1,600		0.0
Landau 1990	1990	DB7	11.5	Chlorobenzene	0.0033	M	1,600		0.0
Landau 1990	1990	DB6	4.5	Chromium	109		19	5,400	5.7
Landau 1990	1990	DB5	2	Chromium	70.7		19	5,400	3.7
Landau 1990	1990	DB6	7	Chromium	58.3		19	270	3.1

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB11	8	Chromium	50.2		19	270	2.6
Landau 1990	1990	DB7	11.5	Chromium	48.3		19	270	2.5
Landau 1990	1990	DB6	2	Chromium	38.4		19	5,400	2.0
Landau 1990	1990	DB7	8.5	Chromium	29.7		19	270	1.6
Landau 1990	1990	DB7	6	Chromium	27.2		19	5,400	1.4
Landau 1990	1990	DB2	3.5	Chromium	25.3		19	5,400	1.3
Landau 1990	1990	DB3	2	Chromium	23.1		19	5,400	1.2
Landau 1990	1990	FB5	2	Chromium	21.4		19	5,400	1.1
Landau 1990	1990	DB8	5	Chromium	19.0		19	5,400	1.0
Landau 1990	1990	DB4	6	Chromium	18.5		19	5,400	1.0
Landau 1990	1990	DB2	7	Chromium	17.5		19	270	0.9
Landau 1990	1990	FB1	7	Chromium	17.4		19	270	0.9
Landau 1990	1990	DB9	11	Chromium	17.4		19	270	0.9
Landau 1990	1990	DB10	5	Chromium	17.2		19	5,400	0.9
Landau 1990	1990	DB4	8.5	Chromium	16.8		19	270	0.9
Landau 1990	1990	DB3	9	Chromium	16.6		19	270	0.9
Landau 1990	1990	FB1	13	Chromium	16.1		19	270	0.8
Landau 1990	1990	FB2	2	Chromium	16.0		19	5,400	0.8
Landau 1990	1990	FB4	8	Chromium	16.0		19	270	0.8
Landau 1990	1990	DB3	3.5	Chromium	15.3		19	5,400	0.8
Landau 1990	1990	DB4	11	Chromium	15.2		19	270	0.8
Landau 1990	1990	DB13	11	Chromium	15.0		19	270	0.8
Landau 1990	1990	DB2	12	Chromium	14.9		19	270	0.8
Landau 1990	1990	DB2	9.5	Chromium	14.8		19	270	0.8
Landau 1990	1990	DB10	11	Chromium	14.7		19	270	0.8
Landau 1990	1990	DB6	13	Chromium	14.6		19	270	0.8
Landau 1990	1990	DB6	10	Chromium	15		19	270	0.8
Landau 1990	1990	DB2	4.5	Chromium	14.3		19	5,400	0.8
Landau 1990	1990	DB3	7.5	Chromium	13.7		19	270	0.7
Landau 1990	1990	DB14	9.5	Chromium	13.5		19	270	0.7
Landau 1990	1990	FB4	11	Chromium	13.3		19	270	0.7
Landau 1990	1990	DB3	13.5	Chromium	13.2		19	270	0.7
Landau 1990	1990	DB10	8	Chromium	12.9		19	270	0.7
Landau 1990	1990	DB11	9.5	Chromium	12.8		19	270	0.7
Landau 1990	1990	DB8	8	Chromium	12.6		19	270	0.7
Landau 1990	1990	DB1	9.5	Chromium	12.6		19	270	0.7
Landau 1990	1990	FB5	11	Chromium	12.2		19	270	0.6
Landau 1990	1990	DB8	11	Chromium	12.1		19	270	0.6
Landau 1990	1990	DB5	11	Chromium	11.5		19	270	0.6

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	18.5	Chromium	12		19	270	0.6
Landau 1990	1990	DB1	5	Chromium	11.4		19	5,400	0.6
Landau 1990	1990	DB9	5	Chromium	11.3		19	5,400	0.6
Landau 1990	1990	FB3	5.5	Chromium	11.3		19	5,400	0.6
Landau 1990	1990	FB5	8	Chromium	11.3		19	270	0.6
Landau 1990	1990	FB3	13.5	Chromium	11.2		19	270	0.6
Landau 1990	1990	DB3	17	Chromium	11.2		19	270	0.6
Landau 1990	1990	DB12	11.5	Chromium	11.0		19	270	0.6
Landau 1990	1990	DB9	8	Chromium	10.9		19	270	0.6
Landau 1990	1990	FB3	3	Chromium	10.8		19	5,400	0.6
Landau 1990	1990	FB2	5.5	Chromium	10.6		19	5,400	0.6
Landau 1990	1990	FB2	8	Chromium	10.4		19	270	0.5
Landau 1990	1990	DB6	16	Chromium	10.4		19	270	0.5
Landau 1990	1990	FB2	18.5	Chromium	10.4		19	270	0.5
Landau 1990	1990	DB1	6.5	Chromium	10.3		19	5,400	0.5
Landau 1990	1990	DB5	8	Chromium	10.1		19	270	0.5
Landau 1990	1990	FB1	2	Chromium	10.0		19	5,400	0.5
Landau 1990	1990	DB12	5	Chromium	10.0		19	5,400	0.5
Landau 1990	1990	DB11	6.5	Chromium	10.0		19	5,400	0.5
Landau 1990	1990	DB2	18	Chromium	10.0		19	270	0.5
Landau 1990	1990	DB3	6	Chromium	9.0		19	5,400	0.5
Landau 1990	1990	FB4	2	Chromium	8.6		19	5,400	0.5
Landau 1990	**1990**	**DB6**	**4.5**	**Chrysene**	**380**	**B**		**9.2**	**41**
Landau 1990	**1990**	**DB11**	**8**	**Chrysene**	**320**	**B**		**0.46**	**696**
Landau 1990	**1990**	**DB11**	**9.5**	**Chrysene**	**97**	**B**		**0.46**	**211**
Landau 1990	**1990**	**DB6**	**7**	**Chrysene**	**40**	**B**		**0.46**	**87**
Landau 1990	1990	DB3	3.5	Chrysene	37	B		9.2	4.0
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Chrysene**	**25**			**0.46**	**54**
Landau 1990	1990	DB5	2	Chrysene	20	B		9.2	2.2
Hart Crowser 1990b	Aug-90	HC-106	5.3	Chrysene	20			9.2	2.2
Landau 1990	1990	DB2	4.5	Chrysene	19	B		9.2	2.1
Landau 1990	1990	DB4	6	Chrysene	13	B		9.2	1.4
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Chrysene**	**12**			**0.46**	**26**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Chrysene	12			9.2	1.3
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Chrysene**	**11**			**0.46**	**24**
Landau 1990	1990	DB6	2	Chrysene	9.9	B		9.2	1.1
Landau 1990	**1990**	**DB2**	**7**	**Chrysene**	**7.3**	**B**		**0.46**	**16**
Landau 1990	**1990**	**DB6**	**13**	**Chrysene**	**6.7**			**0.46**	**15**
Landau 1990	1990	DB8	5	Chrysene	3.6	B		9.2	0.4

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	8.5	Chrysene	2.6	B		0.46	5.7
Landau 1990	1990	DB7	11.5	Chrysene	1.9	B		0.46	4.1
Hart Crowser 1990b	Aug-90	HC-102	8.5	Chrysene	1.7			0.46	3.7
Landau 1990	1990	DB9	5	Chrysene	1.5			9.2	0.2
Landau 1990	1990	DB12	5	Chrysene	1.4			9.2	0.2
Hart Crowser 1990b	Aug-90	HC-106	3.5	Chrysene	1.3			9.2	0.1
Landau 1990	1990	DB10	5	Chrysene	1.1			9.2	0.1
Landau 1990	1990	DB6	16	Chrysene	0.92			0.46	2.0
Landau 1990	1990	DB7	8.5	Chrysene	0.85	B		0.46	1.8
Landau 1990	1990	DB2	9.5	Chrysene	0.75			0.46	1.6
Landau 1990	1990	DB12	11.5	Chrysene	0.53	M		0.46	1.2
Hart Crowser 1990b	Aug-90	HC-106	7.5	Chrysene	0.51			0.46	1.1
Hart Crowser 1990b	Aug-90	HC-105	6.0	Chrysene	0.50			9.2	0.1
Landau 1990	1990	DB11	6.5	Chrysene	0.47			9.2	0.1
Hart Crowser 1990b	Aug-90	HC-110	6.8	Chrysene	0.41			9.2	0.0
Hart Crowser 1990b	Aug-90	HC-103	6.5	Chrysene	0.28			9.2	0.0
Landau 1990	1990	DB6	10	Chrysene	0.26			0.46	0.6
Hart Crowser 1990b	Aug-90	HC-110	3.5	Chrysene	0.24			9.2	0.0
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Chrysene	0.23			0.46	0.5
Landau 1990	1990	DB6	18.5	Chrysene	0.23			0.46	0.5
Hart Crowser 1990b	Aug-90	HC-103	10.8	Chrysene	0.20			0.46	0.4
Landau 1990	1990	DB1	5	Chrysene	0.12			9.2	0.0
Landau 1990	1990	FB2	2	Chrysene	0.11			9.2	0.0
Landau 1990	1990	DB1	6.5	Chrysene	0.081	M		9.2	0.0
Landau 1990	1990	DB13	11	Chrysene	0.076			0.46	0.2
Landau 1990	1990	DB2	3.5	Chrysene	0.038	J		9.2	0.0
Landau 1990	1990	FB5	11	cis-1,2-DCE	0.031		800		0.0
Landau 1990	1990	FB5	8	cis-1,2-DCE	0.023		800		0.0
Landau 1990	1990	DB6	4.5	Copper	1,400		3,000	780	1.8
Landau 1990	**1990**	**DB6**	**7**	**Copper**	**946**		**3,000**	**39**	**24**
Landau 1990	**1990**	**DB7**	**11.5**	**Copper**	**782**		**3,000**	**39**	**20**
Landau 1990	1990	DB6	2	Copper	498		3,000	780	0.6
Landau 1990	1990	DB2	4.5	Copper	263		3,000	780	0.3
Landau 1990	1990	DB5	2	Copper	195		3,000	780	0.3
Landau 1990	1990	DB2	7	Copper	179		3,000	39	4.6
Landau 1990	1990	DB10	5	Copper	101		3,000	780	0.1
Landau 1990	1990	DB7	8.5	Copper	91.2		3,000	39	2.3
Landau 1990	1990	DB8	5	Copper	83.0		3,000	780	0.1
Landau 1990	1990	DB3	3.5	Copper	70.9		3,000	780	0.1

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Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	6	Copper	49.2		3,000	780	0.1
Landau 1990	1990	DB6	13	Copper	48.9		3,000	39	1.3
Landau 1990	1990	DB2	3.5	Copper	40.1		3,000	780	0.1
Landau 1990	1990	DB9	5	Copper	30.7		3,000	780	0.0
Landau 1990	1990	FB2	2	Copper	27.7		3,000	780	0.0
Landau 1990	1990	DB4	8.5	Copper	27.2		3,000	39	0.7
Landau 1990	1990	DB1	6.5	Copper	26.9		3,000	780	0.0
Landau 1990	1990	DB11	8	Copper	26.4		3,000	39	0.7
Landau 1990	1990	DB9	11	Copper	25.3		3,000	39	0.6
Landau 1990	1990	DB6	10	Copper	24.6		3,000	39	0.6
Landau 1990	1990	FB1	7	Copper	24.0		3,000	39	0.6
Landau 1990	1990	DB3	9	Copper	23.2		3,000	39	0.6
Landau 1990	1990	DB2	9.5	Copper	22.6		3,000	39	0.6
Landau 1990	1990	DB2	12	Copper	22.1		3,000	39	0.6
Landau 1990	1990	DB4	11	Copper	21.2		3,000	39	0.5
Landau 1990	1990	DB11	6.5	Copper	20.4		3,000	780	0.0
Landau 1990	1990	FB4	8	Copper	19.7		3,000	39	0.5
Landau 1990	1990	FB4	11	Copper	19.6		3,000	39	0.5
Landau 1990	1990	FB1	13	Copper	19.6		3,000	39	0.5
Landau 1990	1990	DB10	11	Copper	19.4		3,000	39	0.5
Landau 1990	1990	DB13	11	Copper	19.4		3,000	39	0.5
Landau 1990	1990	DB1	9.5	Copper	19.3		3,000	39	0.5
Landau 1990	1990	DB9	8	Copper	17.9		3,000	39	0.5
Landau 1990	1990	DB14	9.5	Copper	17.6		3,000	39	0.5
Landau 1990	1990	DB3	2	Copper	17.3		3,000	780	0.0
Landau 1990	1990	DB11	9.5	Copper	17.2		3,000	39	0.4
Landau 1990	1990	DB7	6	Copper	16.9		3,000	780	0.0
Landau 1990	1990	DB3	7.5	Copper	16.8		3,000	39	0.4
Landau 1990	1990	DB10	8	Copper	16.3		3,000	39	0.4
Landau 1990	1990	DB2	18	Copper	16.3		3,000	39	0.4
Landau 1990	1990	DB8	8	Copper	15.9		3,000	39	0.4
Landau 1990	1990	DB8	11	Copper	15.9		3,000	39	0.4
Landau 1990	1990	DB6	16	Copper	14.9		3,000	39	0.4
Landau 1990	1990	DB1	5	Copper	14.9		3,000	780	0.0
Landau 1990	1990	FB5	11	Copper	14.6		3,000	39	0.4
Landau 1990	1990	FB5	8	Copper	14.4		3,000	39	0.4
Landau 1990	1990	DB5	11	Copper	14.2		3,000	39	0.4
Landau 1990	1990	DB3	13.5	Copper	14.2		3,000	39	0.4
Landau 1990	1990	FB3	13.5	Copper	13.7		3,000	39	0.4

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Crowley Marine Services

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Landau 1990	1990	DB5	8	Copper	13.4		3,000	39	0.3
Landau 1990	1990	DB3	17	Copper	13.1		3,000	39	0.3
Landau 1990	1990	DB12	11.5	Copper	13.0		3,000	39	0.3
Landau 1990	1990	FB3	5.5	Copper	13.0		3,000	780	0.0
Landau 1990	1990	DB12	5	Copper	12.7		3,000	780	0.0
Landau 1990	1990	FB5	2	Copper	12.0		3,000	780	0.0
Landau 1990	1990	FB3	3	Copper	11.7		3,000	780	0.0
Landau 1990	1990	FB2	8	Copper	11.5		3,000	39	0.3
Landau 1990	1990	DB6	18.5	Copper	11.0		3,000	39	0.3
Landau 1990	1990	DB3	6	Copper	11.0		3,000	780	0.0
Landau 1990	1990	FB1	2	Copper	10.7		3,000	780	0.0
Landau 1990	1990	FB2	18.5	Copper	9.8		3,000	39	0.3
Landau 1990	1990	FB2	5.5	Copper	9.3		3,000	780	0.0
Landau 1990	1990	FB4	2	Copper	8.6		3,000	780	0.0
Landau 1990	**1990**	**DB11**	**8**	**Dibenz(a,h)anthracene**	**46**			**0.033**	**1,394**
Landau 1990	**1990**	**DB6**	**4.5**	**Dibenz(a,h)anthracene**	**23**			**0.66**	**35**
Landau 1990	**1990**	**DB3**	**3.5**	**Dibenz(a,h)anthracene**	**11**			**0.66**	**17**
Landau 1990	**1990**	**DB11**	**9.5**	**Dibenz(a,h)anthracene**	**8**			**0.033**	**242**
Landau 1990	**1990**	**DB2**	**4.5**	**Dibenz(a,h)anthracene**	**6.8**			**0.66**	**10**
Landau 1990	**1990**	**DB6**	**7**	**Dibenz(a,h)anthracene**	**3.5**			**0.033**	**106**
Landau 1990	**1990**	**DB2**	**7**	**Dibenz(a,h)anthracene**	**1.8**			**0.033**	**55**
Landau 1990	1990	DB5	2	Dibenz(a,h)anthracene	1.8			0.66	2.7
Landau 1990	1990	DB8	5	Dibenz(a,h)anthracene	1.3			0.66	2.0
Landau 1990	1990	DB4	6	Dibenz(a,h)anthracene	1.3			0.66	2.0
Hart Crowser 1990b	Aug-90	HC-106	5.3	Dibenz(a,h)anthracene	1.1			0.66	1.7
Hart Crowser 1990b	Aug-90	HC-107	3.1	Dibenz(a,h)anthracene	1.0			0.66	1.5
Landau 1990	1990	DB6	2	Dibenz(a,h)anthracene	0.92			0.66	1.4
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Dibenz(a,h)anthracene**	**0.52**			**0.033**	**16**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Dibenz(a,h)anthracene**	**0.46**			**0.033**	**14**
Landau 1990	1990	DB10	5	Dibenz(a,h)anthracene	0.37			0.66	0.6
Landau 1990	**1990**	**DB6**	**13**	**Dibenz(a,h)anthracene**	**0.36**			**0.033**	**11**
Landau 1990	**1990**	**DB4**	**8.5**	**Dibenz(a,h)anthracene**	**0.33**			**0.033**	**10**
Landau 1990	1990	DB9	5	Dibenz(a,h)anthracene	0.33			0.66	0.5
Hart Crowser 1990b	Aug-90	HC-103	8.5	Dibenz(a,h)anthracene	0.23	J		0.033	7.0
Landau 1990	1990	DB12	5	Dibenz(a,h)anthracene	0.18			0.66	0.3
Landau 1990	1990	DB7	11.5	Dibenz(a,h)anthracene	0.17	M		0.033	5.2
Hart Crowser 1990b	Aug-90	HC-106	3.5	Dibenz(a,h)anthracene	0.15			0.66	0.2
Landau 1990	1990	DB7	8.5	Dibenz(a,h)anthracene	0.13			0.033	3.9
Landau 1990	1990	DB11	6.5	Dibenz(a,h)anthracene	0.054	M		0.66	0.1

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB11**	**8**	**Dibenzofuran**	**390**		**160**	**0.059**	**6,610**
Landau 1990	**1990**	**DB6**	**4.5**	**Dibenzofuran**	**210**		**160**	**1.2**	**175**
Landau 1990	**1990**	**DB11**	**9.5**	**Dibenzofuran**	**29**		**160**	**0.059**	**492**
Landau 1990	**1990**	**DB6**	**7**	**Dibenzofuran**	**21**		**160**	**0.059**	**356**
Landau 1990	**1990**	**DB6**	**13**	**Dibenzofuran**	**4.1**		**160**	**0.059**	**69**
Landau 1990	1990	DB5	2	Dibenzofuran	3.2		160	1.2	2.7
Landau 1990	**1990**	**DB3**	**17**	**Dibenzofuran**	**2.5**		**160**	**0.059**	**42**
Landau 1990	1990	DB6	2	Dibenzofuran	2.2		160	1.2	1.8
Landau 1990	**1990**	**DB2**	**7**	**Dibenzofuran**	**2**		**160**	**0.059**	**34**
Landau 1990	**1990**	**DB2**	**9.5**	**Dibenzofuran**	**1.2**		**160**	**0.059**	**20**
Landau 1990	**1990**	**DB7**	**11.5**	**Dibenzofuran**	**0.6**		**160**	**0.059**	**10**
Landau 1990	1990	DB4	6	Dibenzofuran	0.54		160	1.2	0.5
Landau 1990	1990	DB6	16	Dibenzofuran	0.51		160	0.059	8.6
Landau 1990	1990	DB3	13.5	Dibenzofuran	0.44		160	0.059	7.5
Landau 1990	1990	DB3	3.5	Dibenzofuran	0.32	J	160	1.2	0.3
Landau 1990	1990	DB12	5	Dibenzofuran	0.23		160	1.2	0.2
Landau 1990	1990	DB2	4.5	Dibenzofuran	0.15	J	160	1.2	0.1
Landau 1990	1990	DB4	8.5	Dibenzofuran	0.11	J	160	0.059	1.9
Landau 1990	1990	DB6	10	Dibenzofuran	0.092		160	0.059	1.6
Landau 1990	1990	DB8	5	Dibenzofuran	0.042	J	160	1.2	0.0
Landau 1990	1990	DB9	5	Dibenzofuran	0.032		160	1.2	0.0
Landau 1990	1990	DB13	11	Dibenzofuran	0.02	M	160	0.059	0.3
Hart Crowser 1990b	Aug-90	HC-106	5.3	Diesel-Range Hydrocarbons	1,400		2,000		0.7
Hart Crowser 1990b	Aug-90	HC-103	9.8	Diesel-Range Hydrocarbons	940		2,000		0.5
Hart Crowser 1990b	Aug-90	HC-103	10.8	Diesel-Range Hydrocarbons	15		2,000		0.0
Landau 1990	1990	DB7	6	Di-n-butylphthalate	0.08			39	0.0
Landau 1990	1990	DB9	5	Di-n-butylphthalate	0.066			39	0.0
Landau 1990	1990	DB7	8.5	Di-n-butylphthalate	0.054	J		2.0	0.0
Hart Crowser 1989a	Nov-88	SS-4	0-0.5	Endosulfan I	0.0177		480		0.0
Landau 1990	1990	DB6	4.5	Ethylbenzene	1.3		6		0.2
Landau 1990	1990	DB6	7	Ethylbenzene	0.74		6		0.1
Landau 1990	1990	DB11	8	Ethylbenzene	0.48		6		0.1
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Ethylbenzene	0.096		6		0.0
Landau 1990	1990	DB11	9.5	Ethylbenzene	0.08		6		0.0
Landau 1990	1990	DB7	11.5	Ethylbenzene	0.0084		6		0.0
Landau 1990	1990	DB2	9.5	Ethylbenzene	0.0078		6		0.0
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Ethylbenzene	0.005	J	6		0.0
Landau 1990	1990	DB3	13.5	Ethylbenzene	0.0034		6		0.0
Landau 1990	1990	DB6	13	Ethylbenzene	0.0031		6		0.0

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB7	8.5	Ethylbenzene	0.0019		6		0.0
Landau 1990	1990	DB2	7	Ethylbenzene	0.0011	J	6		0.0
Landau 1990	1990	DB12	5	Ethylbenzene	0.0009	M	6		0.0
Landau 1990	1990	DB12	11.5	Ethylbenzene	0.0008	M	6		0.0
Landau 1990	1990	DB5	2	Ethylbenzene	0.0004	M	6		0.0
Landau 1990	**1990**	**DB11**	**8**	**Fluoranthene**	**1,200**	**B**	**3,200**	**1.2**	**1,000**
Landau 1990	**1990**	**DB6**	**4.5**	**Fluoranthene**	**640**	**B**	**3,200**	**24**	**27**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Fluoranthene**	**310**		**3,200**	**1.2**	**258**
Landau 1990	**1990**	**DB11**	**9.5**	**Fluoranthene**	**280**	**B**	**3,200**	**1.2**	**233**
Landau 1990	**1990**	**DB6**	**7**	**Fluoranthene**	**56**	**B**	**3,200**	**1.2**	**47**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Fluoranthene**	**55**		**3,200**	**1.2**	**46**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Fluoranthene	38		3,200	24	1.6
Landau 1990	1990	DB5	2	Fluoranthene	35	B	3,200	24	1.5
Hart Crowser 1990b	Aug-90	HC-107	3.1	Fluoranthene	29		3,200	24	1.2
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Fluoranthene**	**27**		**3,200**	**1.2**	**23**
Landau 1990	1990	DB4	6	Fluoranthene	22	B	3,200	24	0.9
Landau 1990	1990	DB6	2	Fluoranthene	14	B	3,200	24	0.6
Landau 1990	1990	DB3	3.5	Fluoranthene	14	B	3,200	24	0.6
Landau 1990	1990	DB6	13	Fluoranthene	9.3		3,200	1.2	7.8
Landau 1990	1990	DB4	8.5	Fluoranthene	5	B	3,200	1.2	4.2
Landau 1990	1990	DB2	4.5	Fluoranthene	4.5	B	3,200	24	0.2
Landau 1990	1990	DB7	11.5	Fluoranthene	3.8	B	3,200	1.2	3.2
Landau 1990	1990	DB2	9.5	Fluoranthene	3.3		3,200	1.2	2.8
Landau 1990	1990	DB2	7	Fluoranthene	3.2	B	3,200	1.2	2.7
Hart Crowser 1990b	Aug-90	HC-102	8.5	Fluoranthene	3.1		3,200	1.2	2.6
Landau 1990	1990	DB12	5	Fluoranthene	3		3,200	24	0.1
Hart Crowser 1990b	Aug-90	HC-106	3.5	Fluoranthene	2.9		3,200	24	0.1
Landau 1990	1990	DB3	17	Fluoranthene	2.1		3,200	1.2	1.8
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Fluoranthene	1.5		3,200	1.2	1.3
Landau 1990	1990	DB6	16	Fluoranthene	1.5		3,200	1.2	1.3
Landau 1990	1990	DB7	8.5	Fluoranthene	1.3	B	3,200	1.2	1.1
Landau 1990	1990	DB8	5	Fluoranthene	1.2	B	3,200	24	0.1
Hart Crowser 1990b	Aug-90	HC-106	7.5	Fluoranthene	1.0		3,200	1.2	0.8
Hart Crowser 1990b	Aug-90	HC-103	10.8	Fluoranthene	1.0		3,200	1.2	0.8
Landau 1990	1990	DB10	5	Fluoranthene	0.92		3,200	24	0.0
Hart Crowser 1990b	Aug-90	HC-105	6.0	Fluoranthene	0.81		3,200	24	0.0
Landau 1990	1990	DB9	5	Fluoranthene	0.77		3,200	24	0.0
Hart Crowser 1990b	Aug-90	HC-110	6.8	Fluoranthene	0.57		3,200	24	0.0
Hart Crowser 1990b	Aug-90	HC-110	3.5	Fluoranthene	0.55		3,200	24	0.0

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Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	10	Fluoranthene	0.35		3,200	1.2	0.3
Landau 1990	1990	DB6	18.5	Fluoranthene	0.27		3,200	1.2	0.2
Landau 1990	1990	DB1	5	Fluoranthene	0.14		3,200	24	0.0
Landau 1990	1990	DB13	11	Fluoranthene	0.13		3,200	1.2	0.1
Landau 1990	1990	DB11	6.5	Fluoranthene	0.13		3,200	24	0.0
Hart Crowser 1990b	Aug-90	HC-103	6.5	Fluoranthene	0.11		3,200	24	0.0
Landau 1990	1990	DB1	6.5	Fluoranthene	0.1		3,200	24	0.0
Landau 1990	1990	FB2	2	Fluoranthene	0.099	J	3,200	24	0.0
Landau 1990	1990	DB2	18	Fluoranthene	0.076		3,200	1.2	0.1
Landau 1990	1990	DB2	12	Fluoranthene	0.074		3,200	1.2	0.1
Landau 1990	1990	DB5	11	Fluoranthene	0.059	J	3,200	1.2	0.0
Hart Crowser 1990b	Aug-90	HC-106 DUP	7.5	Fluoranthene	0.054	J	3,200	1.2	0.0
Landau 1990	1990	DB3	13.5	Fluoranthene	0.052	J	3,200	1.2	0.0
Landau 1990	1990	DB7	6	Fluoranthene	0.052	J	3,200	24	0.0
Landau 1990	1990	DB2	3.5	Fluoranthene	0.041	J	3,200	24	0.0
Landau 1990	**1990**	**DB11**	**8**	**Fluorene**	**630**		**3,200**	**0.081**	**7,778**
Landau 1990	**1990**	**DB6**	**4.5**	**Fluorene**	**420**	**B**	**3,200**	**1.6**	**263**
Landau 1990	**1990**	**DB11**	**9.5**	**Fluorene**	**140**		**3,200**	**0.081**	**1728**
Landau 1990	**1990**	**DB6**	**7**	**Fluorene**	**32**	**B**	**3,200**	**0.081**	**395**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Fluorene**	**31**		**3,200**	**0.081**	**383**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Fluorene	15		3,200	1.6	9.4
Landau 1990	**1990**	**DB6**	**13**	**Fluorene**	**6.3**		**3,200**	**0.081**	**78**
Landau 1990	1990	DB5	2	Fluorene	5.9		3,200	1.6	3.7
Landau 1990	1990	DB6	2	Fluorene	4	B	3,200	1.6	2.5
Landau 1990	1990	FSS2	0-0.5	Fluorene	4	M	3,200	1.6	2.5
Landau 1990	**1990**	**DB3**	**17**	**Fluorene**	**2.9**		**3,200**	**0.081**	**36**
Landau 1990	**1990**	**DB2**	**7**	**Fluorene**	**2.6**		**3,200**	**0.081**	**32**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Fluorene**	**2.2**		**3,200**	**0.081**	**27**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Fluorene**	**1.8**		**3,200**	**0.081**	**22**
Landau 1990	**1990**	**DB2**	**9.5**	**Fluorene**	**1.7**		**3,200**	**0.081**	**21**
Hart Crowser 1990b	Aug-90	HC-106	3.5	Fluorene	1.7		3,200	1.6	1.1
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Fluorene**	**1.5**		**3,200**	**0.081**	**19**
Landau 1990	1990	DB4	6	Fluorene	1.4	B	3,200	1.6	0.9
Hart Crowser 1990b	Aug-90	HC-107	3.1	Fluorene	0.97		3,200	1.6	0.6
Landau 1990	**1990**	**DB6**	**16**	**Fluorene**	**0.92**		**3,200**	**0.081**	**11**
Landau 1990	**1990**	**DB7**	**11.5**	**Fluorene**	**0.88**		**3,200**	**0.081**	**11**
Landau 1990	1990	DB3	3.5	Fluorene	0.64		3,200	1.6	0.4
Landau 1990	1990	DB3	13.5	Fluorene	0.53		3,200	0.081	6.5
Landau 1990	1990	DB12	5	Fluorene	0.45		3,200	1.6	0.3

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Crowley Marine Services

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Landau 1990	1990	DB4	8.5	Fluorene	0.27	B	3,200	0.081	3.3
Landau 1990	1990	DB7	8.5	Fluorene	0.27		3,200	0.081	3.3
Landau 1990	1990	DB6	10	Fluorene	0.19		3,200	0.081	2.3
Landau 1990	1990	DB6	18.5	Fluorene	0.1		3,200	0.081	1.2
Landau 1990	1990	DB8	5	Fluorene	0.082	B	3,200	1.6	0.1
Landau 1990	1990	DB9	5	Fluorene	0.041		3,200	1.6	0.0
Landau 1990	1990	DB10	5	Fluorene	0.038	J	3,200	1.6	0.0
Landau 1990	1990	DB13	11	Fluorene	0.033	J	3,200	0.081	0.4
Landau 1990	**1990**	**DB11**	**8**	**Indeno(1,2,3-cd)pyrene**	**100**			**0.088**	**1,136**
Landau 1990	**1990**	**DB6**	**4.5**	**Indeno(1,2,3-cd)pyrene**	**37**			**1.8**	**21**
Landau 1990	**1990**	**DB3**	**3.5**	**Indeno(1,2,3-cd)pyrene**	**26**			**1.8**	**14**
Landau 1990	**1990**	**DB11**	**9.5**	**Indeno(1,2,3-cd)pyrene**	**20**			**0.088**	**227**
Landau 1990	1990	DB2	4.5	Indeno(1,2,3-cd)pyrene	14			1.8	7.8
Landau 1990	**1990**	**DB6**	**7**	**Indeno(1,2,3-cd)pyrene**	**7.2**			**0.088**	**82**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Indeno(1,2,3-cd)pyrene**	**6.0**			**0.088**	**68**
Landau 1990	**1990**	**DB2**	**7**	**Indeno(1,2,3-cd)pyrene**	**4.3**			**0.088**	**49**
Hart Crowser 1990b	Aug-90	HC-107	3.1	Indeno(1,2,3-cd)pyrene	3.8			1.8	2.1
Hart Crowser 1990b	Aug-90	HC-106	5.3	Indeno(1,2,3-cd)pyrene	3.8			1.8	2.1
Landau 1990	1990	DB5	2	Indeno(1,2,3-cd)pyrene	3.4			1.8	1.9
Landau 1990	1990	DB8	5	Indeno(1,2,3-cd)pyrene	2.9			1.8	1.6
Landau 1990	1990	DB4	6	Indeno(1,2,3-cd)pyrene	2.3			1.8	1.3
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Indeno(1,2,3-cd)pyrene**	**2.0**			**0.088**	**23**
Landau 1990	1990	DB6	2	Indeno(1,2,3-cd)pyrene	1.6			1.8	0.9
Landau 1990	1990	DB10	5	Indeno(1,2,3-cd)pyrene	1.1			1.8	0.6
Landau 1990	1990	DB9	5	Indeno(1,2,3-cd)pyrene	0.98			1.8	0.5
Landau 1990	**1990**	**DB7**	**8.5**	**Indeno(1,2,3-cd)pyrene**	**0.88**			**0.088**	**10**
Landau 1990	1990	DB6	13	Indeno(1,2,3-cd)pyrene	0.82			0.088	9.3
Hart Crowser 1990b	Aug-90	HC-103	8.5	Indeno(1,2,3-cd)pyrene	0.64			0.088	7.3
Hart Crowser 1990b	Aug-90	HC-106	3.5	Indeno(1,2,3-cd)pyrene	0.63			1.8	0.4
Hart Crowser 1990b	Aug-90	HC-102	8.5	Indeno(1,2,3-cd)pyrene	0.58			0.088	6.6
Landau 1990	1990	DB7	11.5	Indeno(1,2,3-cd)pyrene	0.55			0.088	6.3
Landau 1990	1990	DB4	8.5	Indeno(1,2,3-cd)pyrene	0.53			0.088	6.0
Landau 1990	1990	DB12	5	Indeno(1,2,3-cd)pyrene	0.38			1.8	0.2
Landau 1990	1990	DB2	9.5	Indeno(1,2,3-cd)pyrene	0.26			0.088	3.0
Landau 1990	1990	DB11	6.5	Indeno(1,2,3-cd)pyrene	0.18			1.8	0.1
Hart Crowser 1990b	Aug-90	HC-110	6.8	Indeno(1,2,3-cd)pyrene	0.16			1.8	0.1
Hart Crowser 1990b	Aug-90	HC-103	6.5	Indeno(1,2,3-cd)pyrene	0.14			1.8	0.1
Hart Crowser 1990b	Aug-90	HC-105	6.0	Indeno(1,2,3-cd)pyrene	0.12			1.8	0.1
Hart Crowser 1990b	Aug-90	HC-110	3.5	Indeno(1,2,3-cd)pyrene	0.081	J		1.8	0.0

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Crowley Marine Services

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Landau 1990	1990	DB2	3.5	Indeno(1,2,3-cd)pyrene	0.048	J		1.8	0.0
Landau 1990	1990	DB6	4.5	Lead	1,250		250	1,300	5.0
Landau 1990	**1990**	**DB7**	**11.5**	**Lead**	**712**		**250**	**67**	**11**
Landau 1990	1990	DB6	2	Lead	434		250	1,300	1.7
Landau 1990	1990	DB4	6	Lead	319		250	1,300	1.3
Landau 1990	1990	DB11	8	Lead	311		250	67	4.6
Landau 1990	1990	DB2	7	Lead	226		250	67	3.4
Landau 1990	1990	DB5	2.0	Lead	166		250	1,300	0.7
Landau 1990	1990	DB2	4.5	Lead	120		250	1,300	0.5
Landau 1990	1990	DB7	8.5	Lead	116		250	67	1.7
Landau 1990	1990	DB10	5	Lead	104		250	1,300	0.4
Landau 1990	1990	DB3	3.5	Lead	68		250	1,300	0.3
Landau 1990	1990	DB8	5	Lead	45		250	1,300	0.2
Landau 1990	1990	DB11	6.5	Lead	34		250	1,300	0.1
Landau 1990	1990	DB6	13	Lead	30		250	67	0.4
Landau 1990	1990	DB2	3.5	Lead	30		250	1,300	0.1
Landau 1990	1990	DB9	5	Lead	29		250	1,300	0.1
Landau 1990	1990	DB4	8.5	Lead	19		250	67	0.3
Landau 1990	1990	DB1	6.5	Lead	18		250	1,300	0.1
Landau 1990	1990	FB2	2	Lead	15		250	1,300	0.1
Landau 1990	1990	DB7	6	Lead	15		250	1,300	0.1
Landau 1990	1990	DB12	5	Lead	13		250	1,300	0.1
Landau 1990	1990	DB2	12	Lead	9		250	67	0.1
Landau 1990	1990	DB1	5	Lead	8		250	1,300	0.0
Landau 1990	1990	DB1	9.5	Lead	7		250	67	0.1
Landau 1990	1990	DB2	18	Lead	7		250	67	0.1
Landau 1990	1990	DB6	16	Lead	6		250	67	0.1
Landau 1990	1990	DB3	2	Lead	6		250	1,300	0.0
Landau 1990	1990	FB1	7	Lead	4		250	67	0.1
Landau 1990	1990	DB2	9.5	Lead	4		250	67	0.1
Landau 1990	1990	DB11	9.5	Lead	4		250	67	0.1
Landau 1990	1990	DB6	10	Lead	4		250	67	0.1
Landau 1990	1990	DB9	11	Lead	4		250	67	0.1
Landau 1990	1990	DB10	11	Lead	4		250	67	0.1
Landau 1990	1990	DB13	11	Lead	4		250	67	0.1
Landau 1990	1990	FB3	5.5	Lead	4		250	1,300	0.0
Landau 1990	1990	DB5	11	Lead	3		250	67	0.0
Landau 1990	1990	FB3	3	Lead	2		250	1,300	0.0
Landau 1990	**1990**	**DB6**	**4.5**	**Methylene Chloride**	**2**	**B**	**0.02**		**100**

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Landau 1990	**1990**	**DB6**	**7**	**Methylene Chloride**	**0.53**	**B**	**0.02**		**27**
Landau 1990	1990	DB11	8	Methylene Chloride	0.066	JB	0.02		3.3
Landau 1990	1990	DB6	2	Methylene Chloride	0.053	B	0.02		2.7
Landau 1990	1990	DB11	9.5	Methylene Chloride	0.041	B	0.02		2.1
Landau 1990	1990	DB6	16	Methylene Chloride	0.036	B	0.02		1.8
Landau 1990	1990	DB6	18.5	Methylene Chloride	0.035	B	0.02		1.8
Landau 1990	1990	FB2	2	Methylene Chloride	0.0085	B	0.02		0.4
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Methylene Chloride	0.008		0.02		0.4
Landau 1990	1990	DB10	5	Methylene Chloride	0.0079	B	0.02		0.4
Landau 1990	1990	FB2	18.5	Methylene Chloride	0.0076	B	0.02		0.4
Landau 1990	1990	FB4	8	Methylene Chloride	0.0064	B	0.02		0.3
Landau 1990	1990	DB6	10	Methylene Chloride	0.006	B	0.02		0.3
Landau 1990	1990	DB3	7.5	Methylene Chloride	0.0059	B	0.02		0.3
Landau 1990	1990	DB2	9.5	Methylene Chloride	0.0059	B	0.02		0.3
Landau 1990	1990	DB2	18	Methylene Chloride	0.0059	B	0.02		0.3
Landau 1990	1990	FB5	11	Methylene Chloride	0.0058	B	0.02		0.3
Landau 1990	1990	DB6	13	Methylene Chloride	0.0058	B	0.02		0.3
Landau 1990	1990	DB3	17	Methylene Chloride	0.0056	B	0.02		0.3
Landau 1990	1990	FB4	2	Methylene Chloride	0.0055	B	0.02		0.3
Landau 1990	1990	DB9	11	Methylene Chloride	0.0054	B	0.02		0.3
Landau 1990	1990	DB3	13.5	Methylene Chloride	0.0054	B	0.02		0.3
Landau 1990	1990	DB10	8	Methylene Chloride	0.0053	B	0.02		0.3
Landau 1990	1990	DB2	7	Methylene Chloride	0.005	B	0.02		0.3
Landau 1990	1990	DB3	9	Methylene Chloride	0.0048	B	0.02		0.2
Landau 1990	1990	DB4	11	Methylene Chloride	0.0048	B	0.02		0.2
Landau 1990	1990	DB9	8	Methylene Chloride	0.0047	B	0.02		0.2
Landau 1990	1990	FB3	13.5	Methylene Chloride	0.0042	B	0.02		0.2
Landau 1990	1990	FB1	13	Methylene Chloride	0.0041	B	0.02		0.2
Landau 1990	1990	FB2	5.5	Methylene Chloride	0.004	B	0.02		0.2
Landau 1990	1990	FB2	8	Methylene Chloride	0.004	B	0.02		0.2
Landau 1990	1990	FB5	8	Methylene Chloride	0.004	B	0.02		0.2
Landau 1990	1990	FB3	5.5	Methylene Chloride	0.0039	B	0.02		0.2
Landau 1990	1990	FB4	11	Methylene Chloride	0.0039	B	0.02		0.2
Landau 1990	1990	FB5	2	Methylene Chloride	0.0038	B	0.02		0.2
Landau 1990	1990	DB8	11	Methylene Chloride	0.0038	B	0.02		0.2
Landau 1990	1990	DB10	11	Methylene Chloride	0.0038	B	0.02		0.2
Landau 1990	1990	DB12	5	Methylene Chloride	0.0037	B	0.02		0.2
Landau 1990	1990	DB4	8.5	Methylene Chloride	0.0036	B	0.02		0.2
Landau 1990	1990	DB2	12	Methylene Chloride	0.0036	B	0.02		0.2

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	6	Methylene Chloride	0.0034	B	0.02		0.2
Landau 1990	1990	DB12	11.5	Methylene Chloride	0.0034	B	0.02		0.2
Landau 1990	1990	DB9	5	Methylene Chloride	0.0031	B	0.02		0.2
Landau 1990	1990	DB2	4.5	Methylene Chloride	0.0029	B	0.02		0.1
Landau 1990	1990	DB8	5	Methylene Chloride	0.0029	B	0.02		0.1
Landau 1990	1990	FB1	7	Methylene Chloride	0.0028	B	0.02		0.1
Landau 1990	1990	DB5	11	Methylene Chloride	0.0028	B	0.02		0.1
Landau 1990	1990	FB1	2	Methylene Chloride	0.0026	B	0.02		0.1
Landau 1990	1990	DB2	3.5	Methylene Chloride	0.0025	B	0.02		0.1
Landau 1990	1990	DB8	8	Methylene Chloride	0.0025	JB	0.02		0.1
Landau 1990	1990	DB13	11	Methylene Chloride	0.0024	JB	0.02		0.1
Landau 1990	1990	FB3	3	Methylene Chloride	0.0023	B	0.02		0.1
Landau 1990	1990	DB14	9.5	Methylene Chloride	0.0022	JB	0.02		0.1
Landau 1990	1990	DB5	8	Methylene Chloride	0.0021	J	0.02		0.1
Landau 1990	1990	DB1	9.5	Methylene Chloride	0.0021	B	0.02		0.1
Landau 1990	1990	DB7	11.5	Methylene Chloride	0.0021	JB	0.02		0.1
Landau 1990	1990	DB7	6	Methylene Chloride	0.002	JB	0.02		0.1
Landau 1990	1990	DB3	3.5	Methylene Chloride	0.0019	B	0.02		0.1
Landau 1990	1990	DB1	6.5	Methylene Chloride	0.0019	B	0.02		0.1
Landau 1990	1990	DB3	2	Methylene Chloride	0.0018	B	0.02		0.1
Landau 1990	1990	DB5	2	Methylene Chloride	0.0018	JB	0.02		0.1
Landau 1990	1990	DB7	8.5	Methylene Chloride	0.0017	JB	0.02		0.1
Landau 1990	1990	DB1	5	Methylene Chloride	0.0016	B	0.02		0.1
Landau 1990	1990	DB3	6	Methylene Chloride	0.0016	B	0.02		0.1
Landau 1990	1990	DB11	6.5	Methylene Chloride	0.0016	B	0.02		0.1
Landau 1990	**1990**	**DB11**	**8**	**Naphthalene**	**2,100**		**5**	**0.20**	**10,500**
Landau 1990	**1990**	**DB6**	**4.5**	**Naphthalene**	**1,600**	**B**	**5**	**3.8**	**421**
Landau 1990	**1990**	**DB11**	**9.5**	**Naphthalene**	**450**		**5**	**0.20**	**2250**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Naphthalene**	**210**		**5**	**0.20**	**1050**
Landau 1990	**1990**	**DB6**	**7**	**Naphthalene**	**130**	**B**	**5**	**0.20**	**650**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Naphthalene**	**25**		**5**	**0.20**	**125**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Naphthalene	20		5	3.8	5
Landau 1990	**1990**	**DB6**	**13**	**Naphthalene**	**14**		**5**	**0.20**	**70**
Landau 1990	**1990**	**DB2**	**7**	**Naphthalene**	**9**		**5**	**0.20**	**45**
Landau 1990	1990	DB6	2	Naphthalene	7.4		5	3.8	1.9
Hart Crowser 1990b	**Aug-90**	**HC-103**	**10.8**	**Naphthalene**	**5.1**		**5**	**0.20**	**26**
Landau 1990	**1990**	**DB2**	**9.5**	**Naphthalene**	**4.2**		**5**	**0.20**	**21**
Landau 1990	**1990**	**DB6**	**16**	**Naphthalene**	**3.2**		**5**	**0.20**	**16**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Naphthalene**	**2.8**		**5**	**0.20**	**14**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB3**	**13.5**	**Naphthalene**	**2.7**		**5**	**0.20**	**14**
Landau 1990	1990	DB5	2	Naphthalene	2.4		5	3.8	0.6
Landau 1990	**1990**	**DB3**	**17**	**Naphthalene**	**2**		**5**	**0.20**	**10**
Landau 1990	1990	DB7	11.5	Naphthalene	2		5	0.20	9.0
Landau 1990	1990	DB3	3.5	Naphthalene	0.68		5	3.8	0.2
Landau 1990	1990	DB6	10	Naphthalene	0.49		5	0.20	2.5
Hart Crowser 1990b	Aug-90	HC-104	5.2	Naphthalene	0.34	J	5	3.8	0.1
Landau 1990	1990	DB4	6	Naphthalene	0.23	MB	5	3.8	0.1
Landau 1990	1990	DB2	4.5	Naphthalene	0.22	J	5	3.8	0.1
Landau 1990	1990	DB4	8.5	Naphthalene	0.18	B	5	0.20	0.9
Landau 1990	1990	DB7	8.5	Naphthalene	0.18		5	0.20	0.9
Landau 1990	1990	DB8	5	Naphthalene	0.18	B	5	3.8	0.0
Landau 1990	1990	DB6	18.5	Naphthalene	0.14	M	5	0.20	0.7
Landau 1990	1990	DB13	11	Naphthalene	0.13		5	0.20	0.7
Hart Crowser 1990b	Aug-90	HC-110	8.9	Naphthalene	0.11		5	0.20	0.6
Landau 1990	1990	DB12	5	Naphthalene	0.11		5	3.8	0.0
Landau 1990	1990	DB2	18	Naphthalene	0.098		5	0.20	0.5
Landau 1990	1990	DB9	5	Naphthalene	0.092		5	3.8	0.0
Landau 1990	1990	DB10	5	Naphthalene	0.077	J	5	3.8	0.0
Landau 1990	1990	DB11	6.5	Naphthalene	0.032		5	3.8	0.0
Landau 1990	1990	DB6	4.5	Nickel	65				
Landau 1990	1990	DB7	6	Nickel	38				
Landau 1990	1990	DB5	2	Nickel	35				
Landau 1990	1990	DB6	7	Nickel	33				
Landau 1990	1990	DB7	11.5	Nickel	33				
Landau 1990	1990	DB7	8.5	Nickel	32				
Landau 1990	1990	DB3	2	Nickel	30				
Landau 1990	1990	DB6	2	Nickel	30				
Landau 1990	1990	DB2	3.5	Nickel	30				
Landau 1990	1990	FB5	2	Nickel	26				
Landau 1990	1990	DB3	3.5	Nickel	23				
Landau 1990	1990	DB8	5	Nickel	18				
Landau 1990	1990	DB11	8	Nickel	17				
Landau 1990	1990	DB2	4.5	Nickel	16				
Landau 1990	1990	DB4	6	Nickel	16				
Landau 1990	1990	FB3	3	Nickel	14				
Landau 1990	1990	DB10	5	Nickel	14				
Landau 1990	1990	FB1	7	Nickel	13				
Landau 1990	1990	DB3	7.5	Nickel	13				

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Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB3	9	Nickel	13				
Landau 1990	1990	FB1	13	Nickel	13				
Landau 1990	1990	DB2	7	Nickel	12				
Landau 1990	1990	FB4	8	Nickel	12				
Landau 1990	1990	DB4	8.5	Nickel	12				
Landau 1990	1990	DB9	11	Nickel	12				
Landau 1990	1990	DB9	5	Nickel	11				
Landau 1990	1990	FB3	5.5	Nickel	11				
Landau 1990	1990	DB11	6.5	Nickel	11				
Landau 1990	1990	FB2	2	Nickel	10				
Landau 1990	1990	DB9	8	Nickel	10				
Landau 1990	1990	DB1	9.5	Nickel	10				
Landau 1990	1990	DB2	9.5	Nickel	10				
Landau 1990	1990	DB11	9.5	Nickel	10				
Landau 1990	1990	DB14	9.5	Nickel	10				
Landau 1990	1990	DB6	10	Nickel	10				
Landau 1990	1990	DB10	11	Nickel	10				
Landau 1990	1990	DB13	11	Nickel	10				
Landau 1990	1990	DB8	8	Nickel	9				
Landau 1990	1990	FB2	8	Nickel	9				
Landau 1990	1990	DB4	11	Nickel	9				
Landau 1990	1990	FB4	11	Nickel	9				
Landau 1990	1990	DB2	12	Nickel	9				
Landau 1990	1990	DB6	13	Nickel	9				
Landau 1990	1990	DB3	13.5	Nickel	9				
Landau 1990	1990	DB6	18.5	Nickel	9				
Landau 1990	1990	DB1	5	Nickel	8				
Landau 1990	1990	DB3	6	Nickel	8				
Landau 1990	1990	DB1	6.5	Nickel	8				
Landau 1990	1990	DB10	8	Nickel	8				
Landau 1990	1990	FB5	11	Nickel	8				
Landau 1990	1990	DB12	11.5	Nickel	8				
Landau 1990	1990	FB3	13.5	Nickel	8				
Landau 1990	1990	DB3	17	Nickel	8				
Landau 1990	1990	DB2	18	Nickel	8				
Landau 1990	1990	FB2	18.5	Nickel	8				
Landau 1990	1990	FB1	2	Nickel	7				
Landau 1990	1990	FB4	2	Nickel	7				
Landau 1990	1990	DB12	5	Nickel	7				

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Chemicals Detected in Soil
Crowley Marine Services

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Landau 1990	1990	FB2	5.5	Nickel	7				
Landau 1990	1990	DB5	8	Nickel	7				
Landau 1990	1990	FB5	8	Nickel	7				
Landau 1990	1990	DB5	11	Nickel	7				
Landau 1990	1990	DB8	11	Nickel	7				
Landau 1990	1990	DB6	16	Nickel	7				
Landau 1990	1990	DB4	6	PCE	0.0043		0.05		0.1
Landau 1990	1990	DB13	11	PCE	0.0042		0.05		0.1
Landau 1990	1990	DB4	11	PCE	0.0033		0.05		0.1
Landau 1990	1990	FB5	11	PCE	0.0032		0.05		0.1
Landau 1990	1990	DB7	11.5	PCE	0.0013		0.05		0.0
Landau 1990	1990	DB4	8.5	PCE	0.0007	J	0.05		0.0
Landau 1990	1990	DB6	4.5	Pentachlorophenol	0.69		8.3	0.73	0.9
Landau 1990	1990	DB9	5	Pentachlorophenol	0.33		8.3	0.73	0.5
Landau 1990	1990	DB6	7	Pentachlorophenol	0.28		8.3	0.037	7.6
Landau 1990	1990	DB6	2	Pentachlorophenol	0.27		8.3	0.73	0.4
Landau 1990	1990	DB7	11.5	Pentachlorophenol	0.21		8.3	0.037	5.7
Landau 1990	1990	DB2	7	Pentachlorophenol	0.19	J	8.3	0.037	5.1
Landau 1990	1990	DB7	8.5	Pentachlorophenol	0.18		8.3	0.037	4.9
Landau 1990	1990	DB8	5	Pentachlorophenol	0.15		8.3	0.73	0.2
Landau 1990	1990	DB2	7	Pentachlorophenol	0.12		8.3	0.037	3.2
Landau 1990	1990	DB2	4.5	Pentachlorophenol	0.06		8.3	0.73	0.1
Landau 1990	1990	DB6	18.5	Pentachlorophenol	0.042	J	8.3	0.037	1.1
Landau 1990	1990	DB6	13	Pentachlorophenol	0.026		8.3	0.037	0.7
Landau 1990	1990	DB5	2	Pentachlorophenol	0.024		8.3	0.73	0.0
Landau 1990	1990	DB3	3.5	Pentachlorophenol	0.02		8.3	0.73	0.0
Landau 1990	1990	DB2	18	Pentachlorophenol	0.011		8.3	0.037	0.3
Landau 1990	1990	DB2	3.5	Pentachlorophenol	0.011		8.3	0.73	0.0
Landau 1990	1990	DB11	8	Pentachlorophenol	0.008		8.3	0.037	0.2
Landau 1990	1990	DB9	5	Pentachlorophenol	0.007		8.3	0.73	0.0
Landau 1990	1990	DB2	12	Pentachlorophenol	0.0061		8.3	0.037	0.2
Landau 1990	1990	DB7	8.5	Pentachlorophenol	0.0057		8.3	0.037	0.2
Landau 1990	1990	DB1	5	Pentachlorophenol	0.0047	J	8.3	0.73	0.0
Landau 1990	1990	DB2	9.5	Pentachlorophenol	0.0046	J	8.3	0.037	0.1
Landau 1990	1990	DB4	6	Pentachlorophenol	0.0044	J	8.3	0.73	0.0
Landau 1990	**1990**	**DB11**	**8**	**Phenanthrene**	**2,200**	**B**		**0.49**	**4,490**
Landau 1990	**1990**	**DB6**	**4.5**	**Phenanthrene**	**1,400**	**B**		**9.7**	**144**
Landau 1990	**1990**	**DB11**	**9.5**	**Phenanthrene**	**460**	**B**		**0.49**	**939**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Phenanthrene**	**360**			**0.49**	**735**

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Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	**1990**	**DB6**	**7**	**Phenanthrene**	**160**	**B**		**0.49**	**327**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Phenanthrene**	**88**			**0.49**	**180**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Phenanthrene	61			9.7	6.3
Landau 1990	1990	DB5	2	Phenanthrene	33	B		9.7	3.4
Landau 1990	**1990**	**DB6**	**13**	**Phenanthrene**	**27**			**0.49**	**55**
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Phenanthrene**	**23**			**0.49**	**47**
Landau 1990	1990	DB6	2	Phenanthrene	17	B		9.7	1.8
Landau 1990	1990	FSS2	0-0.5	Phenanthrene	17			9.7	1.8
Landau 1990	1990	DB4	6	Phenanthrene	16	B		9.7	1.6
Hart Crowser 1990b	Aug-90	HC-107	3.1	Phenanthrene	14			9.7	1.4
Landau 1990	**1990**	**DB3**	**17**	**Phenanthrene**	**7.6**			**0.49**	**16**
Landau 1990	**1990**	**DB2**	**7**	**Phenanthrene**	**6.5**	**B**		**0.49**	**13**
Landau 1990	**1990**	**DB2**	**9.5**	**Phenanthrene**	**5.6**			**0.49**	**11**
Hart Crowser 1990b	**Aug-90**	**HC-103 DUP**	**10.8**	**Phenanthrene**	**4.9**			**0.49**	**10**
Landau 1990	1990	DB12	11.5	Phenanthrene	4.8			0.49	9.8
Landau 1990	1990	DB7	11.5	Phenanthrene	4.4	B		0.49	9.0
Landau 1990	1990	DB4	8.5	Phenanthrene	3.5	B		0.49	7.1
Hart Crowser 1990b	Aug-90	HC-103	10.8	Phenanthrene	3.5			0.49	7.1
Landau 1990	1990	DB12	5	Phenanthrene	3.5			9.7	0.4
Landau 1990	1990	DB6	16	Phenanthrene	3.3			0.49	6.7
Landau 1990	1990	DB3	3.5	Phenanthrene	3	B		9.7	0.3
Landau 1990	1990	DB7	8.5	Phenanthrene	1.6	B		0.49	3.3
Landau 1990	1990	DB2	4.5	Phenanthrene	1.3	B		9.7	0.1
Hart Crowser 1990b	Aug-90	HC-106	7.5	Phenanthrene	1.2			0.49	2.4
Hart Crowser 1990b	Aug-90	HC-102	8.5	Phenanthrene	1.1			0.49	2.2
Landau 1990	1990	DB6	10	Phenanthrene	0.91			0.49	1.9
Landau 1990	1990	DB3	13.5	Phenanthrene	0.86			0.49	1.8
Landau 1990	1990	DB6	18.5	Phenanthrene	0.59			0.49	1.2
Landau 1990	1990	DB9	5	Phenanthrene	0.53			9.7	0.1
Landau 1990	1990	DB8	5	Phenanthrene	0.5	B		9.7	0.1
Hart Crowser 1990b	Aug-90	HC-105	6.0	Phenanthrene	0.47			9.7	0.0
Landau 1990	1990	DB10	5	Phenanthrene	0.44			9.7	0.0
Hart Crowser 1990b	Aug-90	HC-104	5.2	Phenanthrene	0.44	J		9.7	0.0
Hart Crowser 1990b	Aug-90	HC-110	3.5	Phenanthrene	0.33			9.7	0.0
Hart Crowser 1990b	Aug-90	HC-110	6.8	Phenanthrene	0.25			9.7	0.0
Hart Crowser 1990b	Aug-90	HC-106	3.5	Phenanthrene	0.23			9.7	0.0
Landau 1990	1990	DB13	11	Phenanthrene	0.19			0.49	0.4
Landau 1990	1990	DB2	12	Phenanthrene	0.17			0.49	0.3
Landau 1990	1990	DB2	18	Phenanthrene	0.17			0.49	0.3

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Crowley Marine Services

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Landau 1990	1990	DB5	11	Phenanthrene	0.092			0.49	0.2
Landau 1990	1990	FB3	13.5	Phenanthrene	0.08			0.49	0.2
Hart Crowser 1990b	Aug-90	HC-109	6.5	Phenanthrene	0.077	J		9.7	0.0
Landau 1990	1990	DB1	6.5	Phenanthrene	0.076			9.7	0.0
Landau 1990	1990	FB2	2	Phenanthrene	0.075	J		9.7	0.0
Landau 1990	1990	DB1	5	Phenanthrene	0.073			9.7	0.0
Landau 1990	1990	DB11	6.5	Phenanthrene	0.073	J		9.7	0.0
Hart Crowser 1990b	Aug-90	HC-106 DUP	7.5	Phenanthrene	0.061	J		0.49	0.1
Landau 1990	1990	DB7	6	Phenanthrene	0.058	J		9.7	0.0
Hart Crowser 1990b	Aug-90	HC-108	7.0	Phenanthrene	0.054	J		0.49	0.1
Landau 1990	1990	DB2	3.5	Phenanthrene	0.043	J		9.7	0.0
Landau 1990	1990	DB6	4.5	Phenol	4.3		48,000	2.1	2.0
Landau 1990	1990	DB6	7	Phenol	0.88		48,000	0.12	7.3
Landau 1990	1990	DB6	13	Phenol	0.1	J	48,000	0.12	0.8
Landau 1990	1990	DB9	5	Phenol	0.038		48,000	2.1	0.0
Landau 1990	**1990**	**DB11**	**8**	**Pyrene**	**840**	**B**	**2,400**	**1.4**	**600**
Landau 1990	**1990**	**DB6**	**4.5**	**Pyrene**	**470**	**B**	**2,400**	**28**	**17**
Landau 1990	**1990**	**DB11**	**9.5**	**Pyrene**	**250**	**B**	**2,400**	**1.4**	**179**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**9.8**	**Pyrene**	**86**		**2,400**	**1.4**	**61**
Landau 1990	**1990**	**DB6**	**7**	**Pyrene**	**48**	**B**	**2,400**	**1.4**	**34**
Hart Crowser 1990b	**Aug-90**	**HC-103**	**8.5**	**Pyrene**	**44**		**2,400**	**1.4**	**31**
Hart Crowser 1990b	Aug-90	HC-106	5.3	Pyrene	41		2,400	28	1.5
Hart Crowser 1990b	**Aug-90**	**HC-110**	**8.9**	**Pyrene**	**34**		**2,400**	**1.4**	**24**
Landau 1990	1990	DB5	2	Pyrene	32	B	2,400	28	1.1
Landau 1990	1990	DB3	3.5	Pyrene	24	B	2,400	28	0.9
Hart Crowser 1990b	Aug-90	HC-107	3.1	Pyrene	23		2,400	28	0.8
Landau 1990	1990	DB4	6	Pyrene	17	B	2,400	28	0.6
Landau 1990	1990	DB6	2	Pyrene	14	B	2,400	28	0.5
Landau 1990	1990	DB2	4.5	Pyrene	12	B	2,400	28	0.4
Landau 1990	1990	DB6	13	Pyrene	8.7		2,400	1.4	6.2
Landau 1990	1990	DB2	7	Pyrene	4.8	B	2,400	1.4	3.4
Landau 1990	1990	DB4	8.5	Pyrene	4	B	2,400	1.4	2.9
Landau 1990	1990	DB2	9.5	Pyrene	3.4		2,400	1.4	2.4
Landau 1990	1990	DB7	11.5	Pyrene	3.2	B	2,400	1.4	2.3
Hart Crowser 1990b	Aug-90	HC-106	3.5	Pyrene	3.2		2,400	28	0.1
Landau 1990	1990	FSS2	0-0.5	Pyrene	3	M	2,400	28	0.1
Hart Crowser 1990b	Aug-90	HC-102	8.5	Pyrene	2.9		2,400	1.4	2.1
Landau 1990	1990	DB8	5	Pyrene	2.6	B	2,400	28	0.1
Landau 1990	1990	DB12	5	Pyrene	2.2		2,400	28	0.1

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB6	16	Pyrene	1.8		2,400	1.4	1.3
Landau 1990	1990	DB3	17	Pyrene	1.8		2,400	1.4	1.3
Landau 1990	1990	DB7	8.5	Pyrene	1.5	B	2,400	1.4	1.1
Landau 1990	1990	DB10	5	Pyrene	1.4		2,400	28	0.1
Hart Crowser 1990b	Aug-90	HC-103 DUP	10.8	Pyrene	1.1		2,400	1.4	0.8
Hart Crowser 1990b	Aug-90	HC-106	7.5	Pyrene	0.95		2,400	1.4	0.7
Hart Crowser 1990b	Aug-90	HC-103	10.8	Pyrene	0.91		2,400	1.4	0.7
Landau 1990	1990	DB9	5	Pyrene	0.72		2,400	28	0.0
Hart Crowser 1990b	Aug-90	HC-105	6.0	Pyrene	0.70		2,400	28	0.0
Hart Crowser 1990b	Aug-90	HC-110	6.8	Pyrene	0.69		2,400	28	0.0
Hart Crowser 1990b	Aug-90	HC-110	3.5	Pyrene	0.47		2,400	28	0.0
Hart Crowser 1990b	Aug-90	HC-103	6.5	Pyrene	0.37		2,400	28	0.0
Landau 1990	1990	DB6	10	Pyrene	0.32		2,400	1.4	0.2
Landau 1990	1990	DB6	18.5	Pyrene	0.27		2,400	1.4	0.2
Landau 1990	1990	DB1	5	Pyrene	0.14		2,400	28	0.0
Landau 1990	1990	DB13	11	Pyrene	0.12		2,400	1.4	0.1
Landau 1990	1990	DB11	6.5	Pyrene	0.12		2,400	28	0.0
Landau 1990	1990	DB2	12	Pyrene	0.11		2,400	1.4	0.1
Landau 1990	1990	DB2	18	Pyrene	0.11		2,400	1.4	0.1
Landau 1990	1990	DB1	6.5	Pyrene	0.1		2,400	28	0.0
Landau 1990	1990	FB2	2	Pyrene	0.075	J	2,400	28	0.0
Landau 1990	1990	DB7	6	Pyrene	0.054	J	2,400	28	0.0
Landau 1990	1990	DB5	11	Pyrene	0.053	J	2,400	1.4	0.0
Hart Crowser 1990b	Aug-90	HC-106 DUP	7.5	Pyrene	0.051	J	2,400	1.4	0.0
Landau 1990	1990	DB2	3.5	Pyrene	0.046	J	2,400	28	0.0
Landau 1990	1990	DB3	13.5	Pyrene	0.044	M	2,400	1.4	0.0
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Selenium	0.3		400		0.0
Landau 1990	1990	DB6	4.5	Styrene	0.66		33		0.0
Landau 1990	1990	DB6	7	Styrene	0.3		33		0.0
Landau 1990	1990	DB11	8	Styrene	0.18		33		0.0
Landau 1990	1990	DB11	9.5	Styrene	0.028	M	33		0.0
Landau 1990	1990	DB6	13	Styrene	0.0014		33		0.0
Landau 1990	1990	DB2	9.5	Styrene	0.0013	M	33		0.0
Landau 1990	1990	DB2	7	Styrene	0.0006	M	33		0.0
Landau 1990	1990	FB5	11	TCE	0.0014		0.03		0.0
Landau 1990	1990	FB5	8	TCE	0.0008	J	0.03		0.0
Landau 1990	1990	DB7	11.5	TCE	0.0005	M	0.03		0.0
Landau 1990	1990	DB6	4.5	Toluene	0.51	J	7		0.1
Landau 1990	1990	DB6	7	Toluene	0.23		7		0.0

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB11	8	Toluene	0.12		7		0.0
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Toluene	0.12		7		0.0
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Toluene	0.049		7		0.0
Landau 1990	1990	DB11	9.5	Toluene	0.016		7		0.0
Landau 1990	1990	DB12	11.5	Toluene	0.0059		7		0.0
Landau 1990	1990	DB7	11.5	Toluene	0.0019	M	7		0.0
Landau 1990	1990	DB6	13	Toluene	0.0018		7		0.0
Landau 1990	1990	DB2	9.5	Toluene	0.0017		7		0.0
Landau 1990	1990	DB2	7	Toluene	0.0015		7		0.0
Landau 1990	1990	DB10	5	Toluene	0.0013		7		0.0
Landau 1990	1990	DB9	8	Toluene	0.001		7		0.0
Landau 1990	1990	DB10	8	Toluene	0.001		7		0.0
Landau 1990	1990	DB12	5	Toluene	0.0009		7		0.0
Landau 1990	1990	DB8	5	Toluene	0.0008	J	7		0.0
Landau 1990	1990	DB9	5	Toluene	0.0008	J	7		0.0
Landau 1990	1990	DB5	8	Toluene	0.0008		7		0.0
Landau 1990	1990	DB4	6	Toluene	0.0007	J	7		0.0
Landau 1990	1990	DB5	11	Toluene	0.0007	J	7		0.0
Landau 1990	1990	DB3	13.5	Toluene	0.0007	M	7		0.0
Landau 1990	1990	DB2	3.5	Toluene	0.0006	J	7		0.0
Landau 1990	1990	DB1	6.5	Toluene	0.0006	J	7		0.0
Landau 1990	1990	FB2	2	Toluene	0.0005	M	7		0.0
Landau 1990	1990	DB7	8.5	Toluene	0.0005	M	7		0.0
Landau 1990	1990	DB5	2	Toluene	0.0004	M	7		0.0
Landau 1990	1990	DB4	8.5	Toluene	0.0004	M	7		0.0
Landau 1990	1990	DB8	11	Toluene	0.0004	M	7		0.0
Landau 1990	1990	FB2	18.5	Toluene	0.0004	M	7		0.0
Landau 1990	**1990**	**FSS2**	**0-0.5**	**Total Petroleum Hydrocarbons**	**280,000**		**2,000**		**140**
Landau 1990	**1990**	**FSS3**	**0-0.5**	**Total Petroleum Hydrocarbons**	**130,000**		**2,000**		**65**
Landau 1990	**1990**	**DB11**	**8**	**Total Petroleum Hydrocarbons**	**29,000**		**2,000**		**15**
Landau 1990	1990	DB6	4.5	Total Petroleum Hydrocarbons	14,000		2,000		7.0
Landau 1990	1990	DB5	2	Total Petroleum Hydrocarbons	2,600		2,000		1.3
Landau 1990	1990	DB11	9.5	Total Petroleum Hydrocarbons	2,600		2,000		1.3
Landau 1990	1990	DB6	7	Total Petroleum Hydrocarbons	1,600		2,000		0.8
Landau 1990	1990	DB12	5	Total Petroleum Hydrocarbons	1,100		2,000		0.6
Landau 1990	1990	DB12	11.5	Total Petroleum Hydrocarbons	910		2,000		0.5
Landau 1990	1990	DB6	13	Total Petroleum Hydrocarbons	600		2,000		0.3
Landau 1990	1990	DB6	2	Total Petroleum Hydrocarbons	500		2,000		0.3
Landau 1990	1990	DB9	5	Total Petroleum Hydrocarbons	480		2,000		0.2

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB4	6	Total Petroleum Hydrocarbons	330		2,000		0.2
Landau 1990	1990	DB13	11	Total Petroleum Hydrocarbons	140		2,000		0.1
Landau 1990	1990	DB-2	7	Total Petroleum Hydrocarbons	88		2,000		0.0
Landau 1990	1990	DB10	8	Total Petroleum Hydrocarbons	43		2,000		0.0
Landau 1990	1990	FB3	5.5	Total Petroleum Hydrocarbons	27		2,000		0.0
Landau 1990	1990	DB10	5	Total Petroleum Hydrocarbons	17		2,000		0.0
Landau 1990	1990	FB3	13.5	Total Petroleum Hydrocarbons	14		2,000		0.0
Landau 1990	1990	FB5	11	Vinyl Chloride	0.0033	J	0.67		0.0
Landau 1990	1990	DB6	4.5	Xylenes (total)	3.2		9		0.4
Landau 1990	1990	DB6	7	Xylenes (total)	1.9		9		0.2
Landau 1990	1990	DB11	8	Xylenes (total)	1.2		9		0.1
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Xylenes (total)	0.64		9		0.1
Landau 1990	1990	DB11	9.5	Xylenes (total)	0.23		9		0.0
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Xylenes (total)	0.047		9		0.0
Landau 1990	1990	DB7	11.5	Xylenes (total)	0.043		9		0.0
Landau 1990	1990	DB12	11.5	Xylenes (total)	0.026		9		0.0
Landau 1990	1990	DB2	9.5	Xylenes (total)	0.016		9		0.0
Landau 1990	1990	DB7	8.5	Xylenes (total)	0.01		9		0.0
Landau 1990	1990	DB2	7	Xylenes (total)	0.0084		9		0.0
Landau 1990	1990	DB6	13	Xylenes (total)	0.0081		9		0.0
Landau 1990	1990	DB3	13.5	Xylenes (total)	0.0048		9		0.0
Landau 1990	1990	DB6	16	Xylenes (total)	0.0031	J	9		0.0
Landau 1990	1990	DB12	5	Xylenes (total)	0.0029		9		0.0
Landau 1990	1990	DB5	2	Xylenes (total)	0.0026	M	9		0.0
Landau 1990	1990	DB7	6	Xylenes (total)	0.0011	M	9		0.0
Landau 1990	1990	DB10	8	Xylenes (total)	0.001	J	9		0.0
Landau 1990	1990	DB5	8	Xylenes (total)	0.0009	J	9		0.0
Landau 1990	1990	DB9	8	Xylenes (total)	0.0009	J	9		0.0
Landau 1990	1990	DB8	5	Xylenes (total)	0.0008	J	9		0.0
Landau 1990	1990	DB9	5	Xylenes (total)	0.0007	J	9		0.0
Landau 1990	1990	DB4	6	Xylenes (total)	0.0007	J	9		0.0
Landau 1990	1990	DB5	11	Xylenes (total)	0.0007	J	9		0.0
Landau 1990	1990	DB2	12	Xylenes (total)	0.0007	M	9		0.0
Landau 1990	1990	DB10	5	Xylenes (total)	0.0006	M	9		0.0
Landau 1990	1990	DB6	4.5	Zinc	4,180		24,000	770	5.4
Landau 1990	**1990**	**DB6**	**7**	**Zinc**	**3,220**		**24,000**	**38**	**85**
Landau 1990	**1990**	**DB7**	**11.5**	**Zinc**	**2,600**		**24,000**	**38**	**68**
Landau 1990	1990	DB6	2	Zinc	1,640		24,000	770	2.1
Landau 1990	**1990**	**DB2**	**7**	**Zinc**	**716**		**24,000**	**38**	**19**

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	DB5	2	Zinc	627		24,000	770	0.8
Landau 1990	1990	DB2	4.5	Zinc	500		24,000	770	0.6
Landau 1990	1990	DB10	5	Zinc	460		24,000	770	0.6
Landau 1990	1990	DB7	8.5	Zinc	332		24,000	38	8.7
Landau 1990	1990	DB3	3.5	Zinc	184		24,000	770	0.2
Landau 1990	1990	DB8	5	Zinc	160		24,000	770	0.2
Landau 1990	1990	DB6	13	Zinc	132		24,000	38	3.5
Landau 1990	1990	FB2	2	Zinc	106		24,000	770	0.1
Landau 1990	1990	DB2	3.5	Zinc	105		24,000	770	0.1
Landau 1990	1990	DB9	5	Zinc	105		24,000	770	0.1
Landau 1990	1990	DB4	6	Zinc	86.7		24,000	770	0.1
Landau 1990	1990	DB11	6.5	Zinc	85.0		24,000	770	0.1
Landau 1990	1990	DB1	6.5	Zinc	67.2		24,000	770	0.1
Landau 1990	1990	DB7	6	Zinc	61.6		24,000	770	0.1
Landau 1990	1990	DB4	8.5	Zinc	61.4		24,000	38	1.6
Landau 1990	1990	DB12	5	Zinc	56.2		24,000	770	0.1
Landau 1990	1990	DB11	8	Zinc	50.3		24,000	38	1.3
Landau 1990	1990	DB6	16	Zinc	44.8		24,000	38	1.2
Landau 1990	1990	DB2	18	Zinc	42.2		24,000	38	1.1
Landau 1990	1990	DB1	9.5	Zinc	42.1		24,000	38	1.1
Landau 1990	1990	DB1	5	Zinc	42.1		24,000	770	0.1
Landau 1990	1990	DB3	2	Zinc	41.5		24,000	770	0.1
Landau 1990	1990	DB2	12	Zinc	40.9		24,000	38	1.1
Landau 1990	1990	DB10	11	Zinc	35.5		24,000	38	0.9
Landau 1990	1990	DB3	9	Zinc	34.8		24,000	38	0.9
Landau 1990	1990	DB6	10	Zinc	34.8		24,000	38	0.9
Landau 1990	1990	DB2	9.5	Zinc	33.7		24,000	38	0.9
Landau 1990	1990	DB13	11	Zinc	33.1		24,000	38	0.9
Landau 1990	1990	FB1	13	Zinc	31.7		24,000	38	0.8
Landau 1990	1990	DB3	17	Zinc	31.3		24,000	38	0.8
Landau 1990	1990	FB1	7	Zinc	30.5		24,000	38	0.8
Landau 1990	1990	DB11	9.5	Zinc	30.2		24,000	38	0.8
Landau 1990	1990	DB3	7.5	Zinc	29.2		24,000	38	0.8
Landau 1990	1990	DB9	11	Zinc	28.6		24,000	38	0.8
Landau 1990	1990	FB4	8	Zinc	28.4		24,000	38	0.7
Landau 1990	1990	FB5	2	Zinc	28.0		24,000	770	0.0
Landau 1990	1990	DB8	8	Zinc	27.3		24,000	38	0.7
Landau 1990	1990	DB5	8	Zinc	27.2		24,000	38	0.7
Landau 1990	1990	DB4	11	Zinc	26.1		24,000	38	0.7

Table D-1
Chemicals Detected in Soil
Crowley Marine Services

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Landau 1990	1990	FB4	11	Zinc	26.0		24,000	38	0.7
Landau 1990	1990	FB2	8	Zinc	25.4		24,000	38	0.7
Landau 1990	1990	DB6	18.5	Zinc	25.4		24,000	38	0.7
Landau 1990	1990	FB3	5.5	Zinc	25.4		24,000	770	0.0
Landau 1990	1990	DB12	11.5	Zinc	25.1		24,000	38	0.7
Landau 1990	1990	DB5	11	Zinc	24.6		24,000	38	0.6
Landau 1990	1990	DB3	13.5	Zinc	24.4		24,000	38	0.6
Landau 1990	1990	FB2	18.5	Zinc	23.8		24,000	38	0.6
Landau 1990	1990	FB3	3	Zinc	23.8		24,000	770	0.0
Landau 1990	1990	DB10	8	Zinc	23.7		24,000	38	0.6
Landau 1990	1990	DB3	6	Zinc	23.7		24,000	770	0.0
Landau 1990	1990	FB5	8	Zinc	23.0		24,000	38	0.6
Landau 1990	1990	DB8	11	Zinc	22.6		24,000	38	0.6
Landau 1990	1990	DB14	9.5	Zinc	22.5		24,000	38	0.6
Landau 1990	1990	DB9	8	Zinc	22.0		24,000	38	0.6
Landau 1990	1990	FB4	2	Zinc	21.9		24,000	770	0.0
Landau 1990	1990	FB3	13.5	Zinc	21.8		24,000	38	0.6
Landau 1990	1990	FB2	5.5	Zinc	21.1		24,000	770	0.0
Landau 1990	1990	FB5	11	Zinc	20.8		24,000	38	0.5
Landau 1990	1990	FB1	2	Zinc	19.9		24,000	770	0.0
Hart Crowser 1989a	Nov-88	SS-1	0-0.5	Zinc	2		24,000	38	0.1
Hart Crowser 1989a	Nov-88	SS-4	0-0.5	Zinc	1.5		24,000	38	0.0
Hart Crowser 1989a	Nov-88	SS-5	0-0.5	Zinc	1.5		24,000	38	0.0
Hart Crowser 1989a	Nov-88	SS-3	0-0.5	Zinc	0.7		24,000	38	0.0
Hart Crowser 1989a	Nov-88	SS-2	0-0.5	Zinc	0.4		24,000	38	0.0

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table D-2
Chemicals Detected in Groundwater
Crowley Marine Services

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Landau 1990	1990	DMW-3	2-Methylnaphthalene	55		32	31	1.8
Landau 1990	1990	DMW-2	2-Methylnaphthalene	3.7		32	31	0.12
Landau 1990	**1990**	**DMW-3**	**Acenaphthene**	**120**		**960**	**9.3**	**13**
Landau 1990	1990	DMW-2	Acenaphthene	24		960	9.3	2.6
Landau 1990	1990	DMW-6	Acenaphthene	7.7		960	9.3	0.83
Landau 1990	1990	DMW-3	Acenaphthylene	4.5			11	0.41
Landau 1990	1990	DMW-2	Acenaphthylene	0.8	J		11	0.07
Landau 1990	1990	DMW-3	Acetone	7.0		800		0.01
Landau 1990	1990	DMW-3	Anthracene	6.4		4,800	59	0.11
Landau 1990	1990	DMW-6	Anthracene	3.4		4,800	59	0.06
Landau 1990	1990	DMW-2	Anthracene	2.9		4,800	59	0.05
Hart Crowser 1989a	Nov-88	MW-1	Antimony	10		6.4		1.6
Hart Crowser 1989b	Nov-88	HC-1	Antimony	10		6.4		1.6
Hart Crowser 1989b	**Nov-88**	**HC-1**	**Arsenic**	**98**		**5**	**370**	**20**
Landau 1990	1990	DMW-6	Arsenic	9		5	370	1.8
Hart Crowser 1989b	Jun-89	HC-19	Arsenic	7		5	370	1.4
Landau 1990	1990	DMW-2	Arsenic	7		5	370	1.4
Landau 1990	1990	DMW-3	Arsenic	7		5	370	1.4
Hart Crowser 1989a	Nov-88	MW-1	Arsenic	6		5	370	1.2
Landau 1990	1990	FMW-2	Arsenic	2		5	370	0.40
Landau 1990	1990	FMW-1	Arsenic	1		5	370	0.20
Hart Crowser 1990b	9/4/1990	HC-1	Arsenic (dissolved)	25		5	370	5.0
Hart Crowser 1990b	9/4/1990	DMW-3	Arsenic (dissolved)	11		5	370	2.2
Hart Crowser 1990b	9/4/1990	DMW-6	Arsenic (dissolved)	10		5	370	2.0
Hart Crowser 1990b	9/4/1990	DMW-2	Arsenic (dissolved)	6		5	370	1.2
Hart Crowser 1990b	**9/4/1990**	**HC-1**	**Arsenic (total)**	**100**		**5**	**370**	**20**
Hart Crowser 1990b	9/4/1990	DMW-6	Arsenic (total)	18		5	370	3.6
Hart Crowser 1990b	9/4/1990	FMW-2	Arsenic (total)	7		5	370	1.4
Hart Crowser 1989a	**Nov-88**	**MW-1**	**Bis(2-ethylhexyl)phthalate**	**47**	**B**	**6.3**	**0.47**	**100**
Landau 1990	**1990**	**FMW-1**	**Bis(2-ethylhexyl)phthalate**	**29**	**B**	**6.3**	**0.47**	**62**
Landau 1990	**1990**	**DMW-3**	**Bis(2-ethylhexyl)phthalate**	**20**	**B**	**6.3**	**0.47**	**43**
Landau 1990	**1990**	**DMW-6**	**Bis(2-ethylhexyl)phthalate**	**19**	**B**	**6.3**	**0.47**	**40**
Landau 1990	**1990**	**FMW-3**	**Bis(2-ethylhexyl)phthalate**	**17**	**B**	**6.3**	**0.47**	**36**
Landau 1990	**1990**	**DMW-2**	**Bis(2-ethylhexyl)phthalate**	**12**	**B**	**6.3**	**0.47**	**26**

Table D-2
Chemicals Detected in Groundwater
Crowley Marine Services

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Landau 1990	**1990**	**FMW-2**	**Bis(2-ethylhexyl)phthalate**	**6.7**	**B**	**6.3**	**0.47**	**14**
Hart Crowser 1989a	**Nov-88**	**HC-2**	**Bis(2-ethylhexyl)phthalate**	**5**	**B**	**6.3**	**0.47**	**11**
Hart Crowser 1989b	Nov-88	HC-1	Cadmium	3		5	3.4	0.88
Landau 1990	1990	FMW-2	Chromium	11		50	320	0.22
Hart Crowser 1989a	Nov-88	HC-2	Chromium	2		50	320	0.04
Hart Crowser 1989b	Nov-88	HC-4	Chromium	1		50	320	0.02
Landau 1990	1990	DMW-6	Chrysene	1.4			1.9	0.74
Landau 1990	1990	DMW-6	cis-1,2-DCE	1.5		80		0.02
Hart Crowser 1989a	Nov-88	MW-1	Copper	12		590	120	0.10
Landau 1990	1990	FMW-2	Copper	7		590	120	0.06
Hart Crowser 1989b	Nov-88	HC-4	Copper	5		590	120	0.04
Hart Crowser 1989a	Nov-88	HC-2	Copper	3		590	120	0.03
Landau 1990	1990	DMW-6	Copper	3		590	120	0.03
Landau 1990	1990	FMW-1	Copper	3		590	120	0.03
Landau 1990	1990	FMW-3	Copper	3		590	120	0.03
Hart Crowser 1989b	Nov-88	HC-1	Copper	2		590	120	0.02
Hart Crowser 1990b	9/4/1990	DMW-6	CPAH	22.6				
Hart Crowser 1990b	9/4/1990	DMW-2	CPAH	2.0				
Hart Crowser 1990b	9/4/1990	DMW-3	CPAH	1.0	J			
Hart Crowser 1990b	9/4/1990	HC-20	CPAH	0.7	J			
Landau 1990	1990	DMW-3	Dibenzofuran	50		32	5.1	9.8
Landau 1990	1990	DMW-2	Dibenzofuran	6.7		32	5.1	1.3
Landau 1990	1990	DMW-6	Dibenzofuran	2.0		32	5.1	0.39
Landau 1990	1990	DMW-6	Fluoranthene	11		640	17	0.65
Landau 1990	1990	DMW-2	Fluoranthene	5.2		640	17	0.31
Landau 1990	1990	DMW-3	Fluoranthene	2.2		640	17	0.13
Landau 1990	1990	DMW-3	Fluorene	58		640	7.0	8.3
Landau 1990	1990	DMW-2	Fluorene	10		640	7.0	1.4
Landau 1990	1990	DMW-6	Fluorene	2.7		640	7.0	0.39
Landau 1990	1990	DMW-3	Methylene Chloride	1.4	JB	5		0.28
Landau 1990	1990	FMW-1	Methylene Chloride	1.1	JB	5		0.22
Landau 1990	1990	FMW-3	Methylene Chloride	1.0	JB	5		0.20
Landau 1990	1990	FMW-2	Methylene Chloride	0.8	JB	5		0.16
Landau 1990	1990	DMW-2	Methylene Chloride	0.7	JB	5		0.14

Table D-2
Chemicals Detected in Groundwater
Crowley Marine Services

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Landau 1990	1990	DMW-6	Methylene Chloride	0.5	JB	5		0.10
Hart Crowser 1990b	9/4/1990	DMW-3	Naphthalene	250		160	92	2.7
Landau 1990	1990	DMW-3	Naphthalene	140		160	92	1.5
Landau 1990	1990	DMW-2	Naphthalene	27		160	92	0.29
Hart Crowser 1990b	9/4/1990	DMW-2	Naphthalene	19		160	92	0.21
Hart Crowser 1989a	Nov-88	HC-2	Nickel	3				
Hart Crowser 1989b	Nov-88	HC-4	Nickel	2				
Landau 1990	1990	FMW-2	Pentachlorophenol	1.1	J	0.73	10	1.5
Landau 1990	1990	DMW-3	Phenanthrene	44			23	1.9
Landau 1990	1990	DMW-2	Phenanthrene	5.1			23	0.22
Landau 1990	1990	DMW-6	Pyrene	9.9		480	20	0.50
Landau 1990	1990	DMW-2	Pyrene	4.3		480	20	0.22
Landau 1990	1990	DMW-3	Pyrene	1.6		480	20	0.08
Hart Crowser 1990b	9/4/1990	DMW-3	Total PAH	973				
Hart Crowser 1990b	9/4/1990	DMW-6	Total PAH	44				
Hart Crowser 1990b	9/4/1990	DMW-2	Total PAH	35				
Hart Crowser 1990b	9/4/1990	HC-19	Total PAH	3				
Hart Crowser 1990b	9/4/1990	HC-20	Total PAH	1	J			
Landau 1990	1990	DMW-2	Zinc	44		4,800	76	0.58
Hart Crowser 1989b	Nov-88	HC-1	Zinc	28		4,800	76	0.37
Landau 1990	1990	DMW-6	Zinc	23		4,800	76	0.30
Landau 1990	1990	FMW-1	Zinc	17		4,800	76	0.22
Hart Crowser 1989a	Nov-88	HC-2	Zinc	11		4,800	76	0.14
Landau 1990	1990	DMW-3	Zinc	11		4,800	76	0.14
Hart Crowser 1989b	Nov-88	HC-4	Zinc	7		4,800	76	0.09
Landau 1990	1990	FMW-3	Zinc	7		4,800	76	0.09
Landau 1990	1990	FMW-2	Zinc	4		4,800	76	0.05
Hart Crowser 1989a	Nov-88	MW-1	Zinc	3		4,800	76	0.04

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006
DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Appendix D-2

Hart Crowser 1989a: Report of Environmental Assessment—Parcel F, Soil and Groundwater Conditions, Evergreen Marine Leasing Property

#3

HARTCROWSER

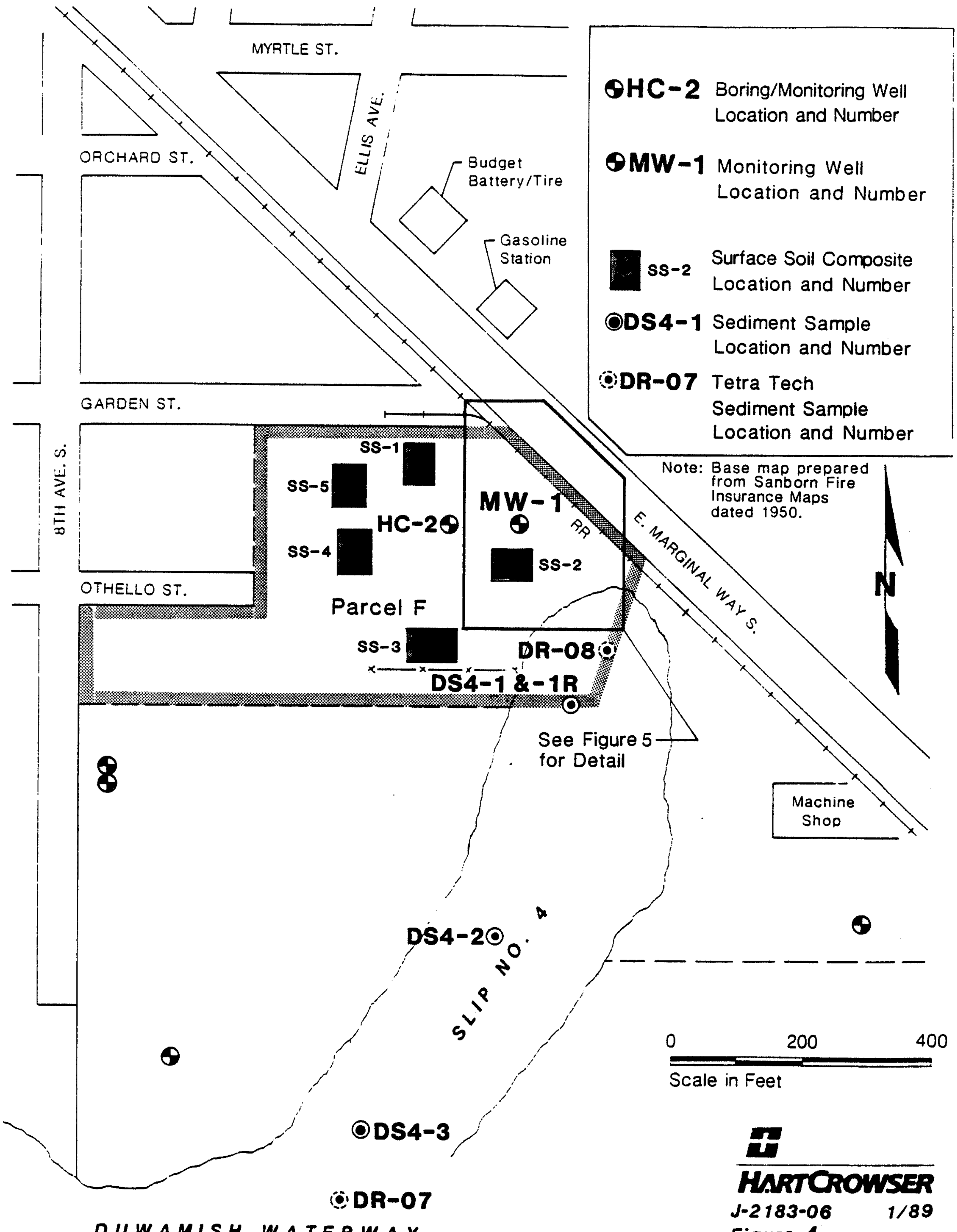
Earth and Environmental Technologies

Environmental Assessment - Parcel F
Soil and Groundwater Conditions
Evergreen Marine Leasing Property
Seattle, Washington

Prepared for
Evergreen Marine Leasing

March 22, 1989
J-2183-06

Site and Exploration Plan

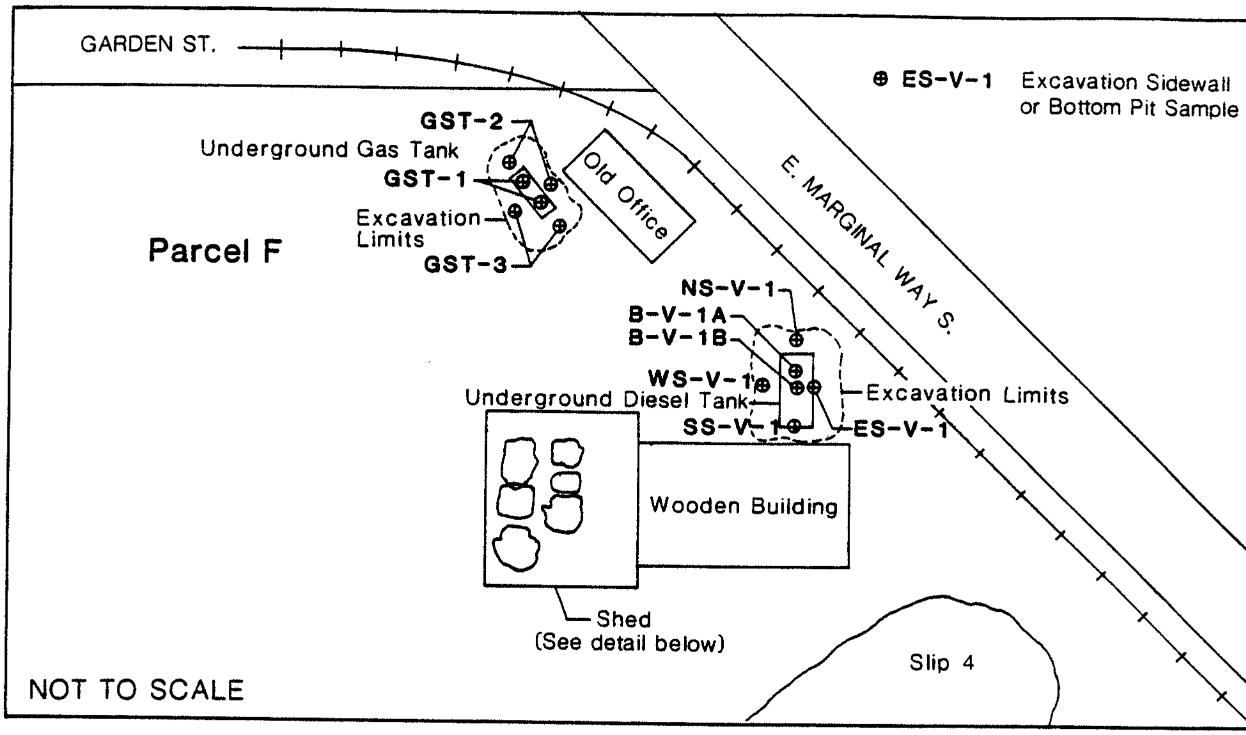


HARTCROWSER

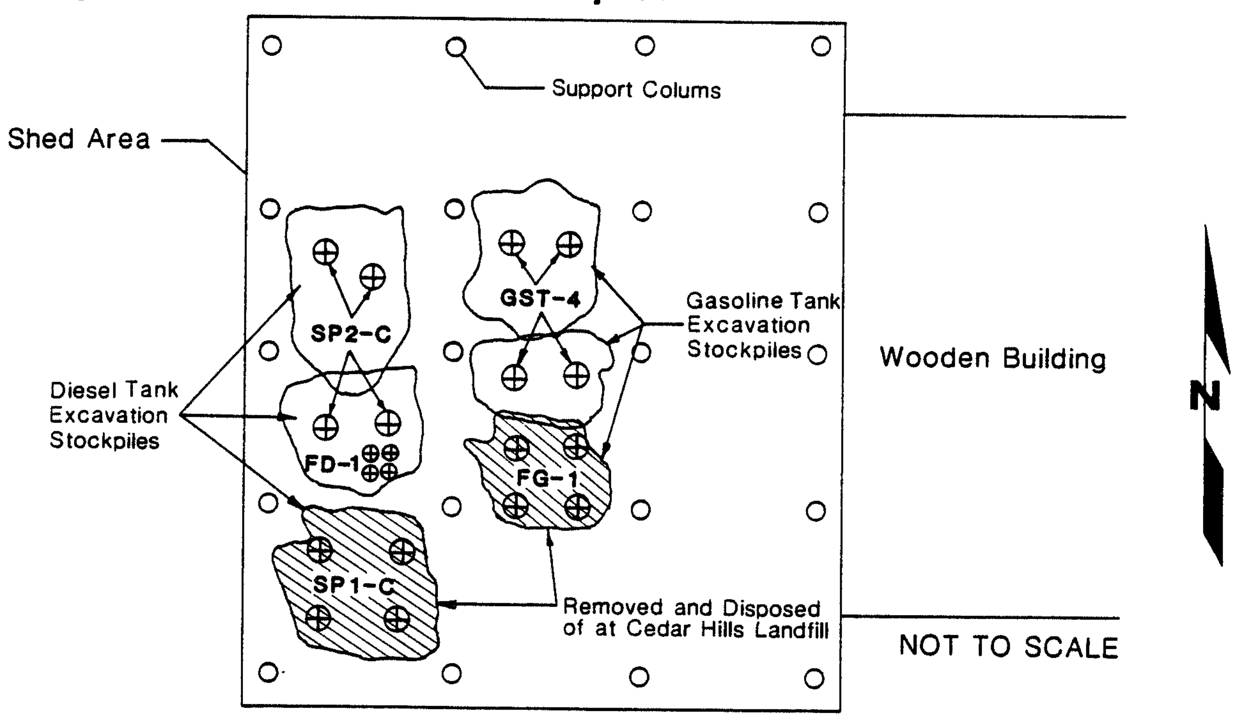
J-2183-06 1/89

Figure 4

Tank Excavation Verification Sampling Plan



Stockpiled Excavation Soil Samples



SP2-C Stockpile Sample Location and Number

Material Exceeding TPH Cleanup Criteria

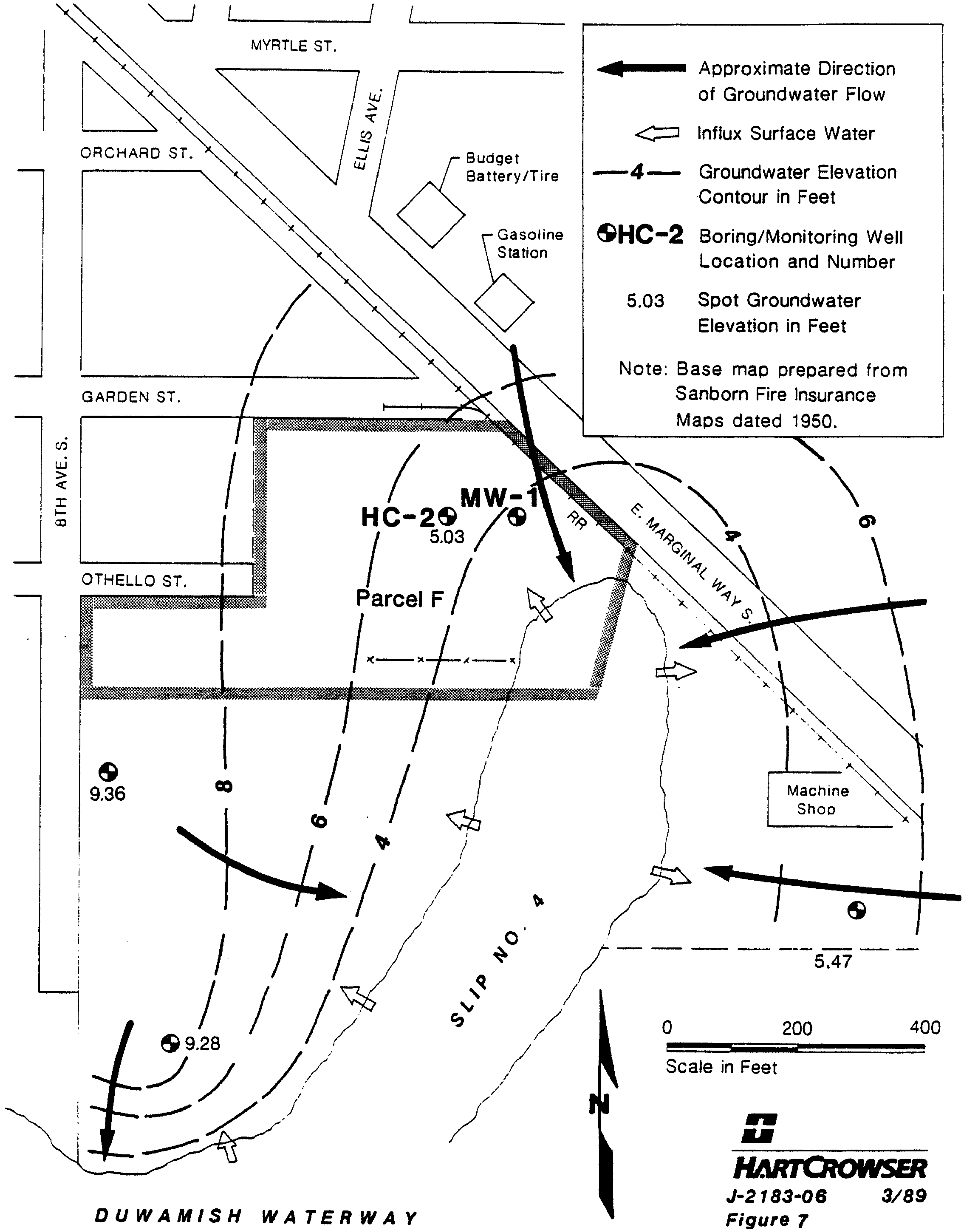
HARTCROWSER

J-2183-06 *3/89*

Figure 5

Groundwater Elevation Contour Map

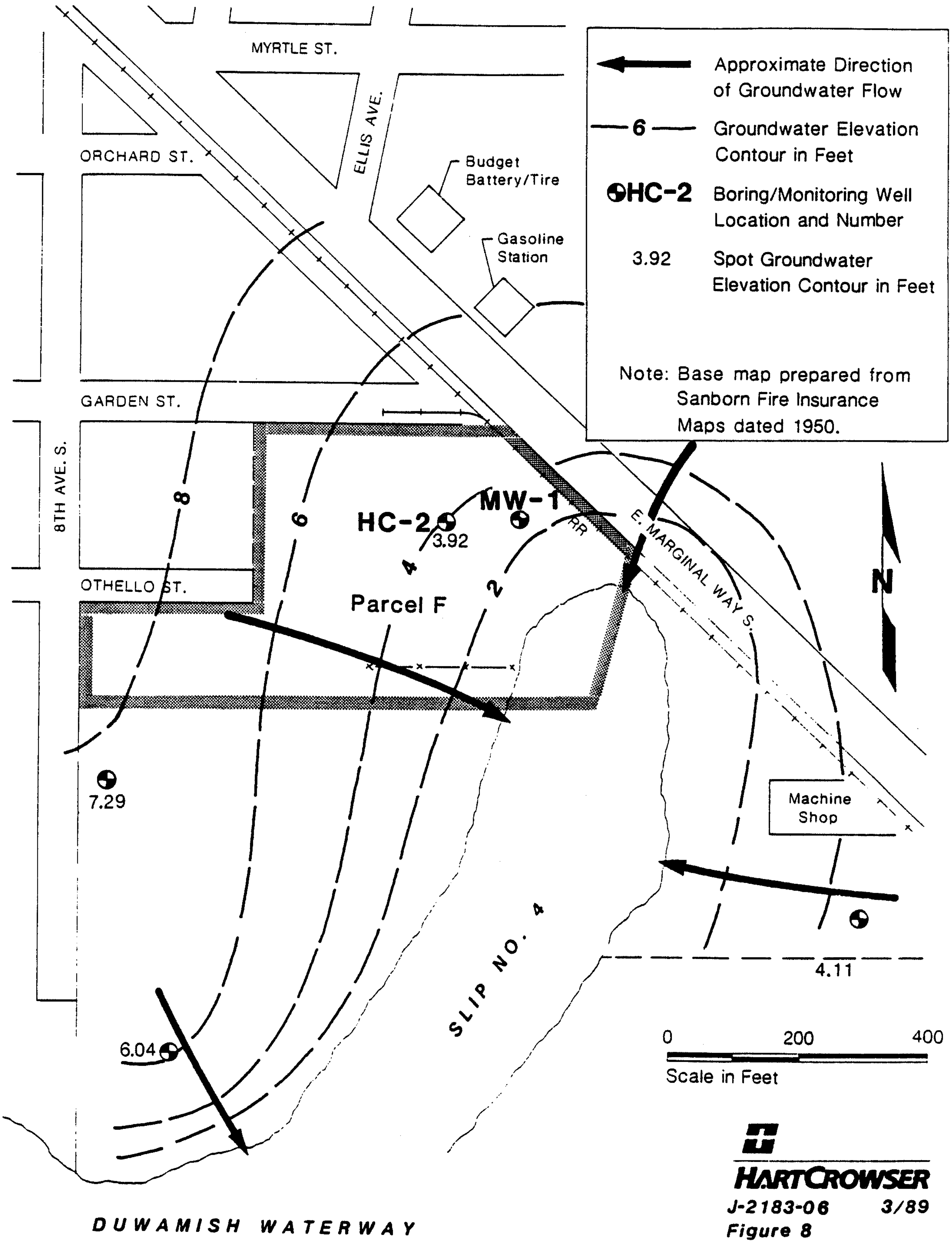
High Tide



HARTCROWSER
J-2183-06 3/89
Figure 7

Groundwater Elevation Contour Map

Low Tide



HARTCROWSER

J-2183-06 3/89

Figure 8

Appendix D-3

Hart Crowser 1989b: Report of Environmental Assessment—Parcel D, Soil and Groundwater Conditions, Evergreen Marine Leasing Property

#3

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JAN 05 1993
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HARTCROWSER

Earth and Environmental Technologies

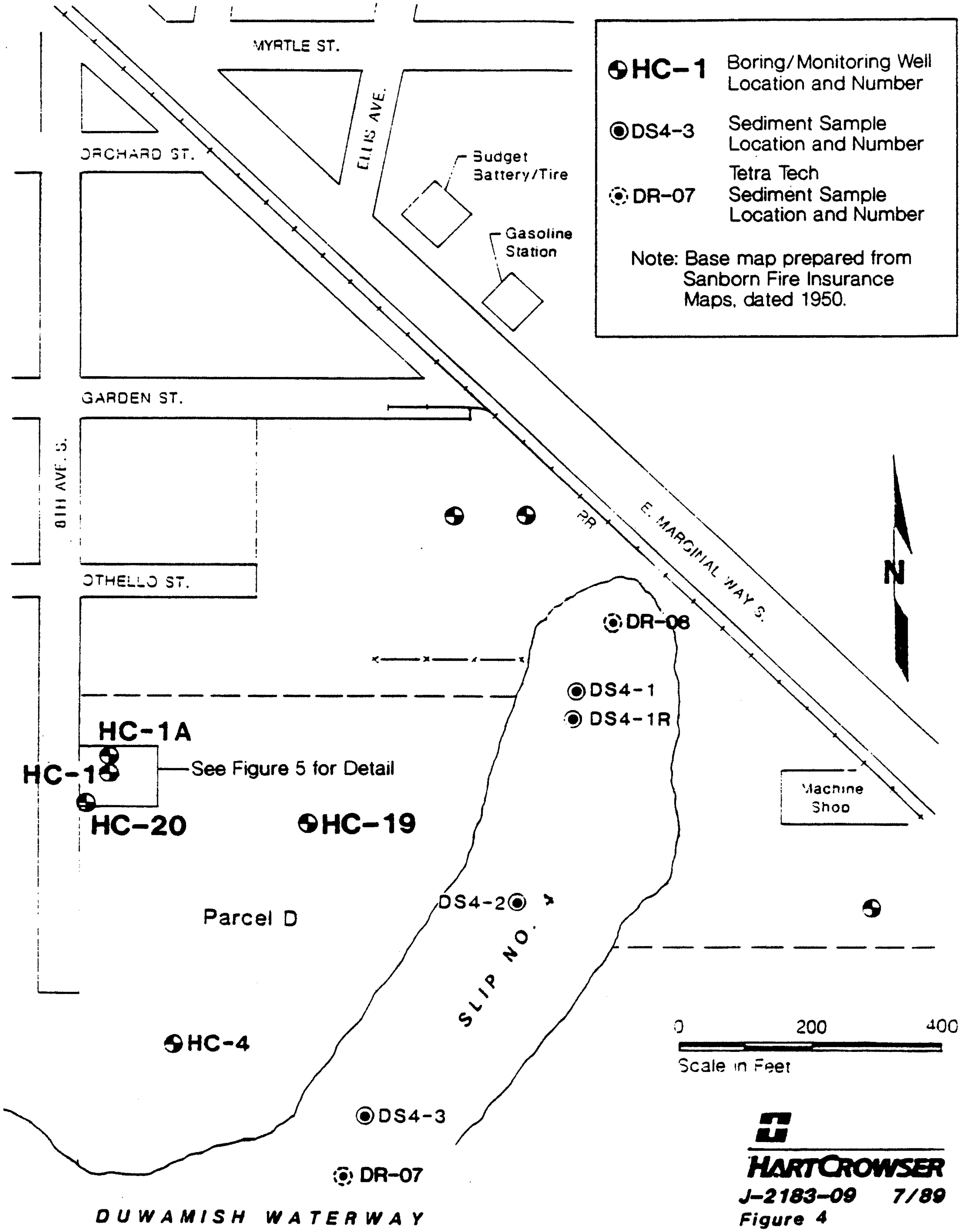
Environmental Assessment - Parcel D Soil and Groundwater Conditions Evergreen Marine Leasing Property Seattle, Washington

Prepared for
Evergreen Marine Leasing

July 20, 1989
J-2183-09

1910 Fairview Avenue East Seattle, Washington 98102-3699 206.324.9530

Site and Exploration Plan

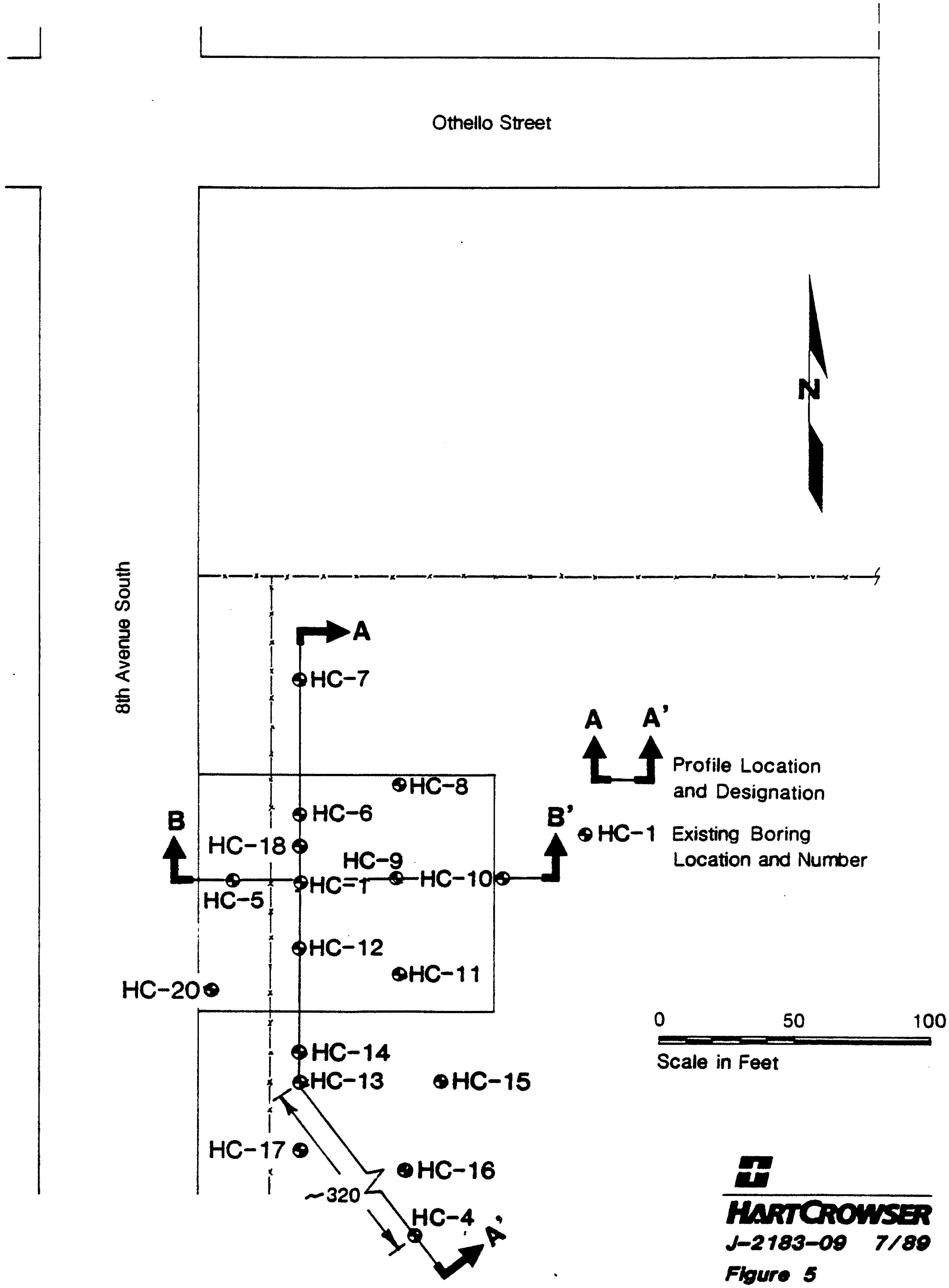


HARTCROWSER

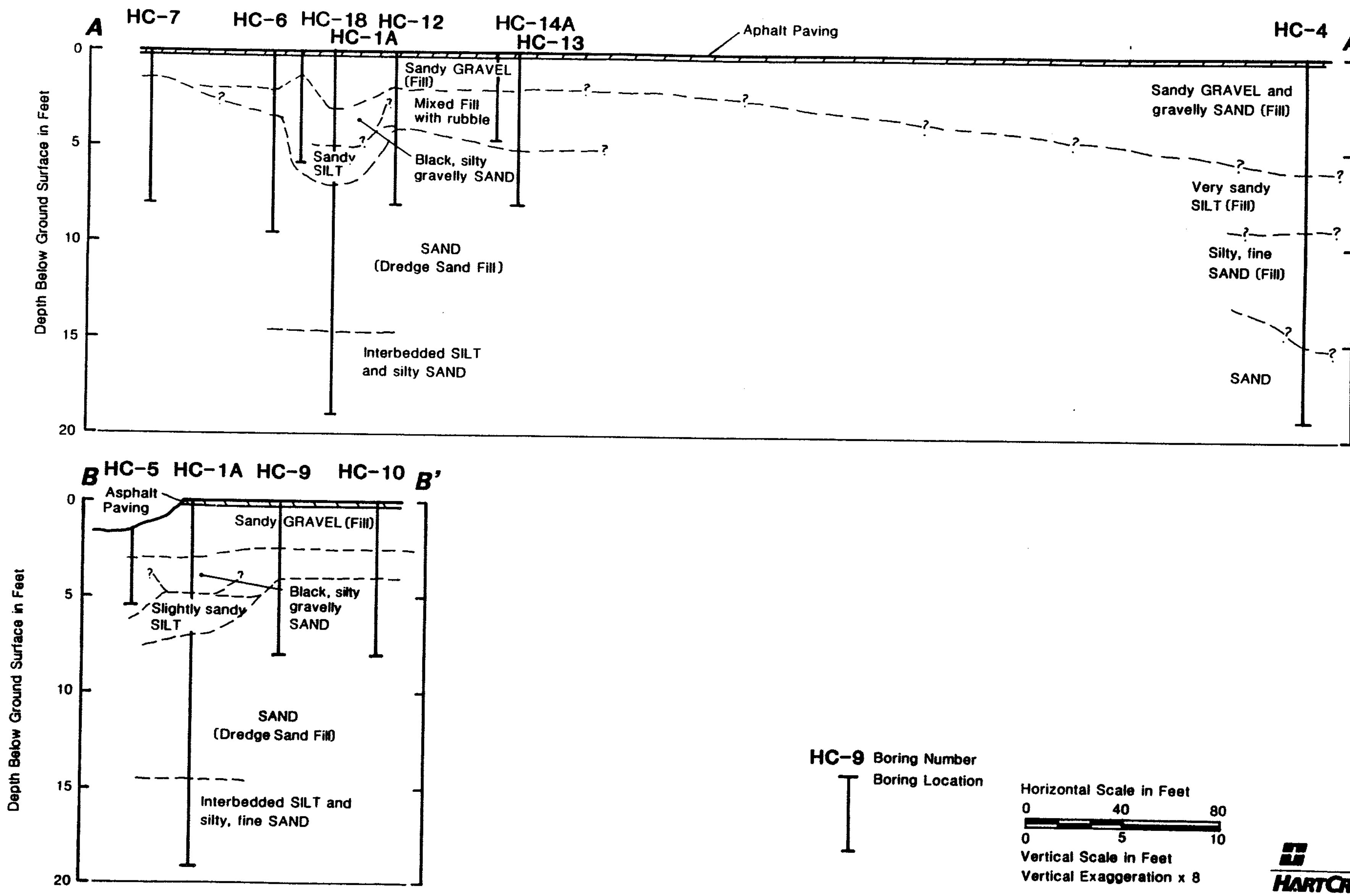
J-2183-09 7/89

Figure 4

Detailed Site Exploration Plan



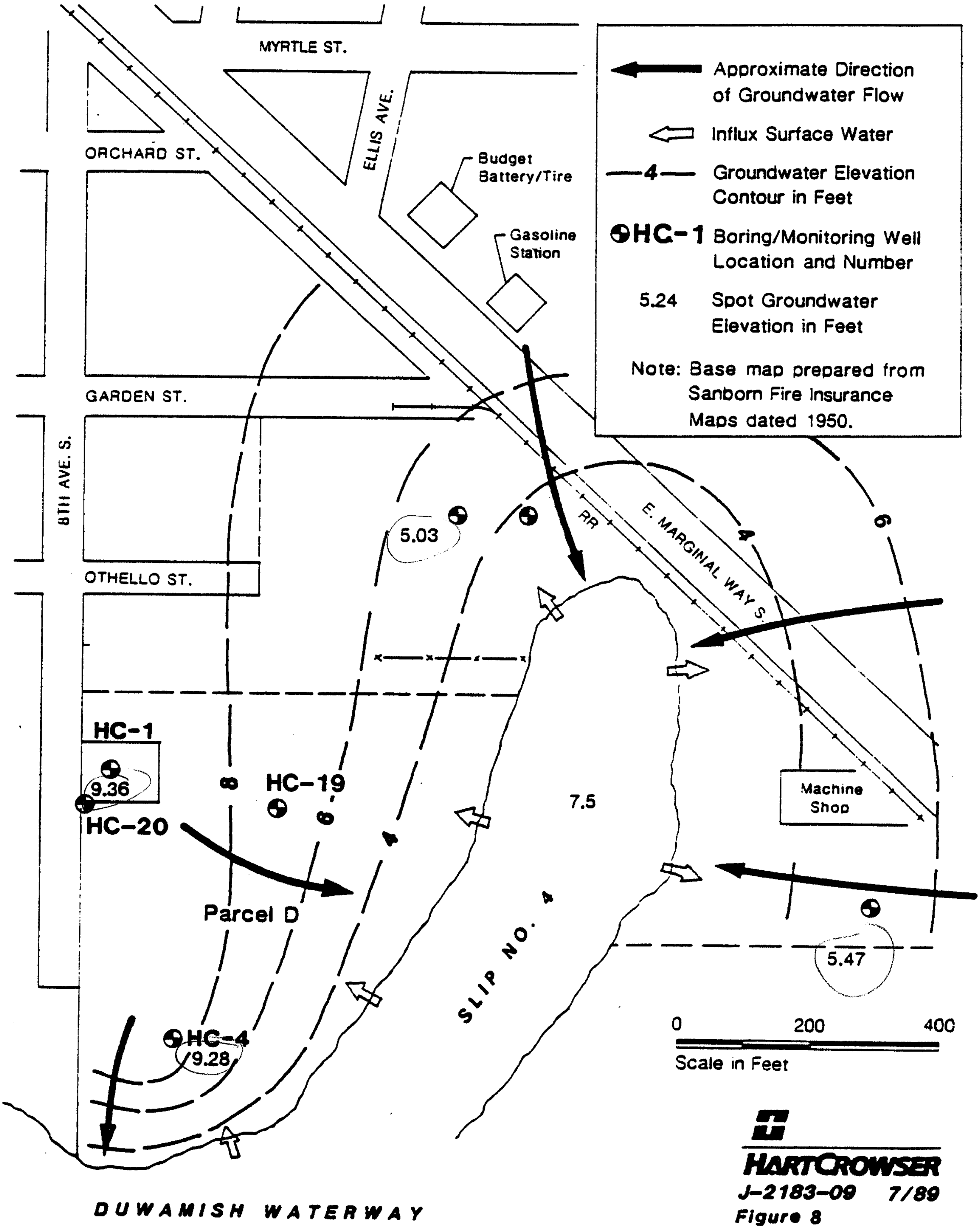
Generalized Subsurface Profiles A-A' and B-B'



HARTCROWSER
J-2183-09 7/89
Figure 6

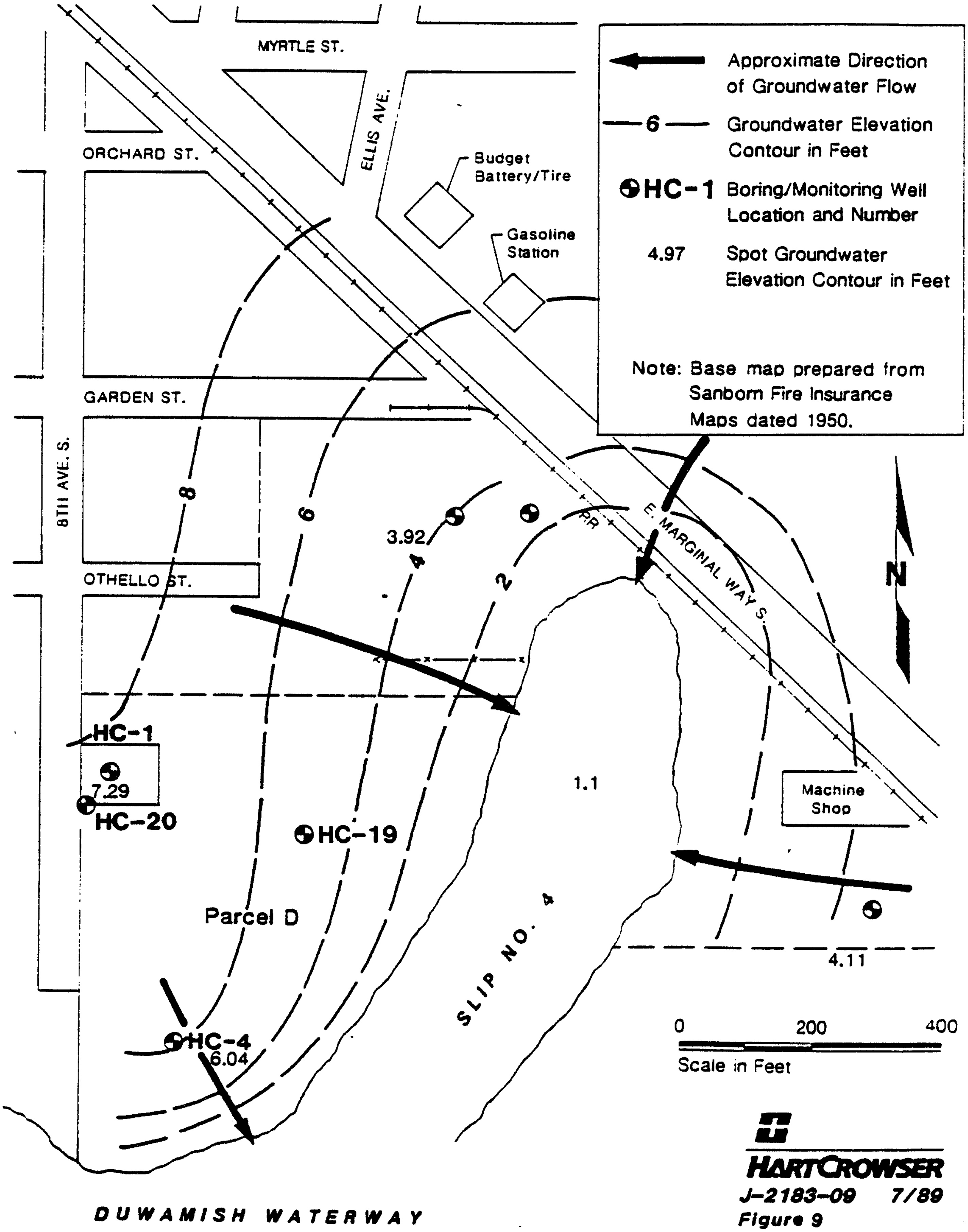
Groundwater Elevation Contour Map

High Tide



Groundwater Elevation Contour Map

Low Tide



HARTCROWSER
J-2183-09 7/89
Figure 9

Appendix D-4

Landau 1990: Environmental Site Assessment, First Interstate Bank of Washington Property

IC#162

Final Report

Environmental Site Assessment
First Interstate Bank of Washington Property
7400 8th Avenue South and
7343 East Marginal Way South
Seattle, Washington

June 8, 1990

Volume I of II

Prepared for

Boeing Environmental Affairs
Seattle, Washington

Prepared by

Landau Associates, Inc.
P.O. Box 1029
Edmonds, WA 98020-9129

EML 90-004

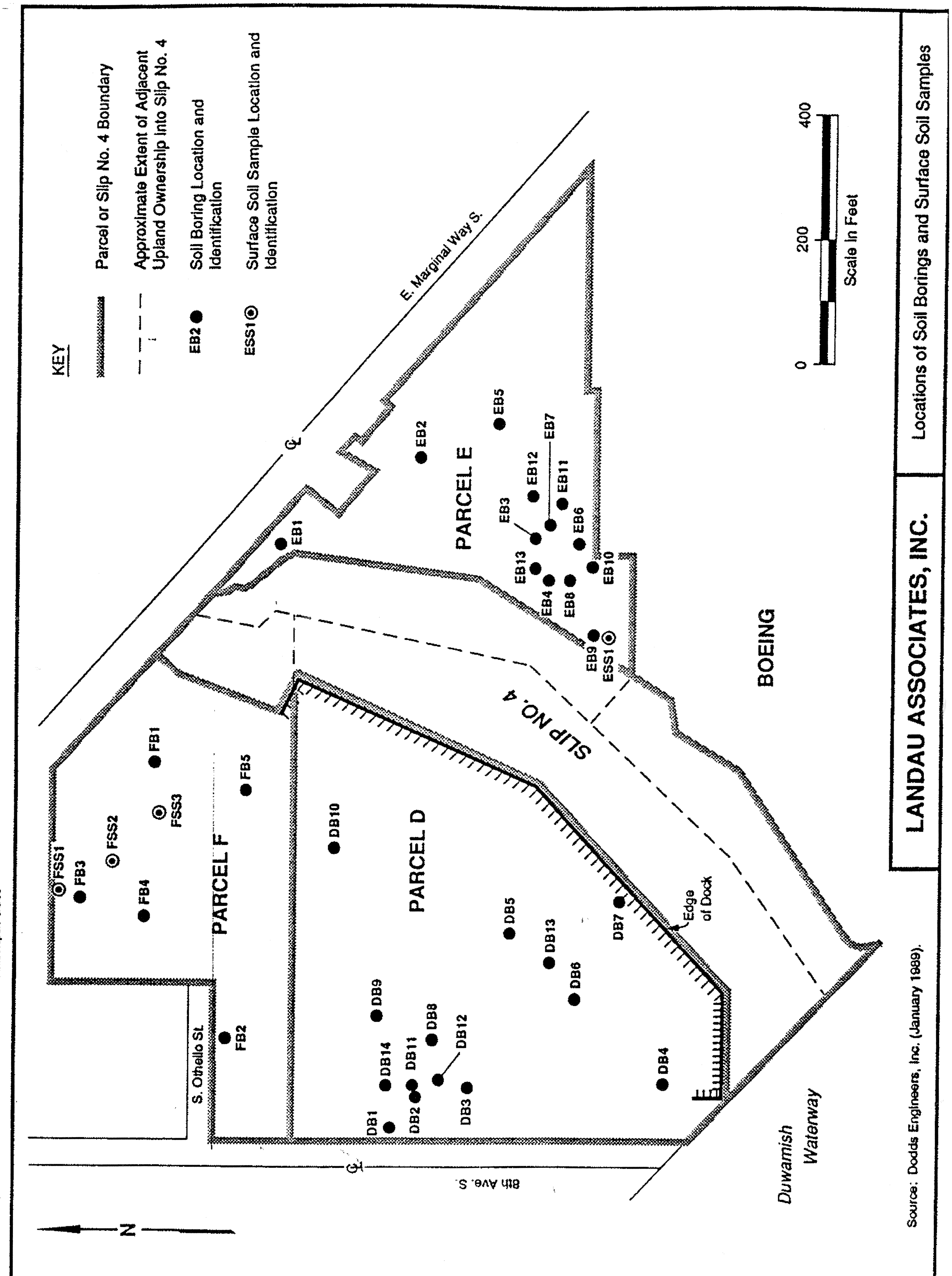
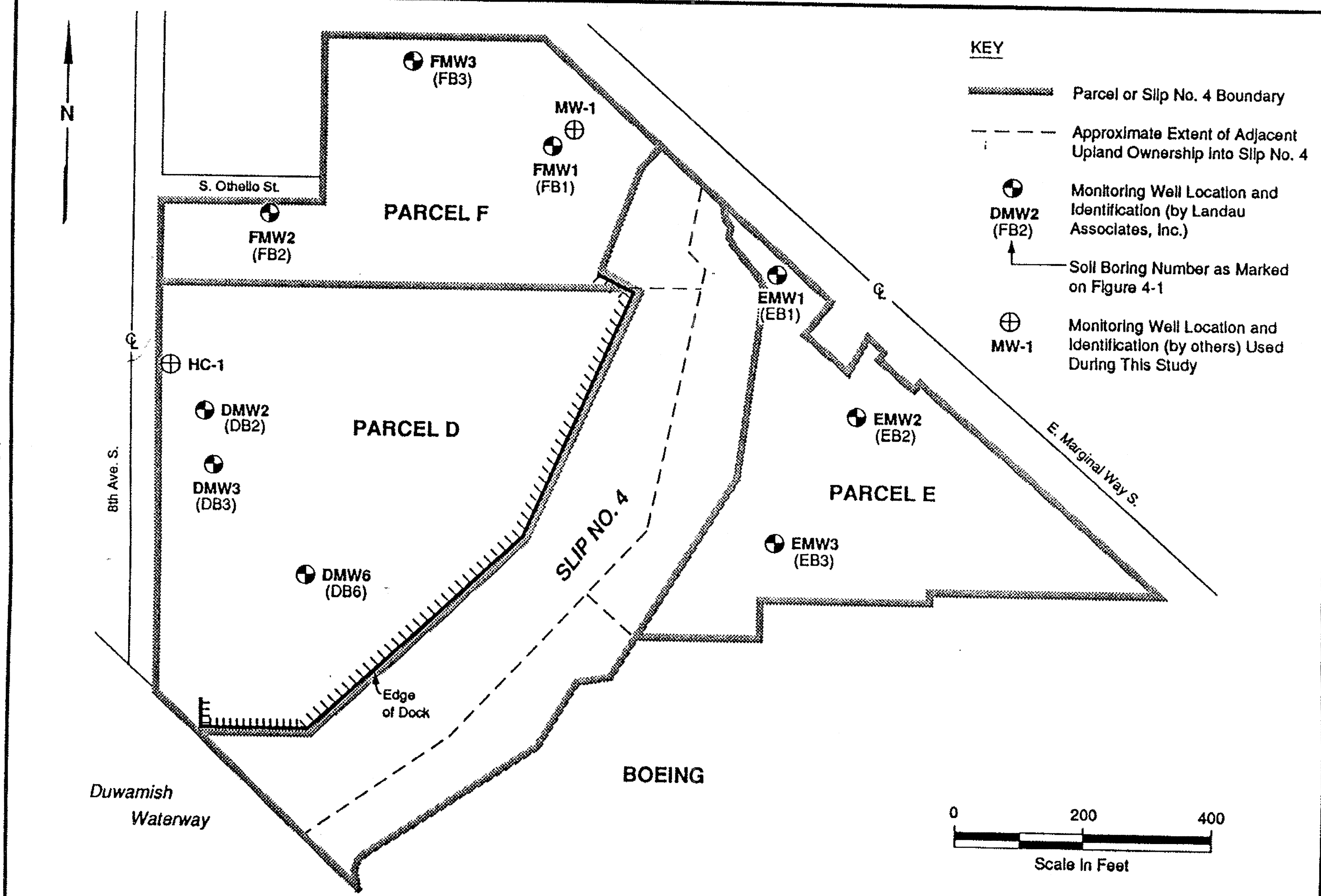

KEY
Parcel or Slip No. 4 Boundary
Approximate Extent of Adjacent Upland Ownership into Slip No. 4
EB2 Soil Boring Location and Identification
ESS1 Surface Soil Sample Location and Identification
0
200
400
Scale in Feet
E. Marginal Way S.
PARCEL E
PARCEL F
PARCEL D
SLIP NO. 4
BOEING
Edge of Dock
S. Othello St.
8th Ave. S.
Duwamish Waterway
N
EB1
EB2
EB3
EB4
EB5
EB6
EB7
EB8
EB9
EB10
EB11
EB12
EB13
ESS1
FB1
FB2
FB3
FB4
FB5
FSS1
FSS2
FSS3
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
Source: Dodds Engineers, Inc. (January 1989).
LANDAU ASSOCIATES, INC.
Locations of Soil Borings and Surface Soil Samples

Figure 4-1

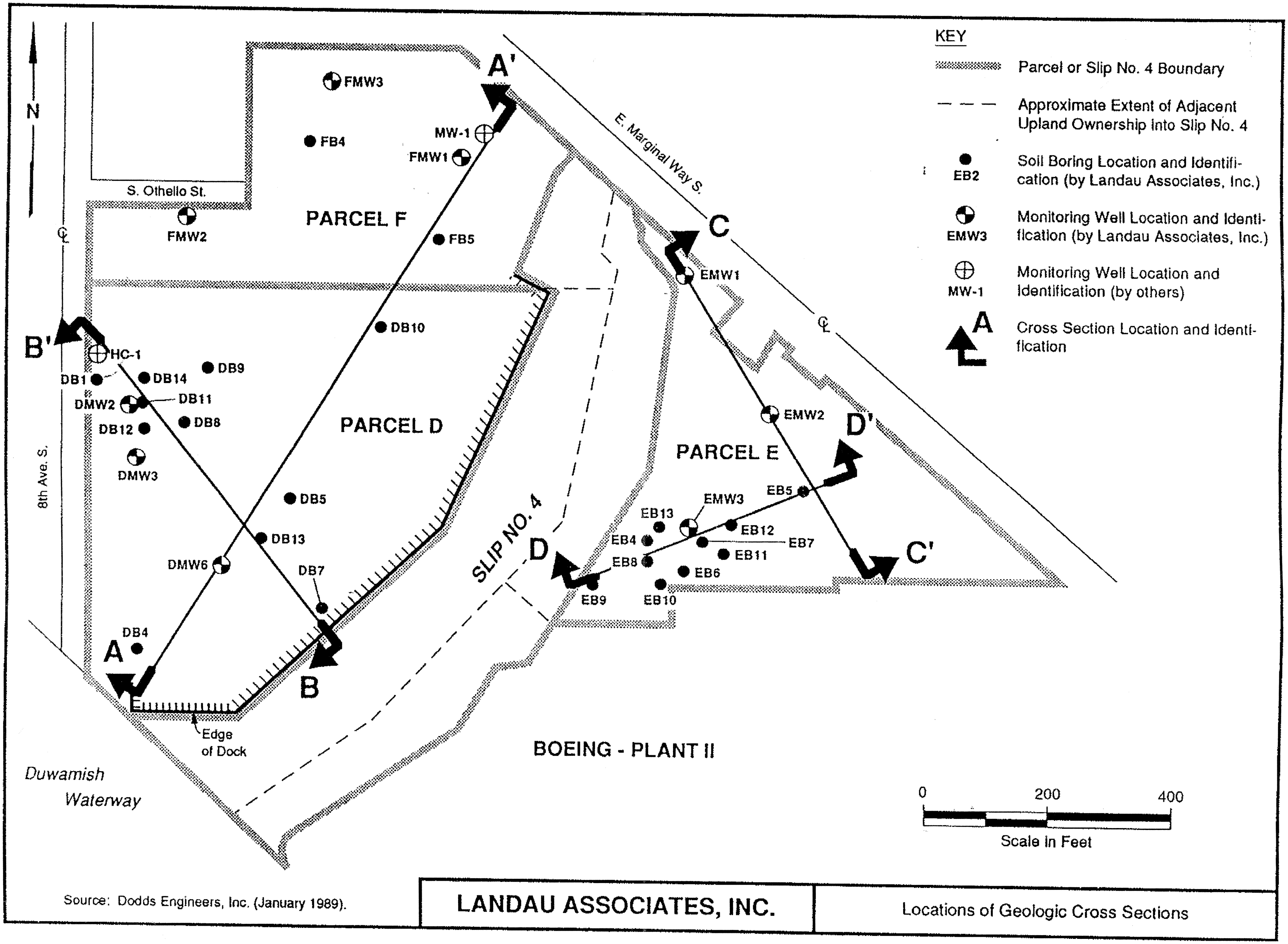


Source: Dodds Engineers, Inc. (January 1989).

LANDAU ASSOCIATES, INC.

Locations of Monitoring Wells

Figure 4-2



Source: Dodds Engineers, Inc. (January 1989).

LANDAU ASSOCIATES, INC.

Locations of Geologic Cross Sections

Figure 4-3

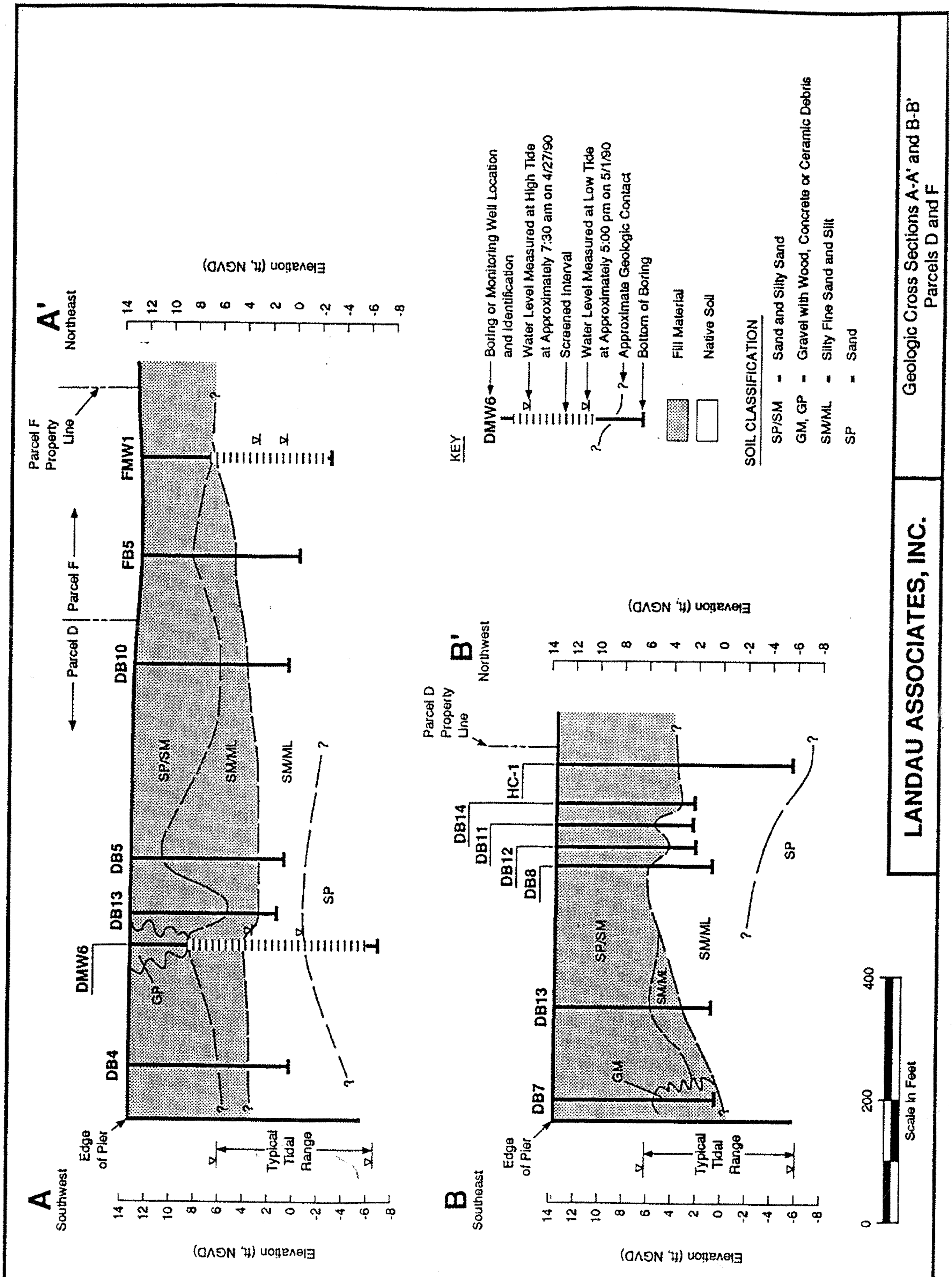
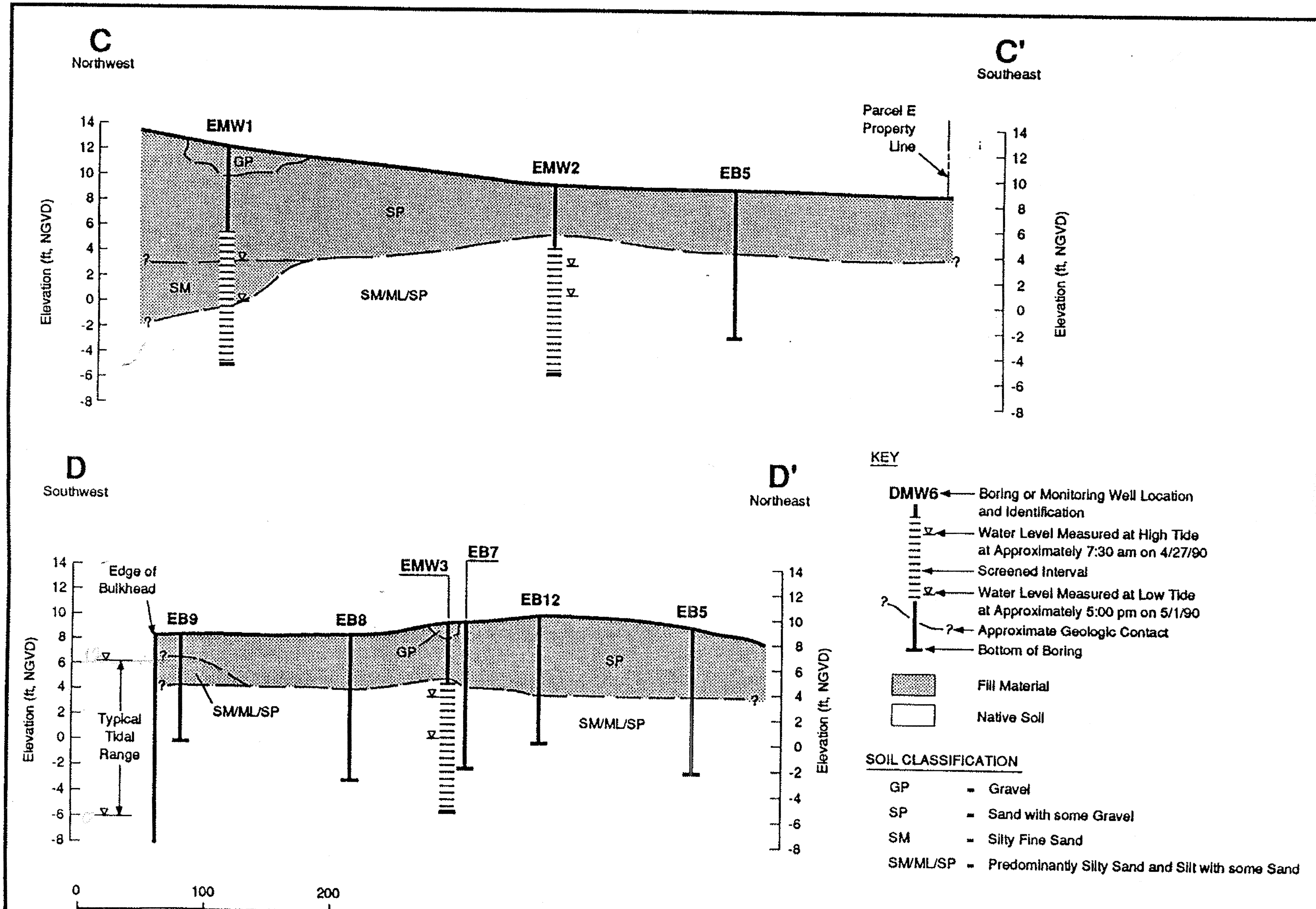

A
Southwest
A'
Northeast
Elevation (ft, NGVD)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
Edge of Pier
Typical Tidal Range
DB4
DMW6
DB13
DB5
DB10
FB5
FMW1
Parcel D
Parcel F
Parcel F Property Line
GP
SP/SM
SM/ML
SP
B
Southeast
B'
Northwest
DB7
GM
SM/ML
Parcel D Property Line
DB8
DB12
DB11
DB14
HC-1
KEY
DMW6 — Boring or Monitoring Well Location and Identification
Water Level Measured at High Tide at Approximately 7:30 am on 4/27/90
Screened Interval
Water Level Measured at Low Tide at Approximately 5:00 pm on 5/1/90
Approximate Geologic Contact
Bottom of Boring
Fill Material
Native Soil
SOIL CLASSIFICATION
SP/SM = Sand and Silty Sand
GM, GP = Gravel with Wood, Concrete or Ceramic Debris
SM/ML = Silty Fine Sand and Silt
SP = Sand
0
200
400
Scale in Feet
LANDAU ASSOCIATES, INC.
Geologic Cross Sections A-A' and B-B'
Parcels D and F

Figure 4-4



LANDAU ASSOCIATES, INC.

Geologic Cross Sections C-C' and D-D'
Parcel E

Figure 4-5

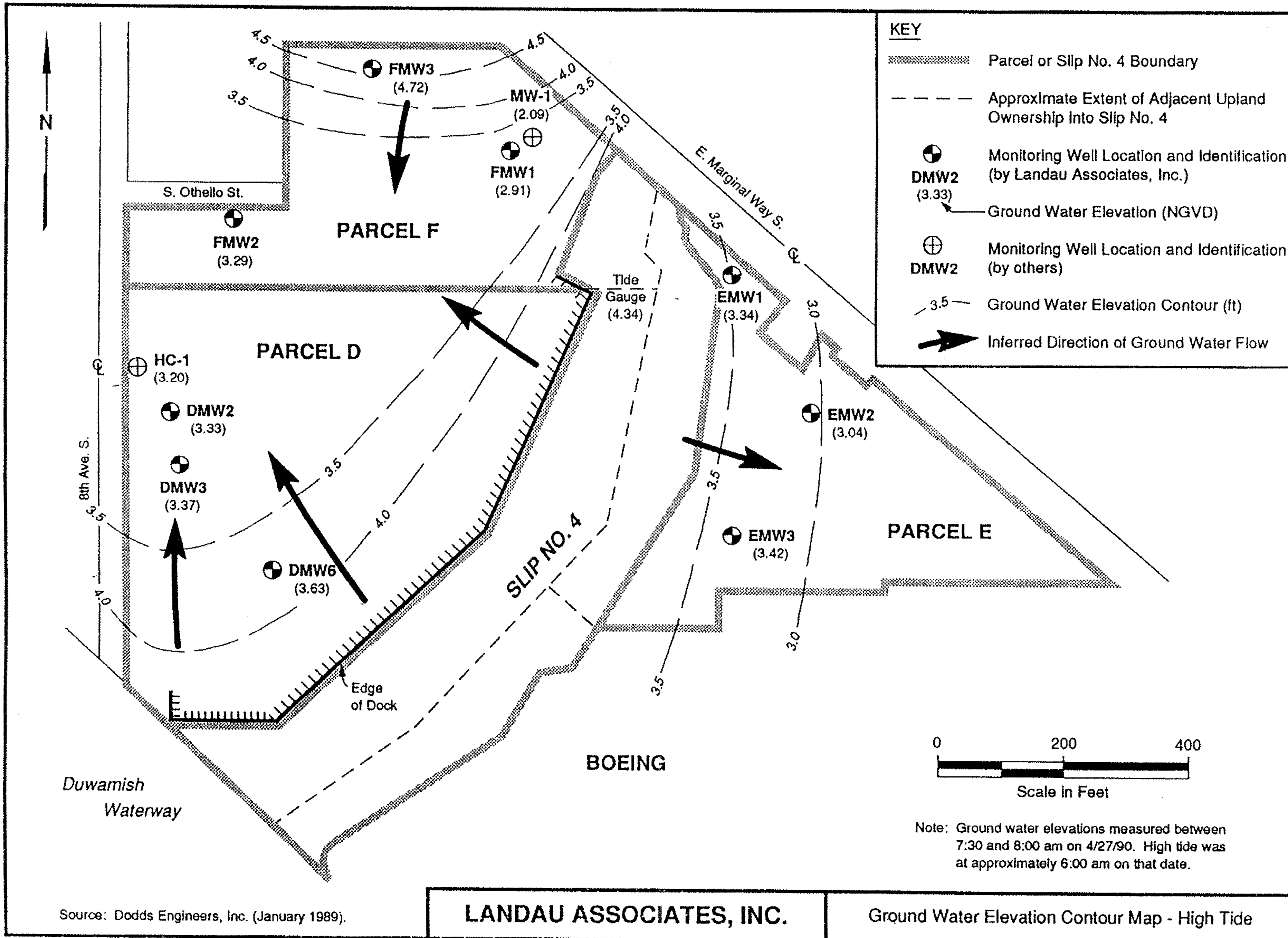
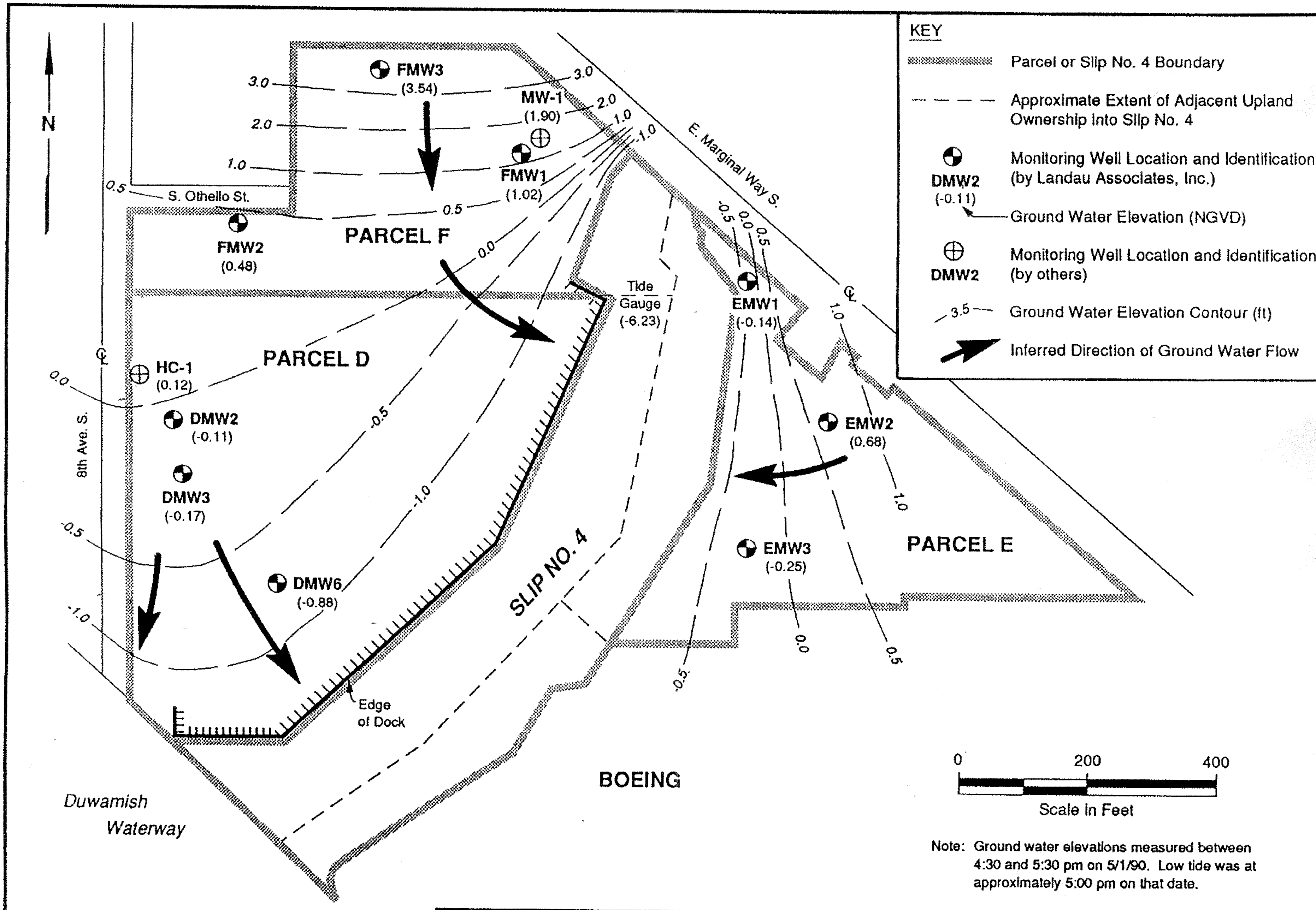

N
KEY
Parcel or Slip No. 4 Boundary
Approximate Extent of Adjacent Upland Ownership into Slip No. 4
DMW2 (3.33) Monitoring Well Location and Identification (by Landau Associates, Inc.)
Ground Water Elevation (NGVD)
DMW2 Monitoring Well Location and Identification (by others)
3.5 Ground Water Elevation Contour (ft)
Inferred Direction of Ground Water Flow
E. Marginal Way S.
S. Othello St.
8th Ave. S.
PARCEL F
PARCEL D
PARCEL E
SLIP NO. 4
BOEING
Duwamish Waterway
FMW3 (4.72)
MW-1 (2.09)
FMW1 (2.91)
FMW2 (3.29)
HC-1 (3.20)
DMW2 (3.33)
DMW3 (3.37)
DMW6 (3.63)
Tide Gauge (4.34)
EMW1 (3.34)
EMW2 (3.04)
EMW3 (3.42)
Edge of Dock
4.5
4.0
3.5
3.0
0
200
400
Scale in Feet
Note: Ground water elevations measured between 7:30 and 8:00 am on 4/27/90. High tide was at approximately 6:00 am on that date.
Source: Dodds Engineers, Inc. (January 1989).
LANDAU ASSOCIATES, INC.
Ground Water Elevation Contour Map - High Tide

Figure 4-6



Source: Dodds Engineers, Inc. (January 1989).

LANDAU ASSOCIATES, INC.

Ground Water Elevation Contour Map - Low Tide

Figure 4-7

Appendix D-5

Hart Crowser 1990b: Report of Supplemental Site Characterization—Parcel D, Evergreen Marine Leasing Property

#3

HARTCROWSER

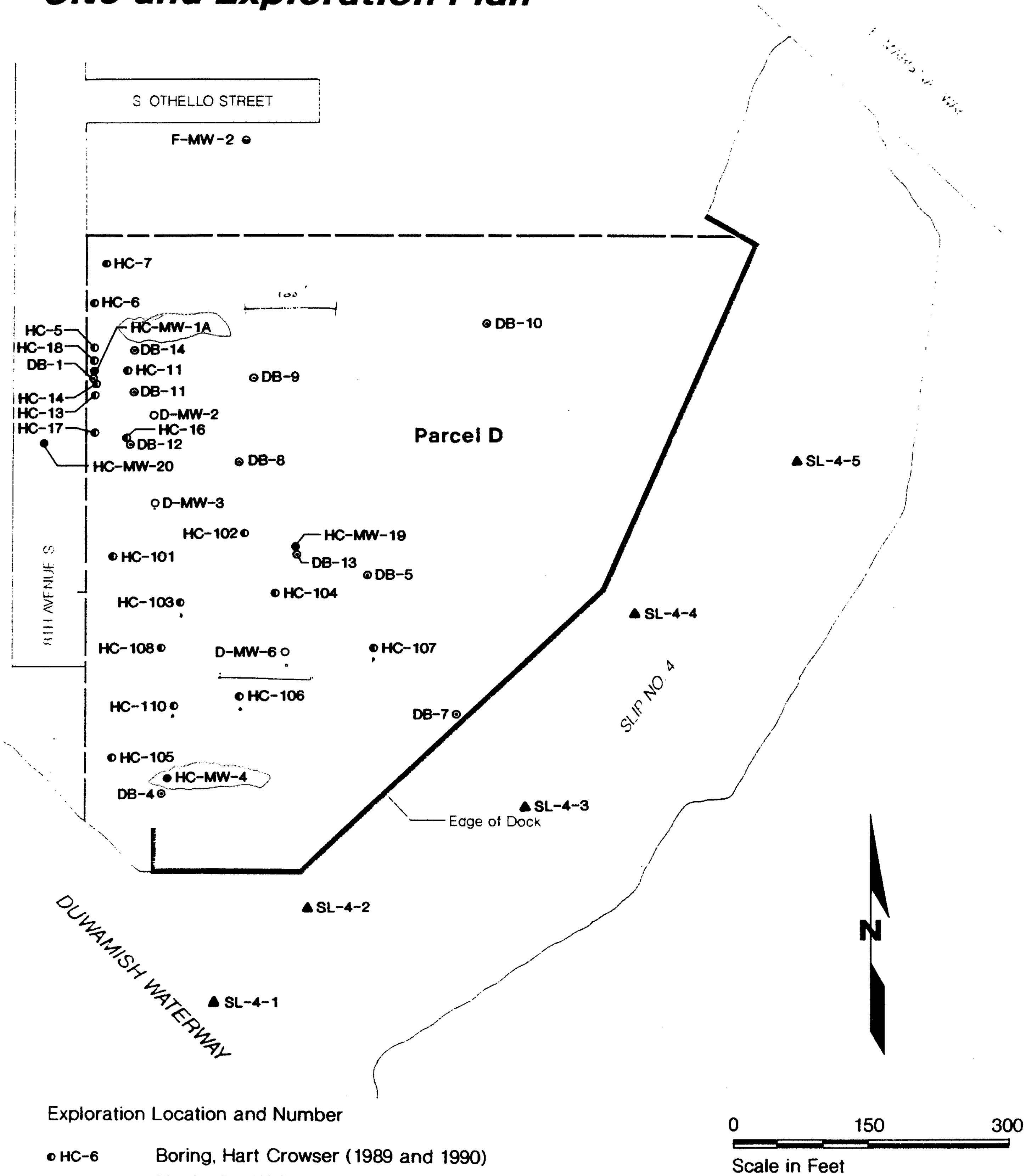
Earth and Environmental Technologies

Supplemental Site Characterization Report
Parcel D
Evergreen Marine Leasing Property
Seattle, Washington

Prepared for
First Interstate

November 15, 1990
J-2183-12

Site and Exploration Plan



Exploration Location and Number

● HC-6	Boring, Hart Crowser (1989 and 1990)
● HC-MW-1A	Monitoring Well, Hart Crowser (1989)
◉ DB-8	Boring, Landau (1990)
○ D-MW-3	Monitoring Well, Landau (1990, Parcel D)
● F-MW-2	Monitoring Well, Landau (1990, Parcel F)
▲ SL-4-2	Surface Sediment Sample, Landau (1990)

HARTCROWSER
J-2183-12 10/90
Figure 2

Appendix D-6

SAIC 2006b: Technical Memorandum, Crowley and First South Properties, Potential for Slip 4 Sediment Recontamination via Groundwater Discharge

Technical Memorandum

Crowley and First South Properties

Potential for Slip 4 Sediment Recontamination via Groundwater Discharge

Prepared for

Toxics Cleanup Program
Northwest Regional Office
Washington State Department of Ecology
Bellevue, Washington

Prepared by

From Science to Solutions

Science Applications International Corporation
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

October 2006

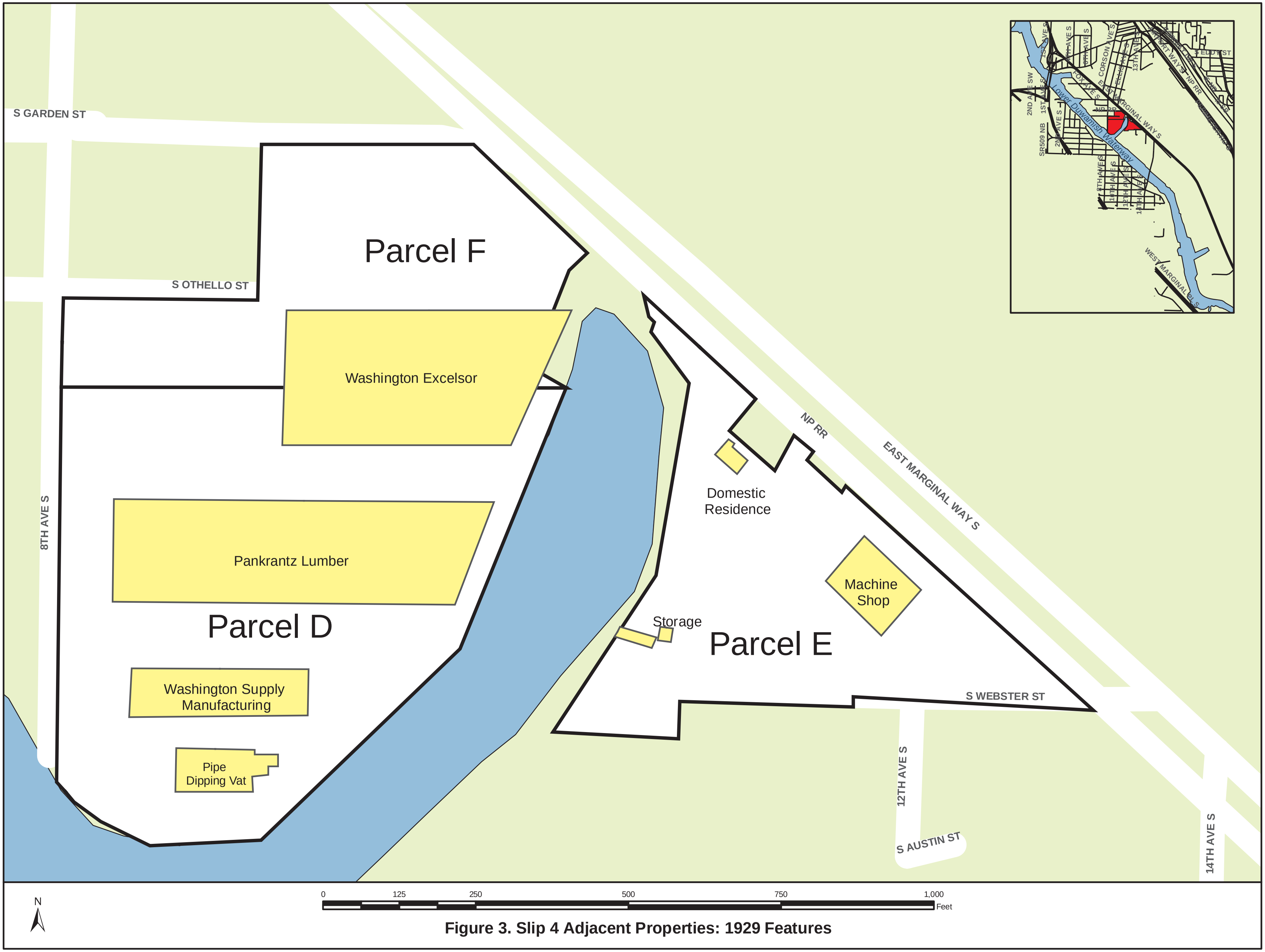


Figure 3. Slip 4 Adjacent Properties: 1929 Features

\0440_gis\Slip4\gis\projects\markd\1929features.mxd 1:2,500

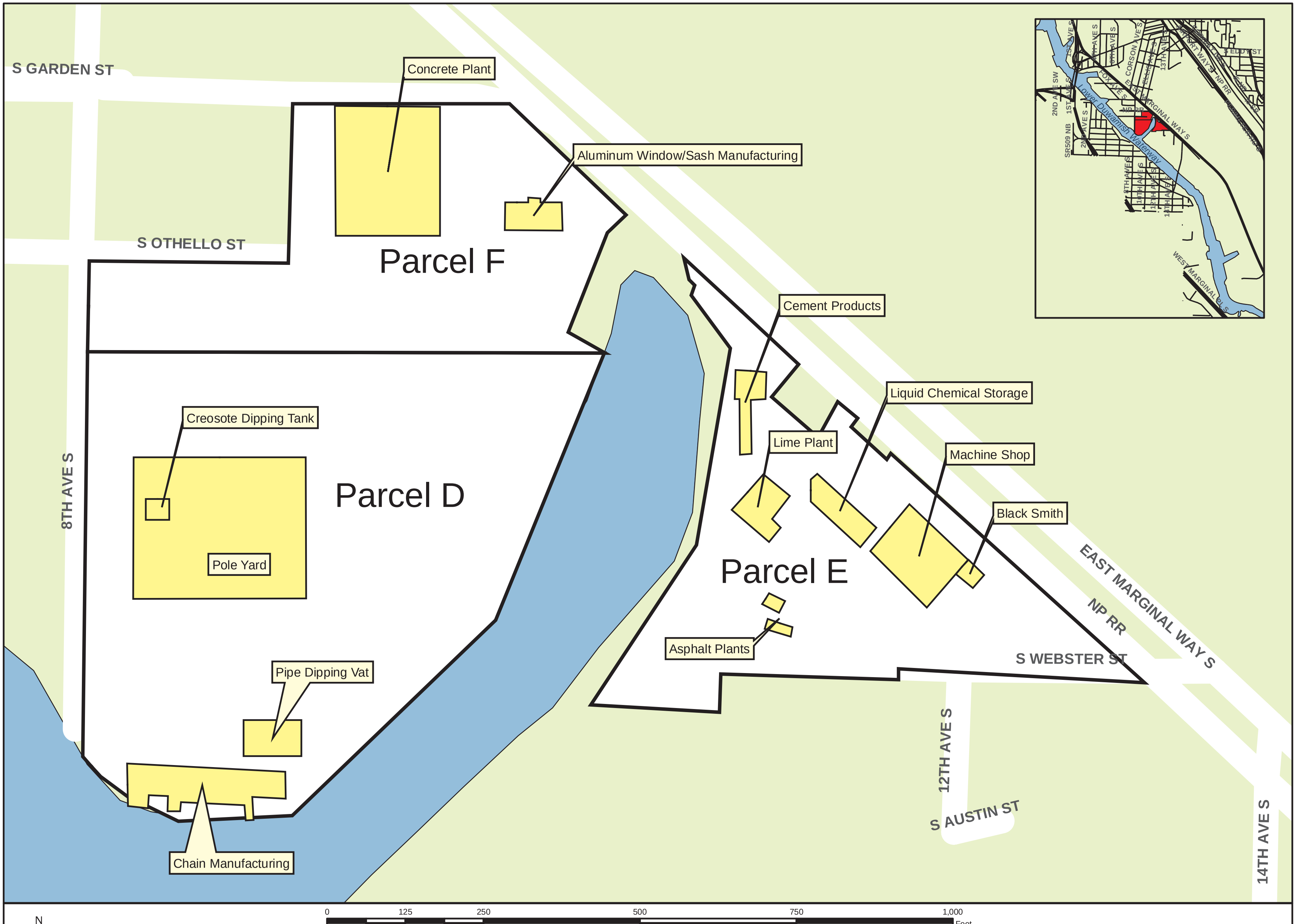


Figure 4. Slip 4 Adjacent Properties: 1950 Features

\0440_gis\Slip4\gis\projects\markd\1950features.mxd 1:2,500

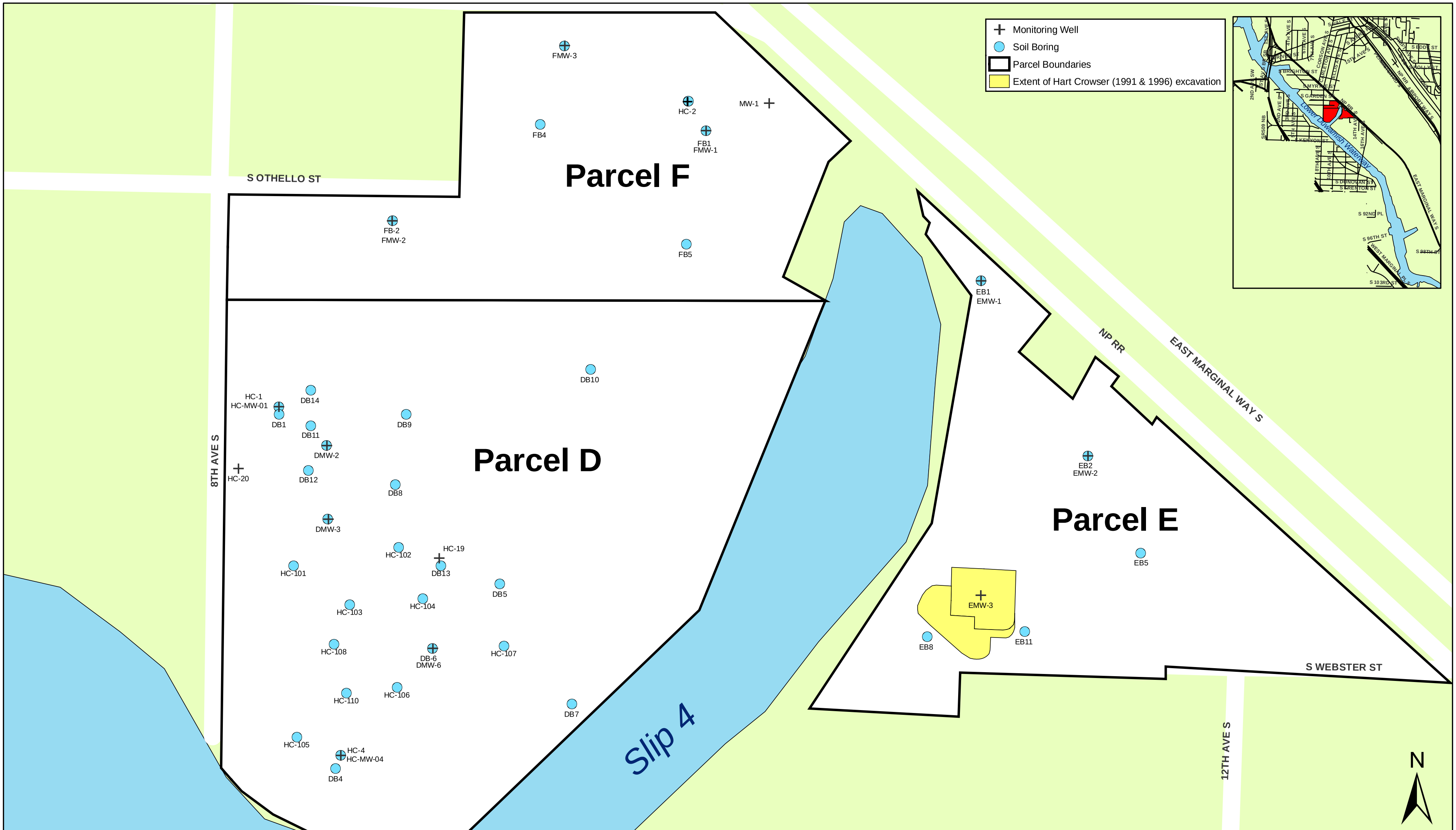


Figure 5. Slip 4 Adjacent Properties: Sample Locations

\0440_gis\Slip4\gis\projects\markd\map_csl_exceed.mxd

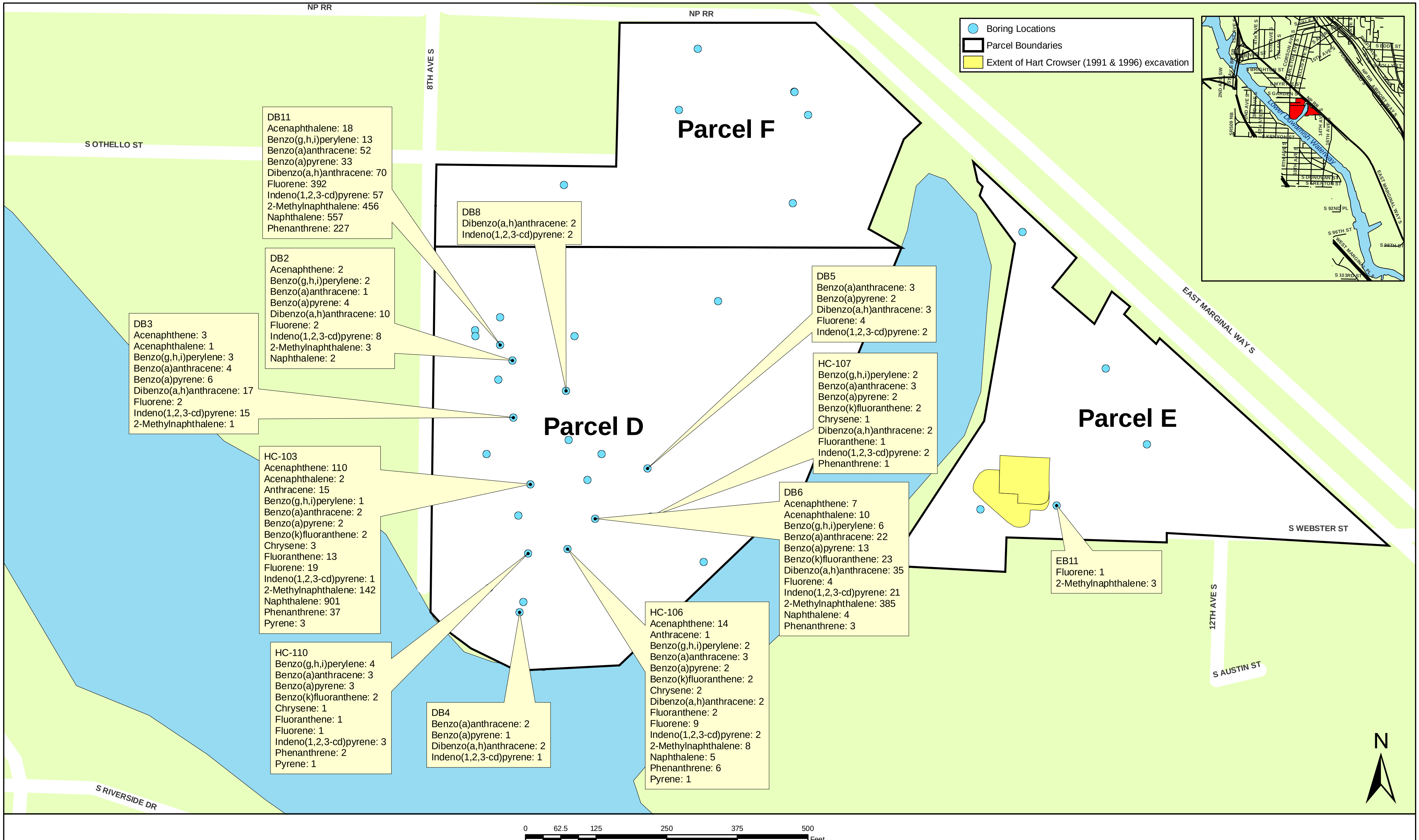


Figure 6. Slip 4 Adjacent Properties: PAH Soil Exceedance Factors

\0440_gis\Slip4\gis\projects\markd\map_csl_exceed.mxd 1:1,875

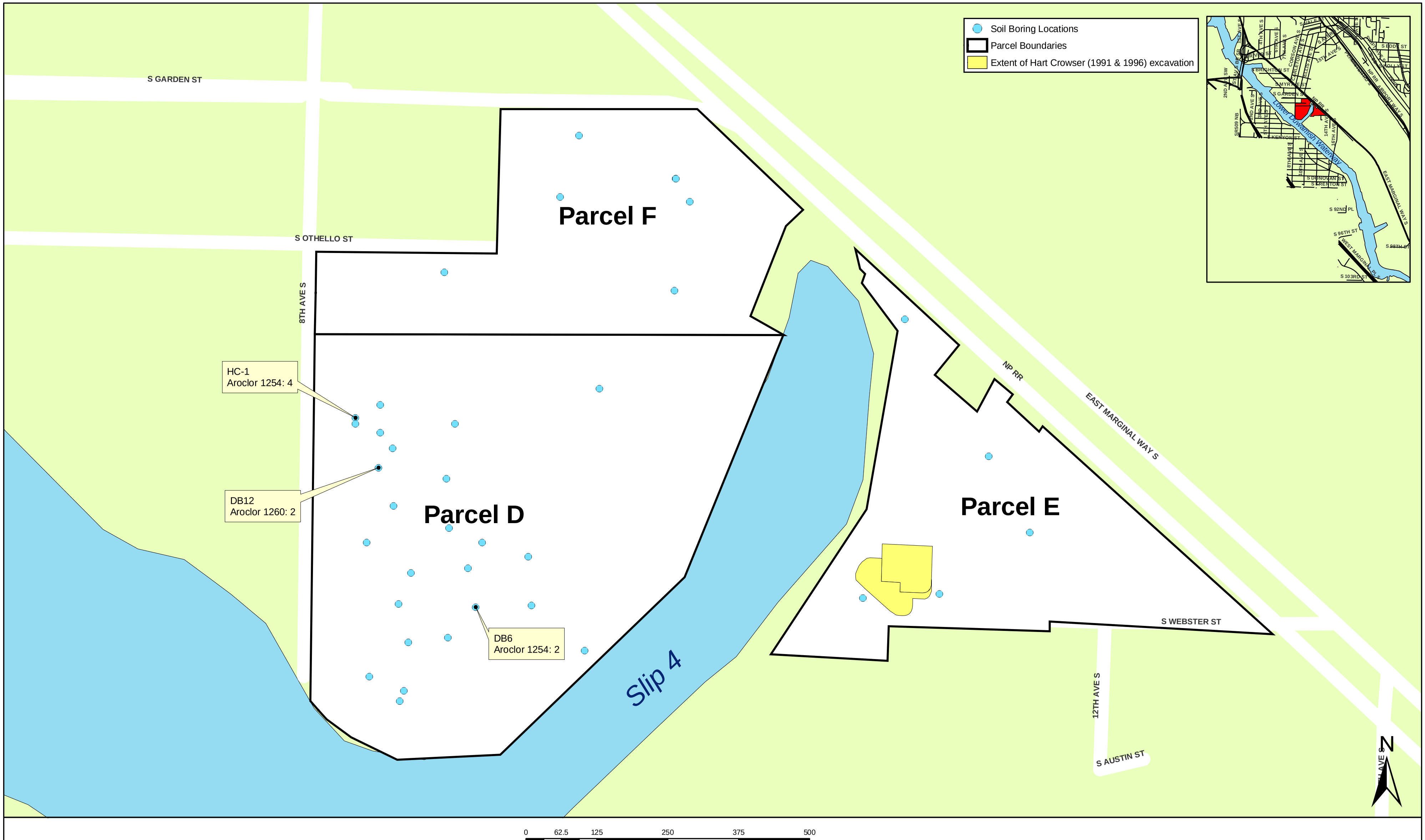


Figure 7. Slip 4 Adjacent Properties: PCB Soil Exceedance Factors

\0440_gis\Slip4\gis\projects\markd\map_csl_exceed.mxd

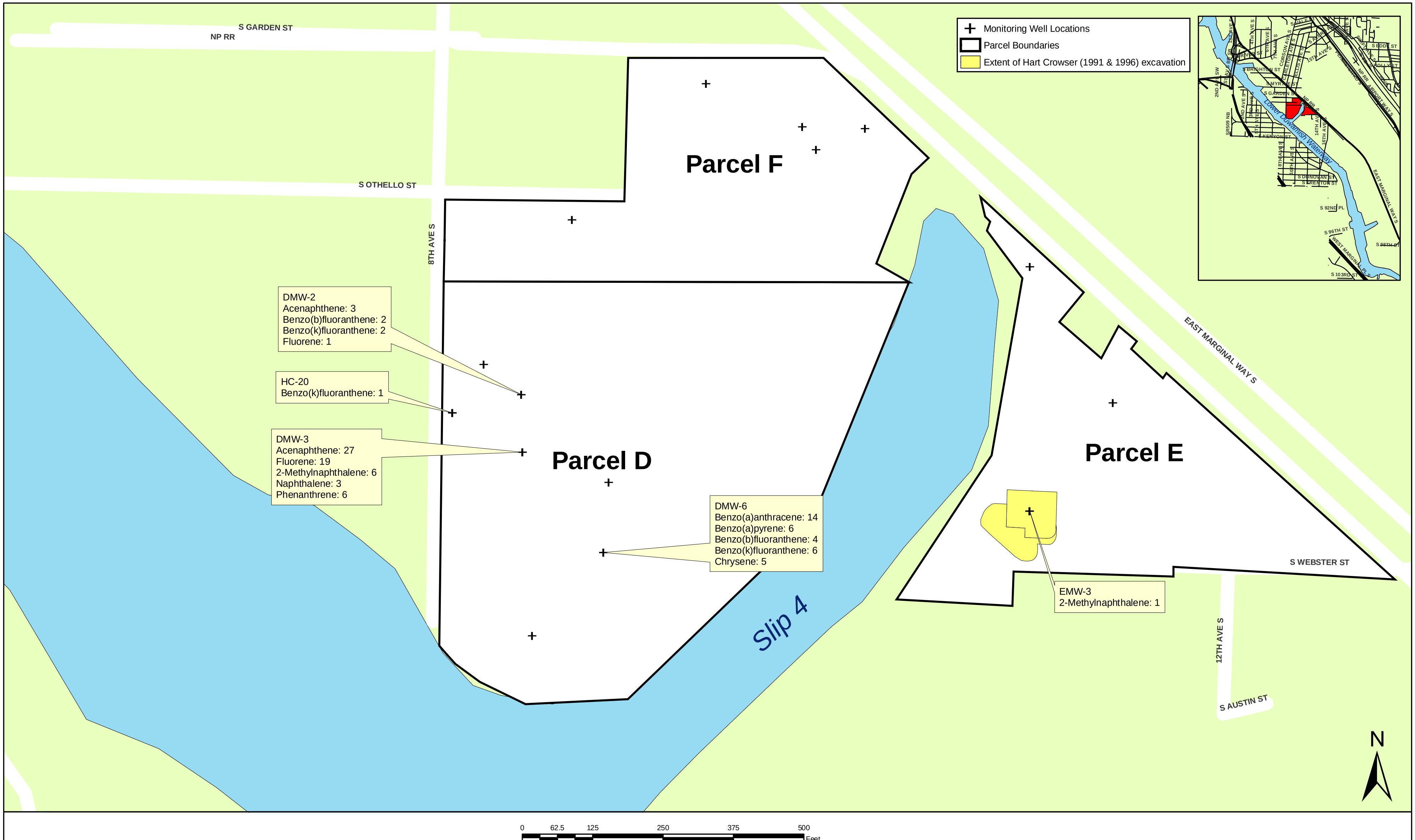


Figure 8. Slip 4 Adjacent Properties: PAH Groundwater Exceedance Factors

\0440_gis\Slip4\gis\projects\markd\map_GWpah_exceed.mxd 1:1,875

Appendix E
Fox Avenue Building Historical Data

Appendix E

E-1 Table E-1: Chemicals Detected in Soil, Fox Avenue Building (Former Great Western Chemical)
Table E-2: Chemicals Detected in Groundwater, Fox Avenue Building (Former Great Western Chemical)
Table E-3: Chemicals Detected in Seep Samples, Fox Avenue Building (Former Great Western Chemical)
Table E-4: Surface Sediment Sampling Results, Fox Avenue Building (Former Great Western Chemical)

E-2 Terra Vac and Floyd & Snider, Inc. 2000a: Supplemental Remedial Investigation and Feasibility Study

E-3 Terra Vac and Floyd & Snider, Inc. 2000b: S. Myrtle Street Embayment Study

Appendix E-1

Table E-1: Chemicals Detected in Soil, Fox Avenue Building (Former Great Western Chemical)

Table E-2: Chemicals Detected in Groundwater, Fox Avenue Building (Former Great Western Chemical)

Table E-3: Chemicals Detected in Seep Samples, Fox Avenue Building (Former Great Western Chemical)

Table E-4: Surface Sediment Sampling Results, Fox Avenue Building (Former Great Western Chemical)

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**1,1,1-TCA**	**160**		**2**		**80**
Hart Crowser 1990b	**1990**	**PT-3**		**1,1,1-TCA**	**130**		**2**		**65**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**1,1,1-TCA**	**120**		**2**		**60**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**1,1,1-TCA**	**97**		**2**		**49**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,1,1-TCA**	**42**		**2**		**21**
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	1,1,1-TCA	15		2		7.5
Hart Crowser 1993a	Jul-93	B-47	6	1,1,1-TCA	3		2		1.5
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,1,1-TCA	2		2		1.0
Hart Crowser 1993a	Jun-93	B-43 (DUP)	12	1,1,1-TCA	2		2		1.0
Hart Crowser 1993a	Jun-93	B-43	12	1,1,1-TCA	1.8		2		0.9
Hart Crowser 1992b	Apr-92	B-30	10-11.5	1,1,1-TCA	1.4		2		0.7
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	1,1,1-TCA	0.97		2		0.5
Hart Crowser 1993a	Jun-93	B-44	14	1,1,1-TCA	0.66		2		0.3
Hart Crowser 1992b	Apr-92	B-30	4-5.5	1,1,1-TCA	0.49		2		0.2
Hart Crowser 1995	Jul-95	HC-GW-1		1,1,1-TCA	0.49		2		0.2
Ecology 1993a	Jul-93	B-48	12	1,1,1-TCA	0.34		2		0.2
Hart Crowser 1993a	Jul-93	B-48 (DUP)	12	1,1,1-TCA	0.32		2		0.2
Hart Crowser 1993a	Jul-93	B-48	12	1,1,1-TCA	0.28		2		0.1
Hart Crowser 1990a	May-90	B2-S3	10	1,1,1-TCA	0.17	M	2		0.1
Ecology 1993a	Jul-93	B-47	12	1,1,1-TCA	0.045	J	2		0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	1,1,1-TCA	0.035		2		0.0
Ecology 1993d	Jul-93	B-51	12	1,1,1-TCA	0.014	J	2		0.0
Hart Crowser 1990b	1990	PT-2		1,1-DCA	14		8,000		0.0
Hart Crowser 1990b	1990	PT-3		1,1-DCA	3.6		8,000		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,1-DCA	3.2		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	1,1-DCA	2.2		8,000		0.0
Hart Crowser 1990b	1990	PT-5		1,1-DCA	0.970		8,000		0.0
Hart Crowser 1990b	1990	PT-4		1,1-DCA	0.910		8,000		0.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	1,1-DCA	0.066		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	1,1-DCA	0.01		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	1,1-DCE	8.9		1.7		5.2
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,4,6,7,8-HpCDD	8.17E-06	B			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,4,6,7,8-HpCDD	6.98E-06	B			
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,4,6,7,8-HpCDD	2.69E-07	B			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,4,6,7,8-HpCDF	1.19E-06				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,4,6,7,8-HpCDF	9.81E-07				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,4,6,7,8-HpCDF	3.33E-08				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,4,7,8,9-HpCDF	9.87E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,4,7,8,9-HpCDF	7.86E-08				

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,4,7,8,9-HpCDF	4.00E-09	J			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,4,7,8-HxCDD	3.89E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,4,7,8-HxCDD	2.41E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,4,7,8-HxCDD	1.4E-09	J			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,4,7,8-HxCDF	4.84E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,4,7,8-HxCDF	3.84E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,4,7,8-HxCDF	1.8E-09				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,6,7,8-HxCDD	2.03E-07				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,6,7,8-HxCDD	1.76E-07				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,6,7,8-HxCDD	9.6E-09				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,6,7,8-HxCDF	4.22E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,6,7,8-HxCDF	3.17E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,6,7,8-HxCDF	1.00E-09				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,7,8,9-HxCDD	1.03E-07				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,7,8,9-HxCDD	7.44E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2,3,7,8,9-HxCDD	3.8E-09				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,7,8,9-HxCDF	2.16E-08				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,7,8-PeCDD	1.13E-08	J			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,7,8-PeCDD	5.5E-09				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	1,2,3,7,8-PeCDF	7.1E-09	J			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2,3,7,8-PeCDF	3.9E-09				
Ecology 1993a	Jul-93	B-47	12	1,2,4-Trimethylbenzene	1.1	J	4,000		0
Ecology 1993a	Jul-93	B-50	10	1,2,4-Trimethylbenzene	0.72	J	4,000		0
Ecology 1993a	Jul-93	B-47	12	1,2,4-Trimethylbenzene	0.38	J	4,000		0
Hart Crowser 1990b	Sep-90	B-9/S-6	15	1,2-DCA	0.097		11		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	1,2-DCE (total)	57		720		0.1
Hart Crowser 1992b	Apr-92	B-30	4-5.5	1,2-DCE (total)	30		720		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	1,2-DCE (total)	9.8		720		0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	1,2-DCE (total)	3.9		720		0.0
ATI 1991a	Aug-91	B-16/S7	16	1,2-DCE (total)	2.1		720		0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	1,2-DCE (total)	2.1		720		0.0
Ecology 1993a	Jul-93	B-48	12	1,2-DCE (total)	1.4	J	720		0.0
Hart Crowser 1990a	May-90	B2-S3	10	1,2-DCE (total)	1.3		720		0.0
Ecology 1993a	Jul-93	B-47	12	1,2-DCE (total)	1		720		0.0
Hart Crowser 1993a	Aug-92	B-33	29.5-31	1,2-DCE (total)	0.9		720		0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	1,2-DCE (total)	0.88		720		0.0
Hart Crowser 1992a	Jan-91	SB-11	2.5	1,2-DCE (total)	0.78		720		0.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	1,2-DCE (total)	0.54		720		0.0
Ecology 1993a	Jul-93	B-49	15	1,2-DCE (total)	0.35		720		0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-21	48-49.5	1,2-DCE (total)	0.31		720		0.0
ATI 1991a	Aug-91	B-17/S1	18	1,2-DCE (total)	0.30		720		0.0
Ecology 1993b	Jun-93	278089		1,2-DCE (total)	0.22		720		0.0
Hart Crowser 1992a	Jan-91	SB-11	13	1,2-DCE (total)	0.22		720		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	1,2-DCE (total)	0.19		720		0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	1,2-DCE (total)	0.19		720		0.0
Hart Crowser 1993a	Aug-92	B-32	0-3	1,2-DCE (total)	0.17		720		0.0
Ecology 1993b	Jun-93	278088		1,2-DCE (total)	0.11		720		0.0
Hart Crowser 1992a	Jan-91	B-15	17	1,2-DCE (total)	0.11		720		0.0
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	1,2-DCE (total)	0.075		720		0.0
Hart Crowser 1993a	Aug-92	B-35	8-10	1,2-DCE (total)	0.074		720		0.0
Ecology 1993d	Jul-93	B-51	12	1,2-DCE (total)	0.044	J	720		0.0
Ecology 1993d	Jul-93	B-52	12	1,2-DCE (total)	0.033	J	720		0.0
Ecology 1993b	Jun-93	278087		1,2-DCE (total)	0.03	J	720		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	1,2-DCE (total)	0.017		720		0.0
Ecology 1991b	Aug-91	B-16	15	1,2-DCE (total)	0.013		720		0.0
Ecology 1993b	Jun-93	278090		1,2-DCE (total)	0.007	J	720		0.0
Ecology 1993b	Jun-93	278090 (DUP)		1,2-DCE (total)	0.007	J	720		0.0
Ecology 1991b	Aug-91	B-16	13.5	1,2-DCE (total)	0.0017		720		0.0
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,2-Dichlorobenzene**	**18**		**15**	**0.0038**	**4,737**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**1,2-Dichlorobenzene**	**1.7**		**15**	**0.0038**	**447**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**1,2-Dichlorobenzene**	**0.41**	**J**	**15**	**0.0038**	**108**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,2-Dichlorobenzene**	**0.14**		**15**	**0.0038**	**37**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,2-Dichlorobenzene**	**0.12**	**J**	**15**	**0.0038**	**32**
Ecology 1993d	**Jul-93**	**B-52**	**12**	**1,2-Dichlorobenzene**	**0.1**	**J**	**15**	**0.0038**	**26**
Hart Crowser 1992a	Jan-91	SB-11	13	1,2-Dichlorobenzene	0.035	J	15	0.0038	9.2
Ecology 1993d	Jul-93	B-52	12	1,2-Dichlorobenzene	0.032	J	15	0.0038	8.4
Ecology 1993b	Jun-93	278089		1,2-Dichlorobenzene	0.025	J	15	0.0038	6.6
Ecology 1993a	Jul-93	B-49	15	1,2-Dichlorobenzene	0.012	J	15	0.0038	3.2
Hart Crowser 1990b	Sep-90	B-9/S-6	15	1,2-Dichloropropane	0.017				
Hart Crowser 1992a	Jan-91	SB-12	13	1,2-Dichloropropane	0.011				
Hart Crowser 1990a	May-89	B-1		1,2-Dichloropropane	0.005				
Ecology 1993a	Jul-93	B-47	12	1,3,5-Trimethylbenzene	0.12	J	4,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	17	1,3-Dichlorobenzene	1.1				
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**1,4-Dichlorobenzene**	**5.9**		**42**	**0.015**	**393**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**1,4-Dichlorobenzene**	**0.71**		**42**	**0.015**	**47**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**1,4-Dichlorobenzene**	**0.16**	**J**	**42**	**0.015**	**11**
Ecology 1993a	Jul-93	B-47	12	1,4-Dichlorobenzene	0.036	J	42	0.015	2.4
Ecology 1993d	Jul-93	B-52	12	1,4-Dichlorobenzene	0.009	J	42	0.015	0.6

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Ecology 1993a	**Jul-93**	**B-47**	**12**	**1,4-Dimethylbenzene**	**0.5**	**J**	**42**	**0.015**	**33**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	2,3,4,6,7,8-HxCDF	7.35E-08	B			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	2,3,4,6,7,8-HxCDF	6.10E-08	B			
Hart Crowser 1992b	Apr-92	B-31	10.5-12	2,3,4,6,7,8-HxCDF	2.1E-09	B			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	2,3,4,7,8-PeCDF	7.3E-09	J			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	2,3,4,7,8-PeCDF	4.00E-09	J			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	2,3,7,8-TCDF	1.25E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	2,3,7,8-TCDF	1.7E-09				
Hart Crowser 1993a	Aug-92	B-35	28-30	2,4,5-Trichlorophenol	0.089		8,000		0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	2,4,5-Trichlorophenol	0.076	J	8,000		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	2,4,5-Trichlorophenol	0.074		8,000		0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	2,4,5-Trichlorophenol	0.027		8,000		0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	2,4,5-Trichlorophenol	0.014		8,000		0.0
Hart Crowser 1992b	Apr-92	B-21	48-49.5	2,4,5-Trichlorophenol	0.013		8,000		0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	2,4,6-Trichlorophenol	0.082	J	91		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	2,4,6-Trichlorophenol	0.017		91		0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	2,4,6-Trichlorophenol	0.0099		91		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	2,4-Dichlorophenol	2.1		240		0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	2,4-Dichlorophenol	0.68		240		0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	2,4-Dichlorophenol	0.5		240		0.0
Hart Crowser 1992b	Apr-92	B-21	48-49.5	2,4-Dichlorophenol	0.38		240		0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	2,4-Dichlorophenol	0.22		240		0.0
Hart Crowser 1992b	Mar-92	B-20	3-4.5	2,4-Dichlorophenol	0.21		240		0.0
Hart Crowser 1993a	Aug-92	B-32	0-3	2,4-Dichlorophenol	0.15	J	240		0.0
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	2,4-Dichlorophenol	0.11	J	240		0.0
Hart Crowser 1992b	Mar-92	B-22	6-7.5	2,4-Dichlorophenol	0.084		240		0.0
Hart Crowser 1993a	Aug-92	B-32	7-9	2,4-Dichlorophenol	0.076		240		0.0
Hart Crowser 1992b	Mar-92	B-24	10.5-12	2,4-Dichlorophenol	0.072		240		0.0
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	2,4-Dichlorophenol	0.063		240		0.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	2,4-Dichlorophenol	0.057		240		0.0
Hart Crowser 1993a	Aug-92	B-36	9-11	2,4-Dichlorophenol	0.056	J	240		0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	2,4-Dichlorophenol	0.052		240		0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	2,4-Dichlorophenol	0.049		240		0.0
Hart Crowser 1992b	Mar-92	B-18	3-4.5	2,4-Dichlorophenol	0.043		240		0.0
Hart Crowser 1992b	Mar-92	B-28	4.5-6	2,4-Dichlorophenol	0.037		240		0.0
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	2,4-Dichlorophenol	0.035		240		0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	2,4-Dichlorophenol	0.028		240		0.0
Hart Crowser 1992b	**Apr-92**	**B-29 (surface fines)**	**0**	**2,4-Dimethylphenol**	**0.52**		**1,600**	**0.037**	**14**
Hart Crowser 1990b	Sep-90	B-8/S-7	18	2-Butanone	21		48,000		0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	Jan-91	SB-10	2.5	2-Butanone	4.6		48,000		0.0
Hart Crowser 1992a	Jan-91	SB-11	13	2-Butanone	4.3		48,000		0.0
Ecology 1993a	Jul-93	B-47	12	2-Butanone	3.5	J	48,000		0.0
Ecology 1993b	Jun-93	278089		2-Butanone	2.7	J	48,000		0.0
Hart Crowser 1990b	Oct-90	SB6-2	7.5	2-Butanone	1.1		48,000		0.0
Ecology 1993b	Jun-93	278087		2-Butanone	0.52		48,000		0.0
Ecology 1993d	Jul-93	B-52	12	2-Butanone	0.37	J	48,000		0.0
Ecology 1993b	Jun-93	278088		2-Butanone	0.35		48,000		0.0
Ecology 1993a	Jul-93	B-49	15	2-Butanone	0.23	J	48,000		0.0
Hart Crowser 1992a	Jan-91	B-15	12.5	2-Butanone	0.18		48,000		0.0
Ecology 1993d	Jul-93	B-51	12	2-Butanone	0.18		48,000		0.0
Ecology 1993a	Jul-93	B-48	12	2-Butanone	0.15		48,000		0.0
Hart Crowser 1992a	Jan-91	B-15	17	2-Butanone	0.021		48,000		0.0
Ecology 1991b	Aug-91	B-16	15	2-Butanone	0.015		48,000		0.0
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**2-Methylnaphthalene**	**2.8**		**320**	**0.073**	**38**
Hart Crowser 1992a	Jan-91	SB-10	2.5	2-Methylnaphthalene	1.9		320	1.4	1.4
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**2-Methylnaphthalene**	**1.7**		**320**	**0.073**	**23**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**2-Methylnaphthalene**	**0.95**		**320**	**0.073**	**13**
Hart Crowser 1995	Jul-95	HC-GW-1		2-Methylnaphthalene	0.42		320	0.073	5.8
Hart Crowser 1992a	Jan-91	SB-10	12.5	2-Methylnaphthalene	0.3		320	0.073	4.1
Ecology 1993a	Jul-93	B-49	15	2-Methylnaphthalene	0.15	J	320	0.073	2.1
Ecology 1993a	Jul-93	B-50	10	2-Methylnaphthalene	0.13	J	320	0.073	1.8
Ecology 1993a	Jul-93	B-50	6	2-Methylnaphthalene	0.12	J	320	1.4	0.1
Hart Crowser 1992a	Jan-91	SB-11	7.5	2-Methylnaphthalene	0.12		320	0.073	1.6
Hart Crowser 1992a	Jan-91	B-15	2.5	2-Methylnaphthalene	0.087		320	1.4	0.1
Hart Crowser 1992b	Apr-92	B-30	14.5-16	4-Methyl-2-Pentanone	8.6				
Hart Crowser 1992b	Apr-92	B-30	4-5.5	4-Methyl-2-Pentanone	3.8				
Ecology 1993a	Jul-93	B-47	12	4-Methyl-2-Pentanone	1.8				
Hart Crowser 1990b	Sep-90	B-8/S-7	18	4-Methyl-2-Pentanone	1.3				
Ecology 1993b	Jun-93	278089		4-Methyl-2-Pentanone	1				
Ecology 1993a	Jul-93	B-49	15	4-Methyl-2-Pentanone	0.44				
Ecology 1993b	Jun-93	278087		4-Methyl-2-Pentanone	0.41				
Ecology 1993a	Jul-93	B-48	12	4-Methyl-2-Pentanone	0.22				
Ecology 1993d	Jul-93	B-51	12	4-Methyl-2-Pentanone	0.18				
Ecology 1993b	Jun-93	278088		4-Methyl-2-Pentanone	0.17				
Ecology 1991b	Aug-91	B-16	15	4-Methyl-2-Pentanone	0.0011	J			
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	4-Methylphenol	1.3			0.98	1.3
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	4-Methylphenol	0.45			0.98	0.5
Hart Crowser 1992a	Jan-91	B-15	17	4-Methylphenol	0.3			0.056	5.4

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Ecology 1993a	Jul-93	B-47	12	4-Methylphenol	0.11	J		0.056	2.0
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Acenaphthalene	0.77			1.4	0.6
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Acenaphthalene	0.43			1.4	0.3
Hart Crowser 1992a	Jan-91	SB-11	7.5	Acenaphthalene	0.14			0.069	2.0
Hart Crowser 1995	Jul-95	HC-GW-1		Acenaphthene	0.52		4,800	1.2	0.4
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Acenaphthene	0.21		4,800	1.2	0.2
Hart Crowser 1990a	May-90	B2-S3	10	Acetone	50	B	8,000		0.0
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Acetone	47	B	8,000		0.0
Hart Crowser 1990a	May-90	B3-S3	10	Acetone	38	B	8,000		0.0
Hart Crowser 1992a	Jan-91	B-15	2.5	Acetone	35	B	8,000		0.0
Hart Crowser 1990b	1990	21-C		Acetone	33		8,000		0.0
Hart Crowser 1990b	Sep-90	B-8/S-7	18	Acetone	26		8,000		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Acetone	10	JB	8,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	Acetone	10	B	8,000		0.0
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Acetone	9.4	JB	8,000		0.0
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Acetone	7.3	JB	8,000		0.0
Hart Crowser 1992a	Jan-91	SB-11	13	Acetone	4.8	B	8,000		0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Acetone	4.2	JB	8,000		0.0
Ecology 1993b	Jun-93	278089		Acetone	4		8,000		0.0
Hart Crowser 1990b	Oct-90	SB6-2	7.5	Acetone	3.7		8,000		0.0
Ecology 1993a	Jul-93	B-47	12	Acetone	3.2	J	8,000		0.0
ATI 1991a	Aug-91	B-16/S7	16	Acetone	2.5	B	8,000		0.0
Ecology 1993b	Jun-93	278087		Acetone	2.3		8,000		0.0
ATI 1991a	Aug-91	B-16/S7	16	Acetone	2.3	B	8,000		0.0
Hart Crowser 1990b	1990	15/16-N		Acetone	2.1		8,000		0.0
ATI 1991a	Aug-91	B-16/S2	10	Acetone	2.0	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-24 (DUP)	10.5-12	Acetone	1.5	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Acetone	1.4	B	8,000		0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Acetone	1.4	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Acetone	1.3	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Acetone	1.3	JB	8,000		0.0
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Acetone	1.3	JB	8,000		0.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Acetone	1.3	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Acetone	1.3	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	12-13.5	Acetone	1.3	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Acetone	1.3	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Acetone	1.2	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Acetone	1.2	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Acetone	1.2	B	8,000		0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Acetone	1.2	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Acetone	1.2	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Acetone	1.1	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Acetone	1.1	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Acetone	1.1	B	8,000		0.0
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Acetone	0.89	JB	8,000		0.0
Ecology 1993b	Jun-93	278088		Acetone	0.88		8,000		0.0
Ecology 1993a	Jul-93	B-49 (DUP)	15	Acetone	0.85	J	8,000		0.0
Ecology 1993a	Jul-93	B-49	15	Acetone	0.81		8,000		0.0
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Acetone	0.8	JB	8,000		0.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Acetone	0.79	JB	8,000		0.0
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Acetone	0.78	JB	8,000		0.0
Hart Crowser 1992a	Oct-91	G-3	7.5	Acetone	0.65	B	8,000		0.0
Hart Crowser 1990b	1990	SW-19E		Acetone	0.610		8,000		0.0
Ecology 1993d	Jul-93	B-51	12	Acetone	0.59		8,000		0.0
Ecology 1993a	Jul-93	B-48	12	Acetone	0.4		8,000		0.0
Hart Crowser 1990b	Sep-90	B-5/S-17	42	Acetone	0.28		8,000		0.0
Hart Crowser 1990a	May-90	B2-S3	10	Acetone	0.26	JB	8,000		0.0
Hart Crowser 1992a	Jan-91	B-15	12.5	Acetone	0.24		8,000		0.0
Ecology 1991b	Aug-91	B-16	15	Acetone	0.19		8,000		0.0
Hart Crowser 1990b	1990	7/8-S		Acetone	0.130		8,000		0.0
Hart Crowser 1990b	1990	5/6-N		Acetone	0.120		8,000		0.0
Hart Crowser 1990b	Sep-90	B-5/S-2	5	Acetone	0.12		8,000		0.0
Hart Crowser 1990b	Oct-90	B-13/S-4	10	Acetone	0.1		8,000		0.0
Ecology 1993d	Jul-93	B-52	12	Acetone	0.1		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Acetone	0.082	B	8,000		0.0
Hart Crowser 1992a	Jan-91	B-15	17	Acetone	0.045		8,000		0.0
Ecology 1991b	Aug-91	B-16	13.5	Acetone	0.043		8,000		0.0
Hart Crowser 1990b	Sep-90	B-6/S-11	27	Acetone	0.03		8,000		0.0
Hart Crowser 1990b	Sep-90	B-6/S-11	27	Acetone	0.03		8,000		0.0
Hart Crowser 1990b	Sep-90	B-9/S-10	25	Acetone	0.030		8,000		0.0
Hart Crowser 1990b	Sep-90	B-9/S-17	42	Acetone	0.029		8,000		0.0
Hart Crowser 1990b	Sep-90	B-9/S-6	15	Acetone	0.029		8,000		0.0
Hart Crowser 1990b	Sep-90	B-5/S-17	42	Acetone	0.028		8,000		0.0
Ecology 1993b	Jun-93	278090		Acetone	0.026		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-12	7.5	Acetone	0.025	B	8,000		0.0
Ecology 1993b	Jun-93	278090 (DUP)		Acetone	0.019		8,000		0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	Acetone	0.013		8,000		0.0
Hart Crowser 1990b	Sep-90	B-5/S-2	5	Acetone	0.012		8,000		0.0

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Hart Crowser 1992b	Apr-92	B-30	4-5.5	Aluminum	16,000				
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Aluminum	14,000				
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Aluminum	13,000				
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Aluminum	12,000				
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Aluminum	11,000				
Hart Crowser 1993a	Aug-92	B-32	7-9	Aluminum	11,000				
Hart Crowser 1993a	Aug-92	B-37	2-4	Aluminum	11,000				
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Aluminum	11,000				
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Aluminum	9,700				
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Aluminum	9,100				
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Aluminum	8,700				
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Aluminum	8,600				
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Aluminum	8,500				
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Aluminum	8,500				
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Aluminum	8,000				
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Aluminum	7,300				
Hart Crowser 1993a	Aug-92	B-38	9-11	Aluminum	7,300				
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Aluminum	7,100				
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Aluminum	6,900				
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Aluminum	6,900				
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Aluminum	6,700				
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Aluminum	6,700				
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Aluminum	6,600				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Aluminum	6,100				
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Aluminum	5,600				
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Aluminum	5,400				
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Aluminum	5,400				
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Aluminum	5,400				
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Aluminum	5,300				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Aluminum	5,200				
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Aluminum	4,900				
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Aluminum	4,900				
Hart Crowser 1993a	Aug-92	B-36	9-11	Aluminum	4,700				
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Aluminum	4,600				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Aluminum	4,600				
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Aluminum	4,500				
Hart Crowser 1993a	Aug-92	B-35	8-10	Aluminum	4,500				
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Aluminum	4,400				
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Aluminum	4,400				

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Hart Crowser 1993a	Aug-92	B-32	0-3	Aluminum	4,400				
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Aluminum	4,300				
Hart Crowser 1993a	Aug-92	B-37	22-24	Aluminum	4,200				
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Aluminum	4,100				
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Aluminum	4,100				
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Aluminum	3,900				
Hart Crowser 1993a	Aug-92	B-35	28-30	Aluminum	3,900				
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Aluminum	3,800				
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Aluminum	3,800				
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Aluminum	3,700				
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Aluminum	3,500				
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Aluminum	3,500				
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Aluminum	3,500				
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Aluminum	3,500				
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Aluminum	3,400				
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Aluminum	3,400				
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Aluminum	3,300				
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Aluminum	3,300				
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Aluminum	3,100				
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Aluminum	3,000				
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Aluminum	2,900				
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Aluminum	2,800				
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Aluminum	2,500				
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Aluminum	2,100				
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Aluminum	1,400				
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Anthracene	0.58		2,400		0.0
Hart Crowser 1995	Jul-95	HC-GW-1		Anthracene	0.18	J	2,400		0.0
Ecology 1993a	Jul-93	B-49	15	Anthracene	0.17	J	2,400		0.0
Ecology 1993a	Jul-93	B-50	6	Anthracene	0.15	J	2,400		0.0
Ecology 1993a	Jul-93	B-50	10	Anthracene	0.1	J	2,400		0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Anthracene	0.054		2,400		0.0
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Arsenic	51		20	12,000	2.6
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Arsenic	43		20	12,000	2.2
ATI 1991a	Aug-91	B-17/S1	18	Arsenic	16		20	590	0.8
ATI 1991a	Aug-91	B-16/S2	10	Arsenic	14		20	590	0.7
Hart Crowser 1992a	Jan-91	SB-10	2.5	Arsenic	9.4		20	12,000	0.5
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Arsenic	8.9		20	12,000	0.4
ATI 1991a	Aug-91	B-16/S7	16	Arsenic	7.6		20	590	0.4
Hart Crowser 1992a	Jan-91	B-15	17	Arsenic	7.2		20	590	0.4

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Hart Crowser 1992b	Mar-92	B-28	7.5-9	Arsenic	6.9		20	590	0.3
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Arsenic	6.9		20	12,000	0.3
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Arsenic	6.8		20	12,000	0.3
ATI 1991a	Aug-91	B-17/S2	22	Arsenic	6.6		20	590	0.3
ATI 1991a	Aug-91	B-17/S6	37	Arsenic	6.6		20	590	0.3
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Arsenic	6.4		20	12,000	0.3
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Arsenic	6.2		20	12,000	0.3
ATI 1991a	Aug-91	B-17/S7	39	Arsenic	5.8		20	590	0.3
Hart Crowser 1992a	Jan-91	B-15	2.5	Arsenic	5.6		20	12,000	0.3
ATI 1991a	Aug-91	B-17/S12	46	Arsenic	5.0		20	590	0.3
Hart Crowser 1992a	Jan-91	SB-12	13	Arsenic	5		20	590	0.3
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Arsenic	4.9		20	12,000	0.2
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Arsenic	4.8		20	12,000	0.2
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Arsenic	4.8		20	12,000	0.2
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Arsenic	4.7		20	12,000	0.2
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Arsenic	3.9		20	12,000	0.2
Hart Crowser 1993a	Aug-92	B-32	7-9	Arsenic	3.4		20	590	0.2
Hart Crowser 1992a	Jan-91	SB-11	13	Arsenic	3.4		20	590	0.2
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Arsenic	3.3		20	12,000	0.2
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Arsenic	3.2		20	590	0.2
Hart Crowser 1993a	Aug-92	B-35	8-10	Arsenic	3.2		20	590	0.2
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Arsenic	3.1		20	12,000	0.2
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Arsenic	3		20	12,000	0.2
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Arsenic	2.9		20	590	0.1
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Arsenic	2.8		20	12,000	0.1
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Arsenic	2.8		20	590	0.1
Hart Crowser 1993a	Aug-92	B-32	0-3	Arsenic	2.8		20	12,000	0.1
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Arsenic	2.7		20	590	0.1
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Arsenic	2.6		20	590	0.1
Hart Crowser 1992a	Jan-91	SB-12	2.5	Arsenic	2.6		20	12,000	0.1
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Arsenic	2.5		20	590	0.1
Hart Crowser 1992a	Jan-91	SB-10	17	Arsenic	2.5		20	590	0.1
Hart Crowser 1992a	Jan-91	SB-11	2.5	Arsenic	2.5		20	12,000	0.1
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Arsenic	2.3		20	590	0.1
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Arsenic	2.3		20	590	0.1
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Arsenic	2.1		20	590	0.1
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Arsenic	2		20	590	0.1
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Arsenic	2		20	12,000	0.1
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Arsenic	2		20	590	0.1

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Hart Crowser 1992b	Mar-92	B-20	3-4.5	Arsenic	1.9		20	12,000	0.1
Hart Crowser 1993a	Aug-92	B-35	28-30	Arsenic	1.9		20	590	0.1
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Arsenic	1.8		20	12,000	0.1
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Arsenic	1.8		20	590	0.1
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Arsenic	1.5		20	590	0.1
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Arsenic	1.4		20	590	0.1
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Arsenic	1.3		20	590	0.1
Hart Crowser 1992a	Jan-91	SB-12	7.5	Arsenic	1.3		20	590	0.1
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Arsenic	1.2		20	590	0.1
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Arsenic	1.2		20	590	0.1
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Arsenic	1.2		20	590	0.1
Hart Crowser 1993a	Aug-92	B-37	2-4	Arsenic	1.2		20	12,000	0.1
Hart Crowser 1993a	Aug-92	B-37	22-24	Arsenic	1.2		20	590	0.1
Hart Crowser 1993a	Aug-92	B-38	9-11	Arsenic	1.2		20	590	0.1
Hart Crowser 1992a	Jan-91	SB-10	12.5	Arsenic	1.2		20	590	0.1
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Arsenic	1.1		20	590	0.1
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Arsenic	1.1		20	590	0.1
Hart Crowser 1992a	Oct-91	H-3	7.5	Arsenic	1.0		20	590	0.1
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Arsenic	0.97		20	590	0.0
Hart Crowser 1993a	Aug-92	B-36	9-11	Arsenic	0.95		20	590	0.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Arsenic	0.92		20	590	0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Arsenic	0.89		20	590	0.0
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Arsenic	0.86		20	590	0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Arsenic	0.81		20	590	0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Arsenic	0.71		20	590	0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Arsenic	0.71		20	590	0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Arsenic	0.7		20	590	0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Arsenic	0.69		20	590	0.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Arsenic	0.69		20	590	0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Arsenic	0.63		20	590	0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Arsenic	0.63		20	590	0.0
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Arsenic	0.6		20	590	0.0
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Arsenic	0.57		20	590	0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Arsenic	0.49		20	590	0.0
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Arsenic	0.46		20	590	0.0
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Barium	1,700		16,000		0.1
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Barium	110		16,000		0.0
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Barium	110		16,000		0.0
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Barium	88		16,000		0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Barium	87		16,000		0.0
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Barium	79		16,000		0.0
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Barium	76		16,000		0.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Barium	63		16,000		0.0
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Barium	56		16,000		0.0
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Barium	53		16,000		0.0
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Barium	48		16,000		0.0
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Barium	47		16,000		0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Barium	41		16,000		0.0
Hart Crowser 1993a	Aug-92	B-32	7-9	Barium	40		16,000		0.0
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Barium	35		16,000		0.0
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Barium	35		16,000		0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Barium	31		16,000		0.0
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Barium	29		16,000		0.0
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Barium	28		16,000		0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Barium	27		16,000		0.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Barium	27		16,000		0.0
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Barium	26		16,000		0.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Barium	26		16,000		0.0
Hart Crowser 1993a	Aug-92	B-32	0-3	Barium	26		16,000		0.0
Hart Crowser 1993a	Aug-92	B-37	2-4	Barium	26		16,000		0.0
Hart Crowser 1993a	Aug-92	B-38	9-11	Barium	26		16,000		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Barium	25		16,000		0.0
Hart Crowser 1993a	Aug-92	B-35	28-30	Barium	20		16,000		0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Barium	19		16,000		0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Barium	19		16,000		0.0
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Barium	19		16,000		0.0
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Barium	18		16,000		0.0
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Barium	18		16,000		0.0
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Barium	17		16,000		0.0
Hart Crowser 1993a	Aug-92	B-37	22-24	Barium	17		16,000		0.0
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Barium	16		16,000		0.0
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Barium	16		16,000		0.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Barium	15		16,000		0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Barium	15		16,000		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Barium	15		16,000		0.0
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Barium	14		16,000		0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Barium	14		16,000		0.0
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Barium	14		16,000		0.0

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Aug-92	B-35	8-10	Barium	14		16,000		0.0
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Barium	13		16,000		0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Barium	13		16,000		0.0
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Barium	13		16,000		0.0
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Barium	12		16,000		0.0
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Barium	12		16,000		0.0
Hart Crowser 1993a	Aug-92	B-36	9-11	Barium	12		16,000		0.0
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Barium	11		16,000		0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Barium	10		16,000		0.0
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Barium	10		16,000		0.0
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Barium	10		16,000		0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Barium	9.9		16,000		0.0
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Barium	9.8		16,000		0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Barium	9.7		16,000		0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Barium	9.7		16,000		0.0
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Barium	9.4		16,000		0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Barium	9		16,000		0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Barium	8.5		16,000		0.0
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Barium	8		16,000		0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Barium	7.5		16,000		0.0
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Barium	7.4		16,000		0.0
Hart Crowser 1990b	**1990**	**25-S**		**Benzene**	**12**		**0.03**		**400**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Benzene**	**12**		**0.03**		**400**
Hart Crowser 1990b	**1990**	**PT-2**		**Benzene**	**3.6**		**0.03**		**120**
Hart Crowser 1990b	**1990**	**PT-3**		**Benzene**	**3**		**0.03**		**100**
Hart Crowser 1990a	May-90	B2-S3	10	Benzene	0.17		0.03		5.7
Hart Crowser 1992a	Jan-91	SB-12	13	Benzene	0.15		0.03		5.0
TV-F&S 2000a	Jul-99	TW-1	11.0	Benzene	0.14		0.03		4.7
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Benzene	0.068		0.03		2.3
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Benzo(a)anthracene	0.79			5.4	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(a)anthracene	0.5			5.4	0.1
Hart Crowser 1992a	Oct-91	Comp A	0-1	Benzo(a)anthracene	0.22	J		5.4	0.0
Hart Crowser 1995	Jul-95	HC-GW-1		Benzo(a)anthracene	0.16	J		0.27	0.6
Ecology 1993a	Jul-93	B-49	15	Benzo(a)anthracene	0.15	J		0.27	0.6
Ecology 1993a	Jul-93	B-50	6	Benzo(a)anthracene	0.14	J		5.4	0.0
Hart Crowser 1992a	Oct-91	Comp F	0-1	Benzo(a)anthracene	0.14	J		5.4	0.0
Ecology 1993a	Jul-93	B-50	10	Benzo(a)anthracene	0.12	J		0.27	0.4
Hart Crowser 1992b	**Mar-92**	**B-22**	**1.5-3**	**Benzo(a)pyrene**	**1**		**0.1**	**4.2**	**10**
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(a)pyrene	0.59		0.1	4.2	5.9

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Benzo(a)pyrene	0.51		0.1	4.2	5.1
Hart Crowser 1992a	Oct-91	Comp F	0-1	Benzo(a)pyrene	0.13	J	0.1	4.2	1.3
Ecology 1993a	Jul-93	B-49	15	Benzo(a)pyrene	0.063	J	0.1	0.21	0.6
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(b)fluoranthene	0.82			9.0	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Benzo(b)fluoranthene	0.73			9.0	0.1
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Benzo(b)fluoranthene	0.7			9.0	0.1
Ecology 1993a	Jul-93	B-49	15	Benzo(b)fluoranthene	0.13	J		0.45	0.3
Hart Crowser 1995	Jul-95	HC-GW-1		Benzo(b)fluoranthene	0.13	J		0.45	0.3
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Benzo(g,h,i)perylene	0.58			1.6	0.4
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(g,h,i)perylene	0.49			1.6	0.3
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Benzo(k)fluoranthene	0.52			9.0	0.1
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Benzo(k)fluoranthene	0.47			9.0	0.1
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Benzoic Acid	3.2		320,000	9.6	0.3
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Bis(2-Ethylhexyl)Phthalate**	**140**	**B**	**71**	**1.6**	**88**
Hart Crowser 1992b	**Mar-92**	**B-24**	**7.5-9**	**Bis(2-Ethylhexyl)Phthalate**	**110**		**71**	**0.078**	**1,410**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Bis(2-Ethylhexyl)Phthalate**	**71**	**B**	**71**	**0.078**	**910**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Bis(2-Ethylhexyl)Phthalate**	**25**	**B**	**71**	**0.078**	**321**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**Bis(2-Ethylhexyl)Phthalate**	**13**		**71**	**0.078**	**167**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**7.5**	**Bis(2-Ethylhexyl)Phthalate**	**11**	**B**	**71**	**0.078**	**141**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Bis(2-Ethylhexyl)Phthalate**	**10**		**71**	**0.078**	**128**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Bis(2-Ethylhexyl)Phthalate**	**6.6**		**71**	**0.078**	**85**
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Bis(2-Ethylhexyl)Phthalate	6.4		71	1.6	4.0
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Bis(2-Ethylhexyl)Phthalate**	**6.2**		**71**	**0.078**	**79**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Bis(2-Ethylhexyl)Phthalate	2.5		71	1.6	1.6
Hart Crowser 1992a	Oct-91	Comp A	0-1	Bis(2-Ethylhexyl)Phthalate	1.5		71	1.6	0.9
Hart Crowser 1992a	Oct-91	Comp B	0-1	Bis(2-Ethylhexyl)Phthalate	1.5		71	1.6	0.9
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Bis(2-Ethylhexyl)Phthalate	1.4		71	1.6	0.9
Ecology 1993a	Jul-93	B-50	6	Bis(2-Ethylhexyl)Phthalate	1.3		71	1.6	0.8
Ecology 1993a	**Jul-93**	**B-50**	**10**	**Bis(2-Ethylhexyl)Phthalate**	**1.3**		**71**	**0.078**	**17**
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Bis(2-Ethylhexyl)Phthalate	0.87		71	1.6	0.5
Hart Crowser 1992a	Jan-91	B-15	2.5	Bis(2-Ethylhexyl)Phthalate	0.85	B	71	1.6	0.5
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Bis(2-Ethylhexyl)Phthalate	0.83		71	1.6	0.5
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Bis(2-Ethylhexyl)Phthalate	0.74		71	1.6	0.5
Ecology 1993b	Jun-93	278086		Bis(2-Ethylhexyl)Phthalate	0.54		71	0.078	6.9
Hart Crowser 1992a	Jan-91	SB-11	2.5	Bis(2-Ethylhexyl)Phthalate	0.39	B	71	1.6	0.2
ATI 1991a	Aug-91	B-16/S2	10	Bis(2-Ethylhexyl)Phthalate	0.35		71	0.078	4.5
Ecology 1993b	Jun-93	278087		Bis(2-Ethylhexyl)Phthalate	0.34	J	71	0.078	4.4
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Bis(2-Ethylhexyl)Phthalate	0.31		71	0.078	4.0
Hart Crowser 1992a	Oct-91	Comp F	0-1	Bis(2-Ethylhexyl)Phthalate	0.30		71	1.6	0.2

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Chemicals Detected in Soil
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Hart Crowser 1992a	Jan-91	SB-12	13	Bis(2-Ethylhexyl)Phthalate	0.2	B	71	0.078	2.6
Hart Crowser 1992a	Oct-91	Comp D	0-1	Bis(2-Ethylhexyl)Phthalate	0.19	J	71	1.6	0.1
Hart Crowser 1992a	Oct-91	G-3	7.5	Bis(2-Ethylhexyl)Phthalate	0.18		71	0.078	2.3
Hart Crowser 1992a	Oct-91	Comp C	0-1	Bis(2-Ethylhexyl)Phthalate	0.17	J	71	1.6	0.1
Ecology 1993b	Jun-93	278088		Bis(2-Ethylhexyl)Phthalate	0.15	J	71	0.078	1.9
Ecology 1993a	Jul-93	B-49	15	Bis(2-Ethylhexyl)Phthalate	0.12	J	71	0.078	1.5
Ecology 1993a	Jul-93	B-47	12	Bis(2-Ethylhexyl)Phthalate	0.075	J	71	0.078	0.96
Hart Crowser 1992a	Jan-91	SB-12	2.5	Bis(2-Ethylhexyl)Phthalate	0.071	B	71	1.6	0.0
TV-F&S 2000a	Feb-99	B-53	14	Bis(2-Ethylhexyl)Phthalate	0.067		71	0.078	0.9
Hart Crowser 1992a	Jan-91	SB-11	13	Bis(2-Ethylhexyl)Phthalate	0.066	B	71	0.078	0.8
Hart Crowser 1992a	Jan-91	B-15	17	Bis(2-Ethylhexyl)Phthalate	0.065	B	71	0.078	0.8
Hart Crowser 1992a	Jan-91	SB-12	7.5	Bis(2-Ethylhexyl)Phthalate	0.057	B	71	0.078	0.7
Ecology 1993d	Jul-93	B-52	12	Bis(2-Ethylhexyl)Phthalate	0.056	J	71	0.078	0.7
TV-F&S 2000a	Feb-99	B-55	14.5	Bis(2-Ethylhexyl)Phthalate	0.052		71	0.078	0.7
Hart Crowser 1992a	Jan-91	B-15	12.5	Bis(2-Ethylhexyl)Phthalate	0.042	B	71	0.078	0.5
Hart Crowser 1993a	Aug-92	B-37	2-4	Butylbenzylphthalate	6.9		16,000	1.3	5.3
Hart Crowser 1992a	Jan-91	SB-10	2.5	Butylbenzylphthalate	4.1		16,000	1.3	3.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Butylbenzylphthalate**	**1.3**		**16,000**	**0.066**	**20**
Hart Crowser 1992a	Jan-91	SB-10	12.5	Butylbenzylphthalate	0.42		16,000	0.066	6.4
Hart Crowser 1992a	Jan-91	SB-11	7.5	Butylbenzylphthalate	0.05		16,000	0.066	0.8
Hart Crowser 1992a	Jan-91	SB-10	2.5	Cadmium	4.3		2	34	2.2
Hart Crowser 1992a	Jan-91	B-15	17	Cadmium	3.2		2	1.7	1.9
Hart Crowser 1992a	Jan-91	B-15	2.5	Cadmium	2.6		2	34	1.3
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Cadmium	2.3		2	34	1.2
Hart Crowser 1992a	Jan-91	SB-12	13	Cadmium	2.3		2	1.7	1.4
Hart Crowser 1992a	Jan-91	SB-11	13	Cadmium	2		2	1.7	1.2
Hart Crowser 1992a	Jan-91	B-15	12.5	Cadmium	1.4		2	1.7	0.8
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Cadmium	1.4		2	34	0.7
Hart Crowser 1992a	Oct-91	H-3	7.5	Cadmium	1.4		2	1.7	0.8
Hart Crowser 1992a	Jan-91	SB-10	12.5	Cadmium	1.4		2	1.7	0.8
Hart Crowser 1992a	Jan-91	SB-10	17	Cadmium	1.3		2	1.7	0.8
Hart Crowser 1992a	Jan-91	SB-11	2.5	Cadmium	1.2		2	34	0.6
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Cadmium	1.1		2	34	0.6
Hart Crowser 1992a	Jan-91	SB-12	2.5	Cadmium	0.9		2	34	0.5
ATI 1991a	Aug-91	B-16/S2	10	Cadmium	0.89		2	1.7	0.5
Hart Crowser 1992a	Jan-91	SB-12	7.5	Cadmium	0.8		2	1.7	0.5
ATI 1991a	Aug-91	B-17/S6	37	Cadmium	0.77		2	1.7	0.5
ATI 1991a	Aug-91	B-17/S1	18	Cadmium	0.76		2	1.7	0.4
ATI 1991a	Aug-91	B-17/S7	39	Cadmium	0.73		2	1.7	0.4

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Chemicals Detected in Soil
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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Cadmium	0.71		2	34	0.4
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Cadmium	0.71		2	1.7	0.4
Hart Crowser 1992a	Jan-91	SB-11	7.5	Cadmium	0.7		2	1.7	0.4
Ecology 1991a	Aug-91	B-16	13.5	Cadmium	0.69	P	2	1.7	0.4
ATI 1991a	Aug-91	B-17/S2	22	Cadmium	0.68		2	1.7	0.4
ATI 1991a	Aug-91	B-17/S12	46	Cadmium	0.66		2	1.7	0.4
ATI 1991a	Aug-91	B-16/S7	16	Cadmium	0.56		2	1.7	0.3
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Cadmium	0.5		2	34	0.3
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Cadmium	0.47		2	34	0.2
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Cadmium	0.38		2	1.7	0.2
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Cadmium	0.37		2	34	0.2
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Cadmium	0.35		2	34	0.2
Ecology 1991a	Aug-91	B-16	15	Cadmium	0.33	P	2	1.7	0.2
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Cadmium	0.25		2	34	0.1
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Cadmium	0.23		2	1.7	0.1
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Cadmium	0.22		2	34	0.1
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Cadmium	0.22		2	1.7	0.1
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Cadmium	0.15		2	1.7	0.1
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Cadmium	0.13		2	34	0.1
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Cadmium	0.13		2	1.7	0.1
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Cadmium	0.12		2	1.7	0.1
Hart Crowser 1993a	Aug-92	B-32	0-3	Cadmium	0.12		2	34	0.1
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Cadmium	0.11		2	1.7	0.1
Hart Crowser 1993a	Aug-92	B-36	9-11	Cadmium	0.096		2	1.7	0.1
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Cadmium	0.094		2	34	0.0
Hart Crowser 1993a	Aug-92	B-35	8-10	Cadmium	0.089		2	1.7	0.1
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Cadmium	0.078		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Cadmium	0.073		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Cadmium	0.071		2	34	0.0
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Cadmium	0.071		2	34	0.0
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Cadmium	0.068		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Cadmium	0.068		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Cadmium	0.067		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Cadmium	0.063		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Cadmium	0.062		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Cadmium	0.059		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Cadmium	0.055		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Cadmium	0.055		2	34	0.0
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Cadmium	0.052		2	1.7	0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Cadmium	0.052		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Cadmium	0.043		2	1.7	0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Cadmium	0.042		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Cadmium	0.041		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Cadmium	0.041		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Cadmium	0.041		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Cadmium	0.04		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Cadmium	0.04		2	1.7	0.0
Hart Crowser 1993a	Aug-92	B-38	9-11	Cadmium	0.04		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Cadmium	0.038		2	34	0.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Cadmium	0.036		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Cadmium	0.034		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Cadmium	0.032		2	34	0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Cadmium	0.032		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Cadmium	0.031		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Cadmium	0.03		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Cadmium	0.029		2	1.7	0.0
Hart Crowser 1993a	Aug-92	B-35	28-30	Cadmium	0.029		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Cadmium	0.028		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Cadmium	0.026		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Cadmium	0.023		2	1.7	0.0
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Cadmium	0.018		2	34	0.0
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Cadmium	0.017		2	1.7	0.0
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Cadmium	0.015		2	1.7	0.0
Hart Crowser 1993a	Aug-92	B-37	2-4	Cadmium	0.013		2	34	0.0
Ecology 1993a	Jul-93	B-49	15	Carbazole	0.08	J	50		0.0
Ecology 1993d	Jul-93	B-51	12	Carbon Disulfide	0.012	J	8,000		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Chlorobenzene	0.031		1,600		0.0
Ecology 1993a	Jul-93	B-49	15	Chlorobenzene	0.027	J	1,600		0.0
Hart Crowser 1990a	May-89	B-1		Chloroform	0.001		160		0.0
Ecology 1991a	Aug-91	B-16	13.5	Chromium	57.7		19	270	3.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Chromium	42		19	5,400	2.2
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Chromium	25		19	5,400	1.3
Ecology 1991a	Aug-91	B-16	15	Chromium	21.0		19	270	1.1
Hart Crowser 1992a	Jan-91	B-15	17	Chromium	20		19	270	1.1
Hart Crowser 1992a	Jan-91	B-15	2.5	Chromium	18		19	5,400	0.9
ATI 1991a	Aug-91	B-16/S2	10	Chromium	18		19	270	0.9
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Chromium	18		19	270	0.9
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Chromium	17		19	270	0.9

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Chromium	16		19	5,400	0.8
Hart Crowser 1993a	Aug-92	B-32	7-9	Chromium	15		19	270	0.8
Hart Crowser 1992a	Jan-91	SB-10	2.5	Chromium	15		19	5,400	0.8
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Chromium	14		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Chromium	14		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Chromium	14		19	5,400	0.7
Hart Crowser 1992a	Jan-91	SB-12	2.5	Chromium	14		19	5,400	0.7
Hart Crowser 1992a	Oct-91	H-3	7.5	Chromium	13.3		19	270	0.7
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Chromium	13		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Chromium	13		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Chromium	13		19	5,400	0.7
Hart Crowser 1993a	Aug-92	B-37	2-4	Chromium	13		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Chromium	13		19	5,400	0.7
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Chromium	12		19	5,400	0.6
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Chromium	12		19	5,400	0.6
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Chromium	12		19	5,400	0.6
Hart Crowser 1992a	Jan-91	SB-11	13	Chromium	12		19	270	0.6
Hart Crowser 1992a	Jan-91	SB-12	7.5	Chromium	12		19	270	0.6
Hart Crowser 1992a	Jan-91	SB-12	13	Chromium	12		19	270	0.6
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Chromium	11		19	5,400	0.6
Hart Crowser 1992a	Jan-91	SB-10	17	Chromium	11		19	270	0.6
ATI 1991a	Aug-91	B-17/S1	18	Chromium	10		19	270	0.5
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Chromium	10		19	270	0.5
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Chromium	10		19	270	0.5
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Chromium	10		19	270	0.5
Hart Crowser 1993a	Aug-92	B-38	9-11	Chromium	10		19	270	0.5
Hart Crowser 1992a	Jan-91	SB-10	12.5	Chromium	10		19	270	0.5
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Chromium	9.6		19	270	0.5
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Chromium	9.6		19	270	0.5
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Chromium	9.3		19	270	0.5
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Chromium	9		19	5,400	0.5
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Chromium	9		19	270	0.5
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Chromium	9		19	270	0.5
Hart Crowser 1992a	Jan-91	SB-11	2.5	Chromium	9		19	5,400	0.5
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Chromium	8.9		19	270	0.5
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Chromium	8.9		19	270	0.5
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Chromium	8.7		19	5,400	0.5
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Chromium	8.7		19	270	0.5
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Chromium	8.4		19	270	0.4

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Aug-92	B-32	0-3	Chromium	8.2		19	5,400	0.4
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Chromium	8		19	270	0.4
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Chromium	7.7		19	270	0.4
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Chromium	7.6		19	270	0.4
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Chromium	7.5		19	270	0.4
ATI 1991a	Aug-91	B-16/S7	16	Chromium	7.3		19	270	0.4
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Chromium	7.3		19	270	0.4
Hart Crowser 1992a	Jan-91	B-15	12.5	Chromium	7		19	270	0.4
Hart Crowser 1992a	Jan-91	SB-11	7.5	Chromium	7		19	270	0.4
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Chromium	6.6		19	5,400	0.3
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Chromium	6.6		19	270	0.3
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Chromium	6.5		19	270	0.3
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Chromium	6.5		19	270	0.3
Hart Crowser 1993a	Aug-92	B-35	28-30	Chromium	6.4		19	270	0.3
Hart Crowser 1993a	Aug-92	B-36	9-11	Chromium	6.4		19	270	0.3
Hart Crowser 1993a	Aug-92	B-37	22-24	Chromium	6.4		19	270	0.3
ATI 1991a	Aug-91	B-17/S2	22	Chromium	6.2		19	270	0.3
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Chromium	6.1		19	5,400	0.3
Hart Crowser 1993a	Aug-92	B-35	8-10	Chromium	6.1		19	270	0.3
ATI 1991a	Aug-91	B-17/S6	37	Chromium	6.0		19	270	0.3
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Chromium	6		19	270	0.3
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Chromium	5.8		19	270	0.3
ATI 1991a	Aug-91	B-17/S12	46	Chromium	5.7		19	270	0.3
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Chromium	5.5		19	270	0.3
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Chromium	5.5		19	270	0.3
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Chromium	5.5		19	270	0.3
ATI 1991a	Aug-91	B-17/S7	39	Chromium	5.4		19	270	0.3
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Chromium	5.4		19	270	0.3
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Chromium	5.2		19	270	0.3
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Chromium	5		19	270	0.3
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Chromium	4.9		19	270	0.3
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Chromium	4.6		19	270	0.2
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Chromium	4.6		19	270	0.2
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Chromium	4.3		19	270	0.2
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Chromium	4.2		19	5,400	0.2
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Chromium	3.6		19	270	0.2
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Chromium	3.6		19	270	0.2
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Chromium	3.3		19	270	0.2
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Chrysene	1			9.2	0.1

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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Chrysene	0.69			9.2	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Chrysene	0.61			9.2	0.1
Hart Crowser 1992a	Oct-91	Comp A	0-1	Chrysene	0.25	J		9.2	0.0
Hart Crowser 1995	Jul-95	HC-GW-1		Chrysene	0.19	J		0.46	0.4
Ecology 1993a	Jul-93	B-49	15	Chrysene	0.14	J		0.46	0.3
Hart Crowser 1992a	Oct-91	Comp F	0-1	Chrysene	0.14	J		9.2	0.0
Ecology 1993a	Jul-93	B-50	6	Chrysene	0.13	J		9.2	0.0
Ecology 1993a	Jul-93	B-50	10	Chrysene	0.11	J		0.46	0.2
Hart Crowser 1990b	1990	SB3/S2		cis-1,2-DCA	6.7				
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	cis-1,2-DCA	0.69				
Hart Crowser 1990b	1990	25-S		cis-1,2-DCE	24		800		0.0
Hart Crowser 1993a	Jun-93	B-44	14	cis-1,2-DCE	9.9		800		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	cis-1,2-DCE	9.8		800		0.0
Hart Crowser 1993a	Jul-93	B-50	11	cis-1,2-DCE	7.9		800		0.0
Hart Crowser 1993a	Jul-93	B-47	6	cis-1,2-DCE	5.1		800		0.0
Hart Crowser 1993a	Jun-93	B-43 (DUP)	12	cis-1,2-DCE	4.7		800		0.0
Hart Crowser 1993a	Jul-93	B-50	12	cis-1,2-DCE	4.5		800		0.0
Hart Crowser 1993a	Jun-93	B-43	12	cis-1,2-DCE	4.4		800		0.0
Hart Crowser 1995	Jul-95	HC-GW-1		cis-1,2-DCE	3.4		800		0.0
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		cis-1,2-DCE	2.4	J	800		0.0
Hart Crowser 1993a	Jul-93	B-48 (DUP)	12	cis-1,2-DCE	2		800		0.0
TV-F&S 2000a	Jul-99	B-58	12.5	cis-1,2-DCE	2.00		800		0.0
Hart Crowser 1993a	Jul-93	B-48	12	cis-1,2-DCE	1.9		800		0.0
Hart Crowser 1993a	Jun-93	B-43	10	cis-1,2-DCE	1.3		800		0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	cis-1,2-DCE	0.88		800		0.0
Hart Crowser 1993a	Jul-93	B-49	12	cis-1,2-DCE	0.85		800		0.0
Hart Crowser 1992a	Jan-91	SB-11	2.5	cis-1,2-DCE	0.78		800		0.0
Hart Crowser 1993a	Jun-93	B-46	10	cis-1,2-DCE	0.75		800		0.0
Hart Crowser 1993a	Jun-93	B-45	44	cis-1,2-DCE	0.55		800		0.0
TV-F&S 2000a	Jul-99	TW-3	13.0	cis-1,2-DCE	0.45		800		0.0
TV-F&S 2000a	Jul-99	TW-1	11.0	cis-1,2-DCE	0.38		800		0.0
TV-F&S 2000a	Jul-99	B-59	30.0	cis-1,2-DCE	0.30	J	800		0.0
Hart Crowser 1992a	Jan-91	SB-11	13	cis-1,2-DCE	0.22		800		0.0
Hart Crowser 1992a	Jan-91	B-15	17	cis-1,2-DCE	0.11		800		0.0
TV-F&S 2000a	Jul-99	B-61	43.5	cis-1,2-DCE	0.088		800		0.0
Hart Crowser 1990b	Sep-90	B-9/S-6	15	cis-1,2-DCE	0.046	B	800		0.0
Hart Crowser 1990b	Sep-90	B-8/S-7	18	cis-1,2-DCE	0.020		800		0.0
Hart Crowser 1990b	1990	SW-19E		cis-1,2-DCE	0.018		800		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	cis-1,2-DCE	0.017		800		0.0

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Hart Crowser 1990b	1990	7/8-S		cis-1,2-DCE	0.010		800		0.0
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Copper	240		3,000	780	0.3
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Copper	210		3,000	780	0.3
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Copper	140		3,000	780	0.2
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Copper	140		3,000	780	0.2
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Copper	130		3,000	780	0.2
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Copper	100		3,000	780	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Copper	56		3,000	780	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Copper	55		3,000	780	0.1
Hart Crowser 1992a	Jan-91	SB-10	2.5	Copper	52		3,000	780	0.1
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Copper	41		3,000	780	0.1
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Copper	34		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Copper	33		3,000	780	0.0
Hart Crowser 1992a	Jan-91	B-15	17	Copper	29		3,000	39	0.7
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Copper	26		3,000	39	0.7
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Copper	26		3,000	780	0.0
Hart Crowser 1992a	Jan-91	B-15	2.5	Copper	23		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Copper	22		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Copper	19		3,000	39	0.5
Hart Crowser 1992a	Jan-91	SB-12	2.5	Copper	19		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Copper	18		3,000	780	0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Copper	18		3,000	39	0.5
Hart Crowser 1992a	Oct-91	H-3	7.5	Copper	16.1		3,000	39	0.4
ATI 1991a	Aug-91	B-16/S2	10	Copper	16		3,000	39	0.4
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Copper	16		3,000	39	0.4
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Copper	16		3,000	39	0.4
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Copper	16		3,000	39	0.4
Hart Crowser 1993a	Aug-92	B-37	2-4	Copper	16		3,000	780	0.0
Hart Crowser 1992a	Jan-91	SB-11	13	Copper	16		3,000	39	0.4
ATI 1991a	Aug-91	B-17/S1	18	Copper	15		3,000	39	0.4
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Copper	15		3,000	39	0.4
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Copper	15		3,000	39	0.4
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Copper	14		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Copper	13		3,000	39	0.3
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Copper	13		3,000	39	0.3
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Copper	13		3,000	39	0.3
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Copper	13		3,000	39	0.3
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Copper	12		3,000	780	0.0
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Copper	12		3,000	780	0.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Copper	12		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Copper	12		3,000	39	0.3
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Copper	12		3,000	39	0.3
Hart Crowser 1993a	Aug-92	B-38	9-11	Copper	12		3,000	39	0.3
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Copper	11		3,000	39	0.3
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Copper	11		3,000	39	0.3
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Copper	10		3,000	39	0.3
Hart Crowser 1993a	Aug-92	B-32	0-3	Copper	10		3,000	780	0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Copper	9.9		3,000	39	0.3
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Copper	9.9		3,000	39	0.3
Hart Crowser 1993a	Aug-92	B-32	7-9	Copper	9.9		3,000	39	0.3
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Copper	9.5		3,000	39	0.2
Hart Crowser 1992a	Jan-91	SB-10	17	Copper	9		3,000	39	0.2
Hart Crowser 1992a	Jan-91	SB-11	2.5	Copper	9		3,000	780	0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Copper	8.8		3,000	39	0.2
ATI 1991a	Aug-91	B-16/S7	16	Copper	8.5		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Copper	8.3		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Copper	7.9		3,000	39	0.2
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Copper	7.6		3,000	39	0.2
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Copper	7.6		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Copper	7.5		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Copper	7.5		3,000	780	0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Copper	7.4		3,000	39	0.2
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Copper	7		3,000	39	0.2
Hart Crowser 1992a	Jan-91	SB-10	12.5	Copper	7		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Copper	6.9		3,000	39	0.2
ATI 1991a	Aug-91	B-17/S6	37	Copper	6.8		3,000	39	0.2
ATI 1991a	Aug-91	B-17/S7	39	Copper	6.8		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Copper	6.8		3,000	39	0.2
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Copper	6.5		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Copper	6.3		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Copper	6.2		3,000	39	0.2
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Copper	6.1		3,000	39	0.2
Hart Crowser 1992a	Jan-91	B-15	12.5	Copper	6		3,000	39	0.2
ATI 1991a	Aug-91	B-17/S12	46	Copper	6.0		3,000	39	0.2
Hart Crowser 1992a	Jan-91	SB-11	7.5	Copper	6		3,000	39	0.2
Hart Crowser 1993a	Aug-92	B-35	8-10	Copper	5.7		3,000	39	0.1
Hart Crowser 1993a	Aug-92	B-36	9-11	Copper	5.5		3,000	39	0.1
ATI 1991a	Aug-91	B-17/S2	22	Copper	5.3		3,000	39	0.1

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Aug-92	B-35	28-30	Copper	5.2		3,000	39	0.1
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Copper	5.1		3,000	39	0.1
Hart Crowser 1992a	Jan-91	SB-12	7.5	Copper	5		3,000	39	0.1
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Copper	4.9		3,000	39	0.1
Hart Crowser 1993a	Aug-92	B-37	22-24	Copper	3.5		3,000	39	0.1
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Copper	3.2		3,000	39	0.1
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Copper	2.5		3,000	39	0.1
Ecology 1993a	Jul-93	B-49 (DUP)	15	Cyclohexane	1.1	J			
Hart Crowser 1995	Jul-95	HC-GW-1		Dibenzofuran	0.22		160	0.059	3.7
Ecology 1993a	Jul-93	B-50	6	Dibenzofuran	0.19	J	160	0.059	3.2
Ecology 1993a	Jul-93	B-50	10	Dibenzofuran	0.17	J	160	0.059	2.9
Ecology 1993a	Jul-93	B-49	15	Dibenzofuran	0.14	J	160	0.059	2.4
Hart Crowser 1992a	Jan-91	SB-11	7.5	Dibenzofuran	0.05		160	0.059	0.8
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Diesel-Range Hydrocarbons	2,400		2,000		1.2
Hart Crowser 1993a	Aug-92	B-32	0-3	Diesel-Range Hydrocarbons	772		2,000		0.4
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Diesel-Range Hydrocarbons	540		2,000		0.3
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Diesel-Range Hydrocarbons	360		2,000		0.2
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Diesel-Range Hydrocarbons	350		2,000		0.2
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Diesel-Range Hydrocarbons	340		2,000		0.2
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Diesel-Range Hydrocarbons	290		2,000		0.1
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Diesel-Range Hydrocarbons	270		2,000		0.1
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Diesel-Range Hydrocarbons	250		2,000		0.1
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Diesel-Range Hydrocarbons	250		2,000		0.1
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Diesel-Range Hydrocarbons	230		2,000		0.1
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Diesel-Range Hydrocarbons	170		2,000		0.1
Hart Crowser 1993a	Aug-92	B-37	2-4	Diesel-Range Hydrocarbons	143		2,000		0.1
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Diesel-Range Hydrocarbons	130		2,000		0.1
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Diesel-Range Hydrocarbons	125		2,000		0.1
ATI 1991a	Aug-91	B-16/S2	10	Diesel-Range Hydrocarbons	43		2,000		0.0
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Diesel-Range Hydrocarbons	33		2,000		0.0
Hart Crowser 1990b	1990	25-S		Diethylene Glycol	11		160,000		0.0
Hart Crowser 1990b	1990	21-C		Diethylene Glycol	10		160,000		0.0
Hart Crowser 1990b	1990	5/6-N		Diethylene Glycol	0.013	B	160,000		0.0
Hart Crowser 1990b	1990	SW-19E		Diethylene Glycol	0.010		160,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	Di-n-butyl phthalate	200	B	8,000	39	5.1
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Di-n-butyl phthalate**	**110**	**B**	**8,000**	**2.0**	**55**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Di-n-butyl phthalate**	**40**	**B**	**8,000**	**2.0**	**20**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Di-n-butyl phthalate**	**22**		**8,000**	**2.0**	**11**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Di-n-butyl phthalate**	**22**		**8,000**	**2.0**	**11**

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	Jan-91	SB-11	7.5	Di-n-butyl phthalate	16	B	8,000	2.0	8.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Di-n-butyl phthalate	15		8,000	2.0	7.5
Hart Crowser 1995	Jul-95	HC-GW-1		Di-n-butyl phthalate	7.8		8,000	2.0	3.9
Ecology 1993a	Jul-93	B-50	10	Di-n-butyl phthalate	5.9		8,000	2.0	3.0
Ecology 1993a	Jul-93	B-50	6	Di-n-butyl phthalate	5.3		8,000	39	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Di-n-butyl phthalate	2.4		8,000	39	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Di-n-butyl phthalate	1.7		8,000	39	0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Di-n-butyl phthalate	0.43		8,000	2.0	0.2
Ecology 1993a	Jul-93	B-47	12	Di-n-butyl phthalate	0.41	J	8,000	2.0	0.2
Hart Crowser 1992a	Jan-91	SB-11	2.5	Di-n-butyl phthalate	0.36	B	8,000	39	0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Di-n-butyl phthalate	0.24	B	8,000	2.0	0.1
Ecology 1993b	Jun-93	278088		Di-n-butyl phthalate	0.12	J	8,000	2.0	0.1
Ecology 1993b	Jun-93	278089		Di-n-butyl phthalate	0.11	J	8,000	2.0	0.1
Hart Crowser 1992a	Jan-91	SB-12	7.5	Di-n-butyl phthalate	0.083	B	8,000	2.0	0.0
Ecology 1993b	Jun-93	278087		Di-n-butyl phthalate	0.058	J	8,000	2.0	0.0
Hart Crowser 1992a	Jan-91	SB-11	13	Di-n-butyl phthalate	0.057	B	8,000	2.0	0.0
Ecology 1993a	Jul-93	B-48	12	Di-n-butyl phthalate	0.054	J	8,000	2.0	0.0
Hart Crowser 1992a	Jan-91	SB-12	2.5	Di-n-butyl phthalate	0.046	B	8,000	39	0.0
Ecology 1993d	Jul-93	B-51	12	Di-n-butyl phthalate	0.042	J	8,000	2.0	0.0
Hart Crowser 1990b	1990	21-C		Ethanol	2.1				
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Ethylbenzene**	**470**		**6**		**78**
Hart Crowser 1990b	**1990**	**PT-3**		**Ethylbenzene**	**180**		**6**		**30**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Ethylbenzene**	**140**		**6**		**23**
Hart Crowser 1990b	**1990**	**25-S**		**Ethylbenzene**	**100**		**6**		**17**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Ethylbenzene**	**100**		**6**		**17**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Ethylbenzene**	**90**		**6**		**15**
Hart Crowser 1990b	**1990**	**25-S**		**Ethylbenzene**	**71**		**6**		**12**
Hart Crowser 1990b	1990	PT-1		Ethylbenzene	41		6		6.8
Hart Crowser 1990b	1990	PT-5		Ethylbenzene	39		6		6.5
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Ethylbenzene	34		6		5.7
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Ethylbenzene	28		6		4.7
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	Ethylbenzene	26		6		4.3
Hart Crowser 1990a	May-90	B2-S3	10	Ethylbenzene	25		6		4.2
Hart Crowser 1990b	1990	PT-4		Ethylbenzene	25		6		4.2
Hart Crowser 1990a	May-90	B2-S3	10	Ethylbenzene	23		6		3.8
Hart Crowser 1990b	1990	21-C		Ethylbenzene	14		6		2.3
Hart Crowser 1990b	1990	PT-2		Ethylbenzene	13		6		2.2
Hart Crowser 1990b	Oct-90	B-7/S-7B		Ethylbenzene	5.6		6		0.9
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Ethylbenzene	5.2		6		0.9

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Fox Avenue Building (Former Great Western Chemical)

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Hart Crowser 1995	Jul-95	HC-GW-1		Ethylbenzene	5.1		6		0.9
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Ethylbenzene	2.6		6		0.4
Hart Crowser 1990b	1990	SB3/S2		Ethylbenzene	2.3		6		0.4
Hart Crowser 1990b	Oct-90	SB5/S3	12.5	Ethylbenzene	1.4		6		0.2
Hart Crowser 1992a	Jan-91	SB-12	13	Ethylbenzene	0.92		6		0.2
Ecology 1993a	Jul-93	B-50	10	Ethylbenzene	0.81	J	6		0.1
ATI 1991a	Aug-91	B-16/S7	16	Ethylbenzene	0.54		6		0.1
ATI 1991a	Aug-91	B-16/S2	10	Ethylbenzene	0.53		6		0.1
Hart Crowser 1990b	1990	SB1/S3		Ethylbenzene	0.520		6		0.1
ATI 1991a	Aug-91	B-16/S7	16	Ethylbenzene	0.40		6		0.1
Ecology 1993a	Jul-93	B-49	15	Ethylbenzene	0.37		6		0.1
Ecology 1993a	Jul-93	B-49 (DUP)	15	Ethylbenzene	0.36	J	6		0.1
ATI 1991a	Aug-91	B-17/S1	18	Ethylbenzene	0.29		6		0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Ethylbenzene	0.26		6		0.0
Ecology 1993a	Jul-93	B-47	12	Ethylbenzene	0.24		6		0.0
Ecology 1993a	Jul-93	B-47	12	Ethylbenzene	0.22	J	6		0.0
Hart Crowser 1990b	1990	SW-9		Ethylbenzene	0.140		6		0.0
TV-F&S 2000a	Jul-99	TW-1	11.0	Ethylbenzene	0.091		6		0.0
Ecology 1993d	Jul-93	B-52	12	Ethylbenzene	0.063	J	6		0.0
Ecology 1993a	Jul-93	B-48	12	Ethylbenzene	0.052	J	6		0.0
Hart Crowser 1990b	1990	SW-1		Ethylbenzene	0.038		6		0.0
Ecology 1991b	Aug-91	B-16	15	Ethylbenzene	0.031		6		0.0
Ecology 1993b	Jun-93	278089		Ethylbenzene	0.023	J	6		0.0
Hart Crowser 1990b	1990	15/16-S		Ethylbenzene	0.019		6		0.0
Hart Crowser 1990b	1990	SW-13		Ethylbenzene	0.015		6		0.0
Ecology 1993d	Jul-93	B-51	12	Ethylbenzene	0.01	J	6		0.0
Hart Crowser 1990b	1990	SW-19E		Ethylbenzene	0.009		6		0.0
Ecology 1993b	Jun-93	278090		Ethylbenzene	0.004	J	6		0.0
Ecology 1993b	Jun-93	278090 (DUP)		Ethylbenzene	0.003	J	6		0.0
Hart Crowser 1992a	Jan-91	B-15	17	Ethylbenzene	0.002		6		0.0
Hart Crowser 1990b	Sep-90	B-9/S-6	15	Ethylbenzene	0.002		6		0.0
Ecology 1991b	Aug-91	B-16	13.5	Ethylbenzene	0.0015		6		0.0
Hart Crowser 1990b	1990	21-C		Ethylene Glycol	12		160,000		0.0
Hart Crowser 1990b	1990	SW-19E		Ethylene Glycol	0.010		160,000		0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Fluoranthene	2.4		3,200	24	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Fluoranthene	1.3		3,200	24	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Fluoranthene	0.96		3,200	24	0.0
Ecology 1993a	Jul-93	B-49	15	Fluoranthene	0.69		3,200	1.2	0.6
Ecology 1993a	Jul-93	B-50	6	Fluoranthene	0.62	J	3,200	24	0.0

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Ecology 1993a	Jul-93	B-50	10	Fluoranthene	0.48		3,200	1.2	0.4
Hart Crowser 1995	Jul-95	HC-GW-1		Fluoranthene	0.44		3,200	1.2	0.4
Hart Crowser 1992a	Oct-91	Comp F	0-1	Fluoranthene	0.42		3,200	24	0.0
Hart Crowser 1992a	Oct-91	Comp A	0-1	Fluoranthene	0.33	J	3,200	24	0.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Fluoranthene	0.26		3,200	24	0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Fluoranthene	0.079		3,200	1.2	0.1
Hart Crowser 1995	Jul-95	HC-GW-1		Fluorene	0.36		3,200	0.081	4.4
Ecology 1993a	Jul-93	B-50	6	Fluorene	0.24	J	3,200	1.6	0.2
Ecology 1993a	Jul-93	B-49	15	Fluorene	0.23	J	3,200	0.081	2.8
Ecology 1993a	Jul-93	B-50	10	Fluorene	0.18	J	3,200	0.081	2.2
Hart Crowser 1992a	Jan-91	SB-11	7.5	Fluorene	0.079		3,200	0.081	0.98
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Gasoline-Range Hydrocarbons**	**6,500**		**30**		**217**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Gasoline-Range Hydrocarbons**	**4,200**		**30**		**140**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Gasoline-Range Hydrocarbons**	**3,200**		**30**		**107**
Hart Crowser 1992b	**Apr-92**	**B-30 (surface total)**	**0**	**Gasoline-Range Hydrocarbons**	**2,600**		**30**		**87**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**Gasoline-Range Hydrocarbons**	**2,600**		**30**		**87**
Hart Crowser 1992b	**Apr-92**	**B-30 (surface fines)**	**0**	**Gasoline-Range Hydrocarbons**	**1,600**		**30**		**53**
Hart Crowser 1993a	**Aug-92**	**B-37**	**2-4**	**Gasoline-Range Hydrocarbons**	**1,429**		**30**		**48**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Gasoline-Range Hydrocarbons**	**1,400**		**30**		**47**
Hart Crowser 1992b	**Apr-92**	**B-31 (surface total)**	**0**	**Gasoline-Range Hydrocarbons**	**490**		**30**		**16**
ATI 1991a	Aug-91	B-16/S2	10	Gasoline-Range Hydrocarbons	150		30		5.0
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Gasoline-Range Hydrocarbons	46		30		1.5
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Gasoline-Range Hydrocarbons	32		30		1.1
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Gasoline-Range Hydrocarbons	30		30		1.0
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Gasoline-Range Hydrocarbons	25		30		0.8
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Gasoline-Range Hydrocarbons	25		30		0.8
Hart Crowser 1993a	Aug-92	B-32	0-3	Gasoline-Range Hydrocarbons	13		30		0.4
Hart Crowser 1993a	Aug-92	B-35	28-30	Gasoline-Range Hydrocarbons	13		30		0.4
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Gasoline-Range Hydrocarbons	10		30		0.3
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Gasoline-Range Hydrocarbons	9		30		0.3
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Gasoline-Range Hydrocarbons	8		30		0.3
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Gasoline-Range Hydrocarbons	8		30		0.3
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Gasoline-Range Hydrocarbons	8		30		0.3
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Gasoline-Range Hydrocarbons	5		30		0.2
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Heavy Oil-Range Hydrocarbons	11,000		2,000		5.5
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Heavy Oil-Range Hydrocarbons	4,000		2,000		2.0
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Heavy Oil-Range Hydrocarbons	3,400		2,000		1.7
Hart Crowser 1993a	Aug-92	B-32	0-3	Heavy Oil-Range Hydrocarbons	2,894		2,000		1.4
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Heavy Oil-Range Hydrocarbons	2,600		2,000		1.3

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Heavy Oil-Range Hydrocarbons	1,300		2,000		0.7
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Heavy Oil-Range Hydrocarbons	1,000		2,000		0.5
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Heavy Oil-Range Hydrocarbons	980		2,000		0.5
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Heavy Oil-Range Hydrocarbons	950		2,000		0.5
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Heavy Oil-Range Hydrocarbons	930		2,000		0.5
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Heavy Oil-Range Hydrocarbons	880		2,000		0.4
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Heavy Oil-Range Hydrocarbons	625		2,000		0.3
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Heavy Oil-Range Hydrocarbons	600		2,000		0.3
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Heavy Oil-Range Hydrocarbons	460		2,000		0.2
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Heavy Oil-Range Hydrocarbons	450		2,000		0.2
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Heavy Oil-Range Hydrocarbons	380		2,000		0.2
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Heavy Oil-Range Hydrocarbons	370		2,000		0.2
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	HpCDD (total)	1.38E-05				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	HpCDD (total)	1.14E-05				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	HpCDD (total)	4.73E-07				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	HpCDF (total)	4.49E-06				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	HpCDF (total)	3.88E-06				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	HpCDF (total)	1.48E-07	J			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	HxCDD (total)	1.05E-06				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	HxCDD (total)	7.58E-07				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	HxCDD (total)	3.73E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	HxCDF (total)	1.09E-06				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	HxCDF (total)	8.81E-07				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	HxCDF (total)	3.73E-08				
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Indeno(1,2,3-cd)pyrene	0.48			1.8	0.3
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Indeno(1,2,3-cd)pyrene	0.47			1.8	0.3
Hart Crowser 1990b	1990	21-C		iso-Propanol	24				
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Lead	500		250	1,300	2.0
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Lead	320		250	1,300	1.3
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Lead	75		250	1,300	0.3
Hart Crowser 1992a	Jan-91	SB-10	2.5	Lead	75		250	1,300	0.3
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Lead	50		250	1,300	0.2
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Lead	38		250	1,300	0.2
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Lead	33		250	1,300	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Lead	31		250	1,300	0.1
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Lead	30		250	67	0.4
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Lead	24		250	1,300	0.1
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Lead	16		250	1,300	0.1
Hart Crowser 1993a	Aug-92	B-32	0-3	Lead	15		250	1,300	0.1

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Lead	15		250	1,300	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Lead	14		250	1,300	0.1
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Lead	13		250	1,300	0.1
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Lead	13		250	1,300	0.1
Hart Crowser 1992a	Jan-91	B-15	2.5	Lead	12		250	1,300	0.0
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Lead	11		250	1,300	0.0
ATI 1991a	Aug-91	B-16/S2	10	Lead	9.8		250	67	0.1
Hart Crowser 1992a	Oct-91	H-3	7.5	Lead	3.8		250	67	0.1
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Lead	3.4		250	1,300	0.0
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Lead	3.2		250	1,300	0.0
Ecology 1991a	Aug-91	B-16	13.5	Lead	2.3	P	250	67	0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Lead	2.2		250	67	0.0
Hart Crowser 1993a	Aug-92	B-32	7-9	Lead	2.2		250	67	0.0
ATI 1991a	Aug-91	B-17/S1	18	Lead	2.1		250	67	0.0
Hart Crowser 1993a	Aug-92	B-37	2-4	Lead	2.1		250	1,300	0.0
Ecology 1991a	Aug-91	B-16	13.5	Lead	2.07		250	67	0.0
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Lead	2		250	1,300	0.0
ATI 1991a	Aug-91	B-17/S6	37	Lead	1.9		250	67	0.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Lead	1.9		250	67	0.0
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Lead	1.9		250	67	0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Lead	1.8		250	67	0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Lead	1.8		250	67	0.0
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Lead	1.7		250	67	0.0
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Lead	1.7		250	67	0.0
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Lead	1.6		250	1,300	0.0
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Lead	1.6		250	67	0.0
Hart Crowser 1993a	Aug-92	B-38	9-11	Lead	1.6		250	67	0.0
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Lead	1.5		250	67	0.0
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Lead	1.5		250	67	0.0
Ecology 1991a	Aug-91	B-16	15	Lead	1.47	B	250	67	0.0
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Lead	1.4		250	67	0.0
ATI 1991a	Aug-91	B-17/S7	39	Lead	1.3		250	67	0.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Lead	1.3		250	67	0.0
ATI 1991a	Aug-91	B-17/S2	22	Lead	1.2		250	67	0.0
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Lead	1.2		250	67	0.0
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Lead	1.2		250	67	0.0
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Lead	1.2		250	67	0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Lead	1.2		250	67	0.0
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Lead	1.1		250	67	0.0

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Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Lead	1.1		250	67	0.0
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Lead	1.1		250	67	0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Lead	1		250	67	0.0
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Lead	1		250	67	0.0
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Lead	1		250	67	0.0
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Lead	1		250	67	0.0
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Lead	0.99		250	1,300	0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Lead	0.99		250	67	0.0
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Lead	0.9		250	67	0.0
Hart Crowser 1993a	Aug-92	B-37	22-24	Lead	0.9		250	67	0.0
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Lead	0.84		250	67	0.0
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Lead	0.83		250	67	0.0
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Lead	0.77		250	67	0.0
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Lead	0.73		250	67	0.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Lead	0.73		250	67	0.0
Hart Crowser 1993a	Aug-92	B-35	28-30	Lead	0.72		250	67	0.0
Hart Crowser 1993a	Aug-92	B-36	9-11	Lead	0.67		250	67	0.0
Hart Crowser 1993a	Aug-92	B-35	8-10	Lead	0.65		250	67	0.0
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Lead	0.51		250	67	0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Lead	0.38		250	67	0.0
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Lead	0.3		250	67	0.0
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Lead	0.26		250	67	0.0
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Lead	0.26		250	67	0.0
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Mercury**	**8.8**		**2**	**0.030**	**293**
Hart Crowser 1992a	Jan-91	SB-10	2.5	Mercury	0.9		2	0.59	1.5
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Mercury	0.62		2	0.59	1.1
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Mercury	0.34		2	0.59	0.6
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Mercury	0.27		2	0.59	0.5
Hart Crowser 1992a	Jan-91	B-15	2.5	Mercury	0.2		2	0.59	0.3
Hart Crowser 1992a	Jan-91	SB-11	13	Mercury	0.2		2	0.030	6.7
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Mercury	0.14		2	0.030	4.7
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Mercury	0.14		2	0.59	0.2
Hart Crowser 1992a	Jan-91	B-15	12.5	Mercury	0.1		2	0.030	3.3
Hart Crowser 1992a	Jan-91	B-15	17	Mercury	0.1		2	0.030	3.3
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Mercury	0.1		2	0.59	0.2
Hart Crowser 1992a	Jan-91	SB-10	12.5	Mercury	0.1		2	0.030	3.3
Hart Crowser 1992a	Jan-91	SB-12	2.5	Mercury	0.1		2	0.59	0.2
Ecology 1991a	Aug-91	B-16	15	Mercury	0.0391		2	0.030	1.3
Ecology 1991a	Aug-91	B-16	13.5	Mercury	0.0091	P	2	0.030	0.3

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

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Hart Crowser 1990b	1990	21-C		Methanol	18	B	40,000		0.0
Hart Crowser 1990b	1990	25-S		Methanol	4.8		40,000		0.0
Hart Crowser 1990b	**1990**	**SB3/S2**		**Methylene Chloride**	**780**	**B**	**0.02**		**39,000**
Hart Crowser 1990b	**Oct-90**	**SB5/S3**	**12.5**	**Methylene Chloride**	**270**		**0.02**		**13,500**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Methylene Chloride**	**80**	**B**	**0.02**		**4,000**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**Methylene Chloride**	**38**	**B**	**0.02**		**1,900**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Methylene Chloride**	**34**	**B**	**0.02**		**1,700**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Methylene Chloride**	**22**		**0.02**		**1,100**
Hart Crowser 1990b	**1990**	**25-S**		**Methylene Chloride**	**13**		**0.02**		**650**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Methylene Chloride**	**11**	**B**	**0.02**		**550**
Hart Crowser 1990b	**1990**	**PT-3**		**Methylene Chloride**	**5.6**		**0.02**		**280**
Hart Crowser 1992a	**Jan-91**	**B-15**	**2.5**	**Methylene Chloride**	**4.2**	**B**	**0.02**		**210**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Methylene Chloride**	**2.8**	**JB**	**0.02**		**140**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Methylene Chloride**	**2.4**	**JB**	**0.02**		**120**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**Methylene Chloride**	**2.3**	**B**	**0.02**		**115**
Hart Crowser 1992b	**Apr-92**	**B-30**	**4-5.5**	**Methylene Chloride**	**2.3**	**B**	**0.02**		**115**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**Methylene Chloride**	**2.3**	**B**	**0.02**		**115**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**Methylene Chloride**	**2.2**	**B**	**0.02**		**110**
Hart Crowser 1993a	**Jun-93**	**B-43 (DUP)**	**12**	**Methylene Chloride**	**1.7**		**0.02**		**85**
Hart Crowser 1992a	**Oct-91**	**Comp E**	**0-1**	**Methylene Chloride**	**1.7**	**B**	**0.02**		**85**
Hart Crowser 1993a	**Jun-93**	**B-43**	**12**	**Methylene Chloride**	**1.6**		**0.02**		**80**
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Methylene Chloride**	**1.4**	**B**	**0.02**		**70**
ATI 1991a	**Aug-91**	**B-17/S12**	**46**	**Methylene Chloride**	**1.4**	**B**	**0.02**		**70**
Hart Crowser 1992a	**Oct-91**	**Comp F**	**0-1**	**Methylene Chloride**	**1.3**	**B**	**0.02**		**65**
ATI 1991a	**Aug-91**	**B-17/S1**	**18**	**Methylene Chloride**	**1.2**	**B**	**0.02**		**60**
ATI 1991a	**Aug-91**	**B-17/S7**	**39**	**Methylene Chloride**	**1.2**	**B**	**0.02**		**60**
Hart Crowser 1990b	**1990**	**PT-4**		**Methylene Chloride**	**1.2**		**0.02**		**60**
Hart Crowser 1992a	**Oct-91**	**Comp B**	**0-1**	**Methylene Chloride**	**1.1**	**B**	**0.02**		**55**
Hart Crowser 1992a	**Oct-91**	**Comp D**	**0-1**	**Methylene Chloride**	**1.1**	**B**	**0.02**		**55**
Hart Crowser 1993a	**Jun-93**	**B-44**	**14**	**Methylene Chloride**	**1**		**0.02**		**50**
Hart Crowser 1992a	**Oct-91**	**Comp A**	**0-1**	**Methylene Chloride**	**1.0**	**B**	**0.02**		**50**
Hart Crowser 1992a	**Oct-91**	**Comp C**	**0-1**	**Methylene Chloride**	**1.0**	**B**	**0.02**		**50**
Hart Crowser 1992b	**Mar-92**	**B-24 (DUP)**	**10.5-12**	**Methylene Chloride**	**0.96**	**B**	**0.02**		**48**
Hart Crowser 1990b	**1990**	**PT-5**		**Methylene Chloride**	**0.960**		**0.02**		**48**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**13**	**Methylene Chloride**	**0.96**		**0.02**		**48**
Hart Crowser 1992b	**Mar-92**	**B-28**	**13.5-15**	**Methylene Chloride**	**0.93**	**B**	**0.02**		**47**
ATI 1991a	**Aug-91**	**B-17/S6**	**37**	**Methylene Chloride**	**0.91**	**B**	**0.02**		**46**
ATI 1991a	**Aug-91**	**B-17/S2**	**22**	**Methylene Chloride**	**0.89**	**B**	**0.02**		**45**
Hart Crowser 1992b	**Mar-92**	**B-28**	**7.5-9**	**Methylene Chloride**	**0.82**	**B**	**0.02**		**41**

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992a	**Oct-91**	**G-3**	**7.5**	**Methylene Chloride**	**0.81**	**B**	**0.02**		**41**
Hart Crowser 1992a	**Oct-91**	**H-1**	**2.5**	**Methylene Chloride**	**0.80**	**B**	**0.02**		**40**
Hart Crowser 1992b	**Mar-92**	**B-24**	**7.5-9**	**Methylene Chloride**	**0.71**	**B**	**0.02**		**36**
Hart Crowser 1992a	**Oct-91**	**G-2**	**5**	**Methylene Chloride**	**0.71**	**B**	**0.02**		**36**
Hart Crowser 1992b	**Mar-92**	**B-28**	**4.5-6**	**Methylene Chloride**	**0.66**	**B**	**0.02**		**33**
Hart Crowser 1992a	**Oct-91**	**G-1**	**2.5**	**Methylene Chloride**	**0.66**	**B**	**0.02**		**33**
Hart Crowser 1992b	**Mar-92**	**B-24**	**3-4.5**	**Methylene Chloride**	**0.61**	**B**	**0.02**		**31**
Hart Crowser 1992a	**Oct-91**	**H-2**	**5**	**Methylene Chloride**	**0.55**	**B**	**0.02**		**28**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**Methylene Chloride**	**0.5**		**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-22**	**6-7.5**	**Methylene Chloride**	**0.49**	**B**	**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-26**	**3-4.5**	**Methylene Chloride**	**0.49**	**B**	**0.02**		**25**
Hart Crowser 1992b	**Mar-92**	**B-26 (DUP)**	**12-13.5**	**Methylene Chloride**	**0.47**	**B**	**0.02**		**24**
Hart Crowser 1992b	**Mar-92**	**B-18**	**15-16.5**	**Methylene Chloride**	**0.46**	**B**	**0.02**		**23**
Hart Crowser 1992b	**Mar-92**	**B-20**	**12-13.5**	**Methylene Chloride**	**0.45**	**B**	**0.02**		**23**
Hart Crowser 1992b	**Mar-92**	**B-22**	**1.5-3**	**Methylene Chloride**	**0.43**	**B**	**0.02**		**22**
Hart Crowser 1992b	**Mar-92**	**B-22 (DUP)**	**10.5-12**	**Methylene Chloride**	**0.42**	**B**	**0.02**		**21**
Hart Crowser 1992a	**Oct-91**	**H-3**	**7.5**	**Methylene Chloride**	**0.39**	**B**	**0.02**		**20**
Hart Crowser 1992b	**Mar-92**	**B-18**	**7.5-9**	**Methylene Chloride**	**0.38**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-20**	**7.5-9**	**Methylene Chloride**	**0.38**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-26**	**6-7.5**	**Methylene Chloride**	**0.37**	**B**	**0.02**		**19**
Hart Crowser 1992b	**Mar-92**	**B-26 (DUP)**	**6-7.5**	**Methylene Chloride**	**0.37**	**B**	**0.02**		**19**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**2.5**	**Methylene Chloride**	**0.35**		**0.02**		**18**
Hart Crowser 1992b	**Apr-92**	**B-31**	**1.5-3**	**Methylene Chloride**	**0.31**	**JB**	**0.02**		**16**
Hart Crowser 1992b	**Apr-92**	**B-21 (DUP)**	**48-49.5**	**Methylene Chloride**	**0.29**	**JB**	**0.02**		**15**
Hart Crowser 1992b	**Apr-92**	**B-29**	**13.5-15**	**Methylene Chloride**	**0.29**	**JB**	**0.02**		**15**
Hart Crowser 1992b	**Mar-92**	**B-25**	**28-29.5**	**Methylene Chloride**	**0.28**	**JB**	**0.02**		**14**
Hart Crowser 1992b	**Apr-92**	**B-21**	**48-49.5**	**Methylene Chloride**	**0.27**	**JB**	**0.02**		**14**
Hart Crowser 1992b	**Apr-92**	**B-29**	**9-10.5**	**Methylene Chloride**	**0.26**	**JB**	**0.02**		**13**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**Methylene Chloride**	**0.25**		**0.02**		**13**
Hart Crowser 1992b	**Apr-92**	**B-31**	**7.5-9**	**Methylene Chloride**	**0.24**	**JB**	**0.02**		**12**
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Methylene Chloride	0.19	JB	0.02		9.5
Hart Crowser 1990a	May-90	B2-S3	10	Methylene Chloride	0.19	B	0.02		9.5
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Methylene Chloride	0.17	JB	0.02		8.5
Ecology 1993a	Jul-93	B-47	12	Methylene Chloride	0.16		0.02		8.0
Hart Crowser 1992a	Jan-91	SB-12	13	Methylene Chloride	0.13		0.02		6.5
Ecology 1993a	Jul-93	B-49	15	Methylene Chloride	0.11		0.02		5.5
Hart Crowser 1990b	Sep-90	B-8/S-7	18	Methylene Chloride	0.11		0.02		5.5
Ecology 1993b	Jun-93	278089		Methylene Chloride	0.085		0.02		4.3
Hart Crowser 1992a	Jan-91	SB-12	2.5	Methylene Chloride	0.055		0.02		2.8

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	1990	15/16-N		Methylene Chloride	0.014		0.02		0.7
Hart Crowser 1990b	1990	7/8-S		Methylene Chloride	0.011		0.02		0.6
Hart Crowser 1990b	1990	SW-19E		Methylene Chloride	0.008		0.02		0.4
Hart Crowser 1990b	1990	5/6-N		Methylene Chloride	0.007		0.02		0.4
Hart Crowser 1992a	Jan-91	B-15	12.5	Methylene Chloride	0.005		0.02		0.3
Hart Crowser 1992a	Jan-91	B-15	17	Methylene Chloride	0.005		0.02		0.3
Hart Crowser 1990a	May-89	B-1		Methylene Chloride	0.003		0.02		0.2
Hart Crowser 1990b	Oct-90	B-13/S-4	10	Methylene Chloride	0.003		0.02		0.2
Ecology 1991b	Aug-91	B-16	13.5	Methylene Chloride	0.0021		0.02		0.1
Hart Crowser 1990b	Sep-90	B-5/S-17	42	Methylene Chloride	0.002		0.02		0.1
Hart Crowser 1990b	Sep-90	B-6/S-11	27	Methylene Chloride	0.002		0.02		0.1
Hart Crowser 1990b	Sep-90	B-9/S-10	25	Methylene Chloride	0.002		0.02		0.1
Hart Crowser 1990b	Sep-90	B-9/S-17	42	Methylene Chloride	0.002		0.02		0.1
Hart Crowser 1990b	Sep-90	B-9/S-6	15	Methylene Chloride	0.002		0.02		0.1
Hart Crowser 1992a	Jan-91	SB-12	7.5	Methylene Chloride	0.002		0.02		0.1
Ecology 1991b	Aug-91	B-16	15	Methylene Chloride	0.0016		0.02		0.1
Hart Crowser 1990b	1990	25-S		Mineral Spirits	1,800		4,000		0.5
Hart Crowser 1990b	1990	21-C		Mineral Spirits	12		4,000		0.0
Hart Crowser 1990b	1990	7/8-S		Mineral Spirits	4.7		4,000		0.0
Hart Crowser 1990b	1990	SW-19E		Mineral Spirits	4.4		4,000		0.0
Hart Crowser 1990b	1990	5/6-N		Mineral Spirits	2.0		4,000		0.0
Hart Crowser 1990b	1990	15/16-N		Mineral Spirits	1.8		4,000		0.0
Hart Crowser 1992a	Jan-91	SB-10	2.5	Naphthalene	5.9		5	3.8	1.6
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Naphthalene**	**4.6**		**5**	**0.20**	**23**
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Naphthalene**	**2.4**		**5**	**0.20**	**12**
Hart Crowser 1995	Jul-95	HC-GW-1		Naphthalene	1.3		5	0.20	6.5
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Naphthalene	1.1		5	0.20	5.5
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Naphthalene	0.97		5	0.20	4.9
Hart Crowser 1992a	Jan-91	SB-10	12.5	Naphthalene	0.86		5	0.20	4.3
Ecology 1993a	Jul-93	B-49	15	Naphthalene	0.6		5	0.20	3.0
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Naphthalene	0.49		5	3.8	0.1
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Naphthalene	0.32		5	3.8	0.1
Hart Crowser 1993a	Aug-92	B-37	2-4	Naphthalene	0.3		5	3.8	0.1
Hart Crowser 1992a	Jan-91	SB-11	7.5	Naphthalene	0.24		5	0.20	1.2
Hart Crowser 1992a	Jan-91	B-15	2.5	Naphthalene	0.23		5	3.8	0.1
Ecology 1993a	Jul-93	B-50	10	Naphthalene	0.12	J	5	0.20	0.6
Ecology 1993a	Jul-93	B-50	6	Naphthalene	0.099	J	5	3.8	0.0
Ecology 1993a	Jul-93	B-48	12	Naphthalene	0.041	J	5	0.20	0.2
Ecology 1991a	Aug-91	B-16	13.5	Nickel	82.5				

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Nickel	30				
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Nickel	28				
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Nickel	28				
Ecology 1991a	Aug-91	B-16	15	Nickel	26.8				
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Nickel	26				
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Nickel	25				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Nickel	25				
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Nickel	22				
Hart Crowser 1992a	Jan-91	B-15	17	Nickel	19				
Hart Crowser 1992a	Jan-91	B-15	2.5	Nickel	18				
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Nickel	16				
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Nickel	15				
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Nickel	15				
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Nickel	14				
Hart Crowser 1992a	Jan-91	SB-11	13	Nickel	12				
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Nickel	11				
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Nickel	11				
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Nickel	11				
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Nickel	11				
Hart Crowser 1992a	Jan-91	SB-10	2.5	Nickel	11				
ATI 1991a	Aug-91	B-17/S1	18	Nickel	10				
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Nickel	9				
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Nickel	8.8				
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Nickel	8.7				
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Nickel	8.7				
ATI 1991a	Aug-91	B-16/S2	10	Nickel	8.1				
Hart Crowser 1992a	Jan-91	SB-12	13	Nickel	8				
Hart Crowser 1993a	Aug-92	B-32	0-3	Nickel	7.8				
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Nickel	7.5				
Hart Crowser 1993a	Aug-92	B-32	7-9	Nickel	7.4				
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Nickel	7.2				
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Nickel	7.1				
Hart Crowser 1992a	Jan-91	SB-10	17	Nickel	7				
Hart Crowser 1992a	Jan-91	SB-12	2.5	Nickel	7				
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Nickel	6.8				
Hart Crowser 1993a	Aug-92	B-37	22-24	Nickel	6.8				
Hart Crowser 1993a	Aug-92	B-37	2-4	Nickel	6.5				
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Nickel	6.4				
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Nickel	6.3				

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Fox Avenue Building (Former Great Western Chemical)

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Hart Crowser 1992b	Apr-92	B-31	10.5-12	Nickel	6.3				
Hart Crowser 1993a	Aug-92	B-38	9-11	Nickel	6.3				
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Nickel	6.1				
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Nickel	6				
Hart Crowser 1993a	Aug-92	B-36	9-11	Nickel	5.9				
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Nickel	5.8				
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Nickel	5.8				
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Nickel	5.7				
Hart Crowser 1993a	Aug-92	B-35	8-10	Nickel	5.6				
ATI 1991a	Aug-91	B-17/S6	37	Nickel	5.5				
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Nickel	5.3				
ATI 1991a	Aug-91	B-17/S7	39	Nickel	5.2				
Hart Crowser 1993a	Aug-92	B-35	28-30	Nickel	5.2				
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Nickel	5.1				
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Nickel	5.1				
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Nickel	5.1				
ATI 1991a	Aug-91	B-17/S12	46	Nickel	5.0				
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Nickel	5				
Hart Crowser 1992a	Jan-91	SB-10	12.5	Nickel	5				
Hart Crowser 1992a	Jan-91	SB-11	2.5	Nickel	5				
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Nickel	4.8				
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Nickel	4.8				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Nickel	4.6				
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Nickel	4.5				
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Nickel	4.4				
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Nickel	4.4				
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Nickel	4.3				
Hart Crowser 1992a	Oct-91	H-3	7.5	Nickel	4.2				
ATI 1991a	Aug-91	B-16/S7	16	Nickel	4.1				
ATI 1991a	Aug-91	B-17/S2	22	Nickel	4.1				
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Nickel	4				
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Nickel	4				
Hart Crowser 1992a	Jan-91	SB-12	7.5	Nickel	4				
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Nickel	3.9				
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Nickel	3.9				
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Nickel	3.9				
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Nickel	3.8				
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Nickel	3.8				
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Nickel	3.7				

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Hart Crowser 1992b	Mar-92	B-28	7.5-9	Nickel	3.4				
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Nickel	3.3				
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Nickel	3.1				
Hart Crowser 1992a	Jan-91	B-15	12.5	Nickel	3				
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Nickel	3				
Hart Crowser 1992a	Jan-91	SB-11	7.5	Nickel	3				
Hart Crowser 1990b	1990	21-C		n-Propanol	1.7				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	OCDD	8.37E-05	B			
Hart Crowser 1992b	Apr-92	B-30	14.5-16	OCDD	5.15E-05	B			
Hart Crowser 1992b	Apr-92	B-31	10.5-12	OCDD	3.05E-06	B			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	OCDF	4.75E-06				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	OCDF	3.49E-06				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	OCDF	1.77E-07				
Hart Crowser 1990b	**1990**	**PT-1**		**PCE**	**19,000**		**0.05**		**380,000**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**PCE**	**18,000**		**0.05**		**360,000**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**PCE**	**15,000**		**0.05**		**300,000**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**PCE**	**13,000**		**0.05**		**260,000**
Hart Crowser 1990b	**1990**	**25-S**		**PCE**	**11,000**		**0.05**		**220,000**
Hart Crowser 1990b	**1990**	**25-S**		**PCE**	**6,000**		**0.05**		**120,000**
Hart Crowser 1990b	**1990**	**PT-3**		**PCE**	**5,900**		**0.05**		**118,000**
Hart Crowser 1990b	**1990**	**PT-2**		**PCE**	**4,400**		**0.05**		**88,000**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**PCE**	**3,000**		**0.05**		**60,000**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**PCE**	**2,700**		**0.05**		**54,000**
Hart Crowser 1990a	**May-90**	**B3-S3**	**10**	**PCE**	**2,600**		**0.05**		**52,000**
Hart Crowser 1990b	**1990**	**PT-1**		**PCE**	**2,500**		**0.05**		**50,000**
Hart Crowser 1990b	**1990**	**PT-4**		**PCE**	**2,300**		**0.05**		**46,000**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**PCE**	**1,900**		**0.05**		**38,000**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**PCE**	**1,500**		**0.05**		**30,000**
Hart Crowser 1990b	**1990**	**SP-2**		**PCE**	**1,200**		**0.05**		**24,000**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**PCE**	**1,100**		**0.05**		**22,000**
Hart Crowser 1990b	**1990**	**PT-5**		**PCE**	**930**		**0.05**		**18,600**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**PCE**	**900**		**0.05**		**18,000**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**PCE**	**900**		**0.05**		**18,000**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**PCE**	**320**		**0.05**		**6,400**
Ecology 1993a	**Jul-93**	**B-50**	**6**	**PCE**	**310**		**0.05**		**6,200**
Hart Crowser 1992a	**Jan-91**	**B-15**	**2.5**	**PCE**	**300**		**0.05**		**6,000**
Hart Crowser 1990b	**Oct-90**	**SB7/S3**	**12.5**	**PCE**	**220**		**0.05**		**4,400**
Hart Crowser 1995	**Jul-95**	**HC-GW-1 (DUP)**		**PCE**	**210**		**0.05**		**4,200**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**PCE**	**200**		**0.05**		**4,000**

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Hart Crowser 1990b	1990	21-C		PCE	170		0.05		3,400
Hart Crowser 1990b	Oct-90	B-12/S-1	2.5	PCE	160		0.05		3,200
Hart Crowser 1990b	Oct-90	B-7/S-7B		PCE	110		0.05		2,200
Hart Crowser 1992b	Apr-92	B-31	10.5-12	PCE	71		0.05		1,420
Hart Crowser 1990b	Oct-90	B-11/S-4	10	PCE	50		0.05		1,000
Hart Crowser 1990b	Oct-90	SB5/S3	12.5	PCE	44		0.05		880
Ecology 1993a	Jul-93	B-47	12	PCE	32		0.05		640
Hart Crowser 1993a	Jun-93	B-43	12	PCE	23		0.05		460
Hart Crowser 1993a	Jun-93	B-43 (DUP)	12	PCE	23		0.05		460
Hart Crowser 1992b	Apr-92	B-30	4-5.5	PCE	21		0.05		420
Hart Crowser 1990b	1990	SB1/S3		PCE	19.2		0.05		384
Hart Crowser 1993a	Jul-93	B-52	6	PCE	19		0.05		380
TV-F&S 2000a	Feb-99	B-56	8.5	PCE	18.00		0.05		360
Hart Crowser 1993a	Jun-93	B-43	10	PCE	17		0.05		340
Hart Crowser 1993a	Aug-92	B-32	0-3	PCE	16		0.05		320
Hart Crowser 1990b	1990	17/18-C		PCE	13		0.05		260
Hart Crowser 1990b	Sep-90	B-9/S-6	15	PCE	8.4		0.05		168
TV-F&S 2000a	Jul-99	TW-6	12.0	PCE	8.40		0.05		168
Hart Crowser 1992a	Jan-91	SB-11	13	PCE	7.7		0.05		154
Hart Crowser 1993a	Jun-93	B-44	14	PCE	6.9		0.05		138
Ecology 1993a	Jul-93	B-49	15	PCE	5.3		0.05		106
Hart Crowser 1993a	Jul-93	B-51	12	PCE	5.2		0.05		104
TV-F&S 2000a	Feb-99	B-56	6.0	PCE	5.20		0.05		104
Hart Crowser 1992a	Jan-91	SB-11	2.5	PCE	5		0.05		100
ATI 1991a	Aug-91	B-16/S2	10	PCE	4.5		0.05		90
Hart Crowser 1993a	Jun-93	B-46	10	PCE	4.5		0.05		90
Ecology 1993a	Jul-93	B-49 (DUP)	15	PCE	4.1		0.05		82
Hart Crowser 1990b	1990	SP-4		PCE	4.1		0.05		82
Hart Crowser 1993a	Jul-93	B-49	12	PCE	3.8		0.05		76
Hart Crowser 1993a	Jul-93	B-52	12	PCE	3.8		0.05		76
Hart Crowser 1993a	Jul-93	B-52 (DUP)	12	PCE	3.6		0.05		72
Ecology 1993a	Jul-93	B-50	10	PCE	3.2	J	0.05		64
Hart Crowser 1993a	Jul-93	B-50	11	PCE	2.5		0.05		50
Hart Crowser 1993a	Jul-93	B-50	12	PCE	2.5		0.05		50
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	PCE	1.9		0.05		38
Hart Crowser 1993a	Aug-92	B-32	7-9	PCE	1.7		0.05		34
Hart Crowser 1992a	Jan-91	SB-11	7.5	PCE	1.7		0.05		34
TV-F&S 2001a	Jul-00	NW-11	6.5	PCE	1.60	J	0.05		32
Hart Crowser 1993a	Jun-93	B-45	14	PCE	1.5		0.05		30

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	**Jun-93**	**B-45 (DUP)**	**14**	**PCE**	**1.5**		**0.05**		**30**
Hart Crowser 1990b	**Oct-90**	**B-10A/S-1**	**7.5**	**PCE**	**1.4**		**0.05**		**28**
Hart Crowser 1993a	**Jul-93**	**B-48**	**12**	**PCE**	**1.4**		**0.05**		**28**
Hart Crowser 1993a	**Jul-93**	**B-48 (DUP)**	**12**	**PCE**	**1.4**		**0.05**		**28**
TV-F&S 2000a	**Feb-99**	**B-56**	**14.0**	**PCE**	**1.40**		**0.05**		**28**
TV-F&S 2000a	**Feb-99**	**B-55**	**10.0**	**PCE**	**1.30**		**0.05**		**26**
TV-F&S 2000a	**Jul-99**	**TW-3**	**13.0**	**PCE**	**1.30**		**0.05**		**26**
Hart Crowser 1990b	**Oct-90**	**B-13/S-2**	**5**	**PCE**	**1.0**		**0.05**		**20**
TV-F&S 2000a	**Feb-99**	**B-54**	**14.0**	**PCE**	**1.00**		**0.05**		**20**
TV-F&S 2001a	**Jul-00**	**NW-9**	**6.5**	**PCE**	**0.99**	**J**	**0.05**		**20**
TV-F&S 2000a	**Feb-99**	**B-53**	**8.5**	**PCE**	**0.97**		**0.05**		**19**
Hart Crowser 1992b	**Apr-92**	**B-31**	**1.5-3**	**PCE**	**0.94**		**0.05**		**19**
TV-F&S 2000a	**Jul-99**	**TW-6**	**9.0**	**PCE**	**0.81**		**0.05**		**16**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**PCE**	**0.75**		**0.05**		**15**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**PCE**	**0.73**		**0.05**		**15**
TV-F&S 2001a	**Jul-00**	**NW-10**	**6.5**	**PCE**	**0.68**	**J**	**0.05**		**14**
Ecology 1993b	**Jun-93**	**278089**		**PCE**	**0.67**		**0.05**		**13**
Hart Crowser 1990b	**Oct-90**	**B-14/S-3**	**11.5**	**PCE**	**0.640**		**0.05**		**13**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**PCE**	**0.61**	**J**	**0.05**		**12**
TV-F&S 2000a	**Jul-99**	**B-64**	**10.0**	**PCE**	**0.59**		**0.05**		**12**
TV-F&S 2000a	**Feb-99**	**B-56**	**11.0**	**PCE**	**0.58**		**0.05**		**12**
Hart Crowser 1990b	**1990**	**SP-6**		**PCE**	**0.550**		**0.05**		**11**
Hart Crowser 1993a	**Jun-93**	**B-45**	**44**	**PCE**	**0.54**		**0.05**		**11**
TV-F&S 2000a	**Jul-99**	**B-64**	**12.5**	**PCE**	**0.54**		**0.05**		**11**
Ecology 1993d	**Jul-93**	**B-51**	**12**	**PCE**	**0.51**		**0.05**		**10**
Hart Crowser 1990b	**Oct-90**	**SB8/S3**	**12.5**	**PCE**	**0.500**		**0.05**		**10**
TV-F&S 2000a	Feb-99	B-57	8.5	PCE	0.46		0.05		9.2
Hart Crowser 1992b	Apr-92	B-31	7.5-9	PCE	0.44		0.05		8.8
Hart Crowser 1992a	Oct-91	Comp D	0-1	PCE	0.42		0.05		8.4
Hart Crowser 1992a	Oct-91	H-1	2.5	PCE	0.40		0.05		8.0
TV-F&S 2000a	Sep-99	B-20A	12.5	PCE	0.38		0.05		7.6
Hart Crowser 1992a	Oct-91	Comp C	0-1	PCE	0.36		0.05		7.2
Hart Crowser 1992a	Oct-91	Comp B	0-1	PCE	0.34		0.05		6.8
TV-F&S 2001a	Jul-00	NW-2	6.5	PCE	0.34	J	0.05		6.8
Hart Crowser 1992a	Oct-91	Comp A	0-1	PCE	0.32		0.05		6.4
TV-F&S 2001a	Jul-00	NW-6	7.5	PCE	0.30	J	0.05		6.0
Hart Crowser 1990b	1990	SW-19E		PCE	0.300		0.05		6.0
Hart Crowser 1992b	Apr-92	B-29	13.5-15	PCE	0.27		0.05		5.4
TV-F&S 2001a	Jul-00	NW-1	8.0	PCE	0.27	J	0.05		5.4

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	1990	19/20-S		PCE	0.240		0.05		4.8
TV-F&S 2001a	Jul-00	NW-8	7.5	PCE	0.22	J	0.05		4.4
Hart Crowser 1993a	Jun-93	B-46	12	PCE	0.21		0.05		4.2
TV-F&S 2001a	Jul-00	NW-12	5.5	PCE	0.21	J	0.05		4.2
TV-F&S 2001a	Jul-00	NW-7	10.5	PCE	0.20	J	0.05		4.0
TV-F&S 2000a	Jul-99	TW-7	12.0	PCE	0.20		0.05		4.0
Hart Crowser 1992b	Mar-92	B-25	28-29.5	PCE	0.19		0.05		3.8
TV-F&S 2000a	Jul-99	B-60	10.0	PCE	0.19		0.05		3.8
Hart Crowser 1990b	Oct-90	SB6-2	7.5	PCE	0.19		0.05		3.8
Ecology 1993b	Jun-93	278090		PCE	0.18		0.05		3.6
TV-F&S 2000a	Jul-99	B-58	10.0	PCE	0.17		0.05		3.4
Ecology 1993b	Jun-93	278090 (DUP)		PCE	0.16		0.05		3.2
TV-F&S 2001a	Jul-00	NW-5	6.5	PCE	0.16	J	0.05		3.2
TV-F&S 2001a	Jul-00	NW-9	10.5	PCE	0.14	J	0.05		2.8
TV-F&S 2000a	Jul-99	B-61	24.5	PCE	0.13		0.05		2.6
Hart Crowser 1990b	1990	SW-13		PCE	0.130		0.05		2.6
TV-F&S 2000a	Jul-99	TW-7	9.0	PCE	0.13		0.05		2.6
Ecology 1993b	Jun-93	278088		PCE	0.12		0.05		2.4
Hart Crowser 1992b	Apr-92	B-21	48-49.5	PCE	0.12		0.05		2.4
TV-F&S 2001a	Jul-00	NW-12	10.0	PCE	0.12	J	0.05		2.4
Hart Crowser 1992b	Mar-92	B-26 (DUP)	12-13.5	PCE	0.11		0.05		2.2
Ecology 1993d	Jul-93	B-52	12	PCE	0.1		0.05		2.0
TV-F&S 2001a	Jul-00	NW-4	6.5	PCE	0.10	J	0.05		2.0
Hart Crowser 1992a	Jan-91	SB-12	13	PCE	0.098		0.05		2.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	PCE	0.096		0.05		1.9
TV-F&S 2001a	Jul-00	NW-2	10.5	PCE	0.093	J	0.05		1.9
Hart Crowser 1990b	Sep-90	B-6/S-11	27	PCE	0.092		0.05		1.8
TV-F&S 2001a	Jul-00	NW-7	6.5	PCE	0.086	J	0.05		1.7
TV-F&S 2000a	Jul-99	B-62	16.0	PCE	0.076		0.05		1.5
TV-F&S 2001a	Jul-00	NW-3	10.5	PCE	0.074	J	0.05		1.5
Hart Crowser 1992b	Apr-92	B-23	47.5-49	PCE	0.073		0.05		1.5
Hart Crowser 1992a	Oct-91	G-3	7.5	PCE	0.073		0.05		1.5
Hart Crowser 1992b	Apr-92	B-27	44.5-46	PCE	0.072		0.05		1.4
TV-F&S 2000a	Jul-99	B-61	13.5	PCE	0.072		0.05		1.4
TV-F&S 2000a	Jul-99	B-61	43.5	PCE	0.071		0.05		1.4
TV-F&S 2000a	Feb-99	B-54	9.0	PCE	0.07		0.05		1.4
TV-F&S 2000a	Feb-99	B-57	14.5	PCE	0.067		0.05		1.3
TV-F&S 2001a	Jul-00	NW-3	6.5	PCE	0.061	J	0.05		1.2
Hart Crowser 1990a	May-89	B-1		PCE	0.058		0.05		1.2

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	Sep-90	B-8/S-7	18	PCE	0.058		0.05		1.2
Ecology 1993b	Jun-93	278087		PCE	0.055	J	0.05		1.1
Hart Crowser 1992a	Jan-91	SB-12	2.5	PCE	0.05		0.05		1.0
Hart Crowser 1990b	1990	15/16-N		PCE	0.044		0.05		0.9
Hart Crowser 1990b	1990	15/16-S		PCE	0.042		0.05		0.8
Hart Crowser 1990b	1990	SP-3		PCE	0.035		0.05		0.7
Hart Crowser 1990b	1990	SP-5		PCE	0.033		0.05		0.7
Hart Crowser 1992a	Jan-91	B-15	17	PCE	0.026		0.05		0.5
Hart Crowser 1990b	1990	SW-4		PCE	0.026		0.05		0.5
Ecology 1993b	Jun-93	278086		PCE	0.024		0.05		0.5
Hart Crowser 1990b	1990	SW-7		PCE	0.020		0.05		0.4
Hart Crowser 1992a	Jan-91	B-15	12.5	PCE	0.016		0.05		0.3
Hart Crowser 1990b	1990	SW-14		PCE	0.013		0.05		0.3
Hart Crowser 1990b	1990	SP-1		PCE	0.012		0.05		0.2
Hart Crowser 1990b	1990	15/16-C		PCE	0.011		0.05		0.2
Hart Crowser 1990b	1990	SW-8		PCE	0.011		0.05		0.2
Hart Crowser 1990b	1990	SW-9		PCE	0.011		0.05		0.2
Hart Crowser 1990b	1990	SW-19E		PCE	0.010		0.05		0.2
Ecology 1991b	Aug-91	B-16	13.5	PCE	0.0091		0.05		0.2
Hart Crowser 1990b	Oct-90	B-13/S-4	10	PCE	0.008		0.05		0.2
Hart Crowser 1990b	Sep-90	B-5/S-2	5	PCE	0.004		0.05		0.1
Hart Crowser 1992a	Jan-91	SB-12	7.5	PCE	0.003		0.05		0.1
Ecology 1991b	Aug-91	B-16	15	PCE	0.0006	J	0.05		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	PeCDD (total)	2.34E-08				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	PeCDD (total)	1.13E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	PeCDF (total)	7.34E-08				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	PeCDF (total)	1.75E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	PeCDF (total)	4.4E-09				
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Pentachlorophenol**	**490**	**D**	**8.3**	**0.037**	**13,243**
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Pentachlorophenol**	**71**		**8.3**	**0.037**	**1,919**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Pentachlorophenol**	**29**		**8.3**	**0.73**	**40**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Pentachlorophenol**	**22**		**8.3**	**0.037**	**595**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**13**	**Pentachlorophenol**	**22**		**8.3**	**0.037**	**595**
Ecology 1993a	**Jul-93**	**B-50**	**6**	**Pentachlorophenol**	**19**	**J**	**8.3**	**0.73**	**26**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Pentachlorophenol**	**13**		**8.3**	**0.037**	**351**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Pentachlorophenol**	**12**		**8.3**	**0.037**	**324**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Pentachlorophenol**	**11**		**8.3**	**0.037**	**297**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**Pentachlorophenol**	**9.4**	**J**	**8.3**	**0.037**	**254**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**Pentachlorophenol**	**7.7**	**J**	**8.3**	**0.037**	**208**

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Fox Avenue Building (Former Great Western Chemical)

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Hart Crowser 1992b	**Apr-92**	**B-30 (surface fines)**	**0**	**Pentachlorophenol**	**7.6**		**8.3**	**0.73**	**10**
Hart Crowser 1992a	**Jan-91**	**B-15**	**17**	**Pentachlorophenol**	**7.5**		**8.3**	**0.037**	**203**
Hart Crowser 1992a	Jan-91	B-15	2.5	Pentachlorophenol	6.3		8.3	0.73	8.6
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Pentachlorophenol	5.5		8.3	0.73	7.5
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Pentachlorophenol**	**5**		**8.3**	**0.037**	**135**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Pentachlorophenol**	**4.7**		**8.3**	**0.037**	**127**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**Pentachlorophenol**	**4.4**		**8.3**	**0.037**	**119**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**Pentachlorophenol**	**4.4**		**8.3**	**0.037**	**119**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Pentachlorophenol	4.2		8.3	0.73	5.8
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Pentachlorophenol**	**4**		**8.3**	**0.037**	**108**
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Pentachlorophenol	3.4		8.3	0.73	4.7
Ecology 1993a	**Jul-93**	**B-49**	**15**	**Pentachlorophenol**	**2.9**		**8.3**	**0.037**	**78**
ATI 1991a	**Aug-91**	**B-16/S7**	**16**	**Pentachlorophenol**	**2.7**		**8.3**	**0.037**	**73**
Hart Crowser 1993a	Aug-92	B-37	2-4	Pentachlorophenol	2.7		8.3	0.73	3.7
Hart Crowser 1993a	**Aug-92**	**B-38**	**9-11**	**Pentachlorophenol**	**2.7**		**8.3**	**0.037**	**73**
ATI 1991a	**Aug-91**	**B-17/S1**	**18**	**Pentachlorophenol**	**2.2**		**8.3**	**0.037**	**59**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**Pentachlorophenol**	**2**		**8.3**	**0.037**	**54**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**7.5**	**Pentachlorophenol**	**1.5**		**8.3**	**0.037**	**41**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**12.5**	**Pentachlorophenol**	**1**		**8.3**	**0.037**	**27**
ATI 1991a	**Aug-91**	**B-16/S2**	**10**	**Pentachlorophenol**	**0.97**		**8.3**	**0.037**	**26**
Ecology 1993b	**Jun-93**	**278086**		**Pentachlorophenol**	**0.89**		**8.3**	**0.037**	**24**
Hart Crowser 1992a	Oct-91	Comp A	0-1	Pentachlorophenol	0.89	J	8.3	0.73	1.2
Ecology 1993b	**Jun-93**	**278089**		**Pentachlorophenol**	**0.68**		**8.3**	**0.037**	**18**
Ecology 1993b	**Jun-93**	**278087**		**Pentachlorophenol**	**0.46**	**J**	**8.3**	**0.037**	**12**
Ecology 1993b	**Jun-93**	**278088**		**Pentachlorophenol**	**0.45**		**8.3**	**0.037**	**12**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**Pentachlorophenol**	**0.42**		**8.3**	**0.037**	**11**
Hart Crowser 1993a	Aug-92	B-37	2-4	Pentachlorophenol	0.34		8.3	0.73	0.5
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Pentachlorophenol	0.25		8.3	0.73	0.3
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Pentachlorophenol	0.22		8.3	0.73	0.3
Hart Crowser 1992a	Jan-91	SB-12	7.5	Pentachlorophenol	0.14	J	8.3	0.037	3.8
Ecology 1993b	Jun-93	278090		Pentachlorophenol	0.13	J	8.3	0.037	3.5
Ecology 1993d	Jul-93	B-51	12	Pentachlorophenol	0.13	J	8.3	0.037	3.5
Hart Crowser 1993a	Aug-92	B-35	28-30	Pentachlorophenol	0.075		8.3	0.037	2.0
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Pentachlorophenol	0.055		8.3	0.037	1.5
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Pentachlorophenol	0.029		8.3	0.73	0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Pentachlorophenol	0.027		8.3	0.037	0.7
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Pentachlorophenol	0.022		8.3	0.037	0.6
Hart Crowser 1993a	Aug-92	B-37	22-24	Pentachlorophenol	0.011		8.3	0.037	0.3
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Pentachlorophenol	0.0062		8.3	0.037	0.2

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Pentachlorophenol	0.005		8.3	0.037	0.1
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Pentachlorophenol	0.0047		8.3	0.73	0.0
Hart Crowser 1993a	Aug-92	B-32	0-3	Pentachlorophenol	0.0043	J	8.3	0.73	0.0
Hart Crowser 1993a	Aug-92	B-35	8-10	Pentachlorophenol	0.0038		8.3	0.037	0.1
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Pentachlorophenol	0.0037		8.3	0.037	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Pentachlorophenol	0.0029		8.3	0.73	0.0
Hart Crowser 1993a	Aug-92	B-36	9-11	Pentachlorophenol	0.0027		8.3	0.037	0.1
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Pentachlorophenol	0.0026		8.3	0.037	0.1
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Pentachlorophenol	0.0024		8.3	0.037	0.1
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Pentachlorophenol	0.0023		8.3	0.73	0.0
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Pentachlorophenol	0.0023		8.3	0.73	0.0
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Pentachlorophenol	0.0023		8.3	0.73	0.0
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Pentachlorophenol	0.0021		8.3	0.73	0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Phenanthrene	2.4			9.7	0.2
Ecology 1993a	Jul-93	B-49	15	Phenanthrene	1.1			0.49	2.2
Ecology 1993a	Jul-93	B-50	6	Phenanthrene	1.1			9.7	0.1
Hart Crowser 1995	Jul-95	HC-GW-1		Phenanthrene	1.1			0.49	2.2
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Phenanthrene	1			9.7	0.1
Ecology 1993a	Jul-93	B-50	10	Phenanthrene	0.89			0.49	1.8
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Phenanthrene	0.84			9.7	0.1
Hart Crowser 1992a	Oct-91	Comp F	0-1	Phenanthrene	0.48			9.7	0.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Phenanthrene	0.33			9.7	0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Phenanthrene	0.22			0.49	0.4
Hart Crowser 1990b	1990	15/16-N		Propylene Glycol	0.012		1,600,000		0.0
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Pyrene	3.1		2,400	28	0.1
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Pyrene	0.97		2,400	28	0.0
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Pyrene	0.83		2,400	28	0.0
Ecology 1993a	Jul-93	B-49	15	Pyrene	0.81		2,400	1.4	0.6
Ecology 1993a	Jul-93	B-50	10	Pyrene	0.41	J	2,400	1.4	0.3
Ecology 1993a	Jul-93	B-50	6	Pyrene	0.39	J	2,400	28	0.0
Hart Crowser 1992a	Oct-91	Comp A	0-1	Pyrene	0.33	J	2,400	28	0.0
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Pyrene	0.32		2,400	28	0.0
Hart Crowser 1992a	Oct-91	Comp F	0-1	Pyrene	0.32		2,400	28	0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Pyrene	0.11		2,400	1.4	0.1
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Stoddard Solvent	890				
Hart Crowser 1995	Jul-95	HC-GW-1		Stoddard Solvent	850				
Hart Crowser 1990b	1990	25-S		Stoddard Solvent	2,200				
Hart Crowser 1990b	1990	21-C		Stoddard Solvent	14				
Hart Crowser 1990b	1990	7/8-S		Stoddard Solvent	7.6				

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	1990	SW-19E		Stoddard Solvent	6.9				
Hart Crowser 1990b	1990	5/6-N		Stoddard Solvent	3.3				
Hart Crowser 1990b	1990	15/16-N		Stoddard Solvent	2.9				
Hart Crowser 1992a	Jan-91	SB-10	2.5	Styrene	200		33		6.1
Hart Crowser 1992a	Jan-91	SB-10	17	Styrene	100		33		3.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Styrene	40		33		1.2
Hart Crowser 1992a	Jan-91	SB-10	12.5	Styrene	19		33		0.6
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Styrene	10		33		0.3
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Styrene	8.9		33		0.3
Ecology 1993a	Jul-93	B-47	12	Styrene	0.28		33		0.0
Ecology 1993b	Jun-93	278089		Styrene	0.021	J	33		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Styrene	0.007		33		0.0
Hart Crowser 1992b	Apr-92	B-30	14.5-16	TCDD (total)	1.7E-09	J			
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	TCDF (total)	9.42E-08				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	TCDF (total)	2.99E-08				
Hart Crowser 1992b	Apr-92	B-31	10.5-12	TCDF (total)	5.8E-10	J			
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**TCE**	**1,100**		**0.03**		**36,667**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**TCE**	**980**		**0.03**		**32,667**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**TCE**	**940**		**0.03**		**31,333**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**TCE**	**820**		**0.03**		**27,333**
Hart Crowser 1990b	**1990**	**PT-3**		**TCE**	**550**		**0.03**		**18,333**
Hart Crowser 1990b	**1990**	**PT-2**		**TCE**	**230**		**0.03**		**7,667**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**TCE**	**220**		**0.03**		**7,333**
Hart Crowser 1990b	**1990**	**25-S**		**TCE**	**210**		**0.03**		**7,000**
Hart Crowser 1990b	**1990**	**25-S**		**TCE**	**180**		**0.03**		**6,000**
Hart Crowser 1990b	**1990**	**PT-1**		**TCE**	**150**		**0.03**		**5,000**
Hart Crowser 1990b	**1990**	**PT-5**		**TCE**	**78**		**0.03**		**2,600**
Hart Crowser 1990b	**1990**	**PT-4**		**TCE**	**59**		**0.03**		**1,967**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**TCE**	**38**		**0.03**		**1,267**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**TCE**	**29**		**0.03**		**967**
Hart Crowser 1993a	**Jul-93**	**B-47**	**6**	**TCE**	**17**		**0.03**		**567**
Hart Crowser 1992b	**Apr-92**	**B-31**	**10.5-12**	**TCE**	**11**		**0.03**		**367**
Hart Crowser 1993a	**Jun-93**	**B-43 (DUP)**	**12**	**TCE**	**10**		**0.03**		**333**
Hart Crowser 1993a	**Jun-93**	**B-43**	**12**	**TCE**	**9.7**		**0.03**		**323**
Hart Crowser 1995	**Jul-95**	**HC-GW-1**		**TCE**	**9**		**0.03**		**300**
Hart Crowser 1995	**Jul-95**	**HC-GW-1 (DUP)**		**TCE**	**8.6**		**0.03**		**287**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**TCE**	**7.7**		**0.03**		**257**
Hart Crowser 1990b	**1990**	**21-C**		**TCE**	**4.9**		**0.03**		**163**
Hart Crowser 1990b	**Oct-90**	**SB7/S3**	**12.5**	**TCE**	**4.8**		**0.03**		**160**

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	**Jul-93**	**B-48 (DUP)**	**12**	**TCE**	**4.7**		**0.03**		**157**
Hart Crowser 1993a	**Jun-93**	**B-44**	**14**	**TCE**	**4.3**		**0.03**		**143**
Hart Crowser 1993a	**Jun-93**	**B-45**	**44**	**TCE**	**4.3**		**0.03**		**143**
Hart Crowser 1993a	**Jul-93**	**B-48**	**12**	**TCE**	**4.2**		**0.03**		**140**
Hart Crowser 1990b	**Oct-90**	**B-11/S-4**	**10**	**TCE**	**3.4**		**0.03**		**113**
Ecology 1993a	**Jul-93**	**B-50**	**10**	**TCE**	**3.3**		**0.03**		**110**
TV-F&S 2000a	**Feb-99**	**B-54**	**9.0**	**TCE**	**3.00**		**0.03**		**100**
Ecology 1993a	**Jul-93**	**B-48**	**12**	**TCE**	**2.6**		**0.03**		**87**
Hart Crowser 1993a	**Jun-93**	**B-43**	**10**	**TCE**	**1.8**		**0.03**		**60**
Hart Crowser 1992b	**Apr-92**	**B-21**	**48-49.5**	**TCE**	**1.2**		**0.03**		**40**
Hart Crowser 1993a	**Jul-93**	**B-49**	**12**	**TCE**	**1.2**		**0.03**		**40**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**2.5**	**TCE**	**0.92**		**0.03**		**31**
Hart Crowser 1992b	**Apr-92**	**B-30**	**4-5.5**	**TCE**	**0.87**		**0.03**		**29**
TV-F&S 2000a	**Jul-99**	**TW-6**	**12.0**	**TCE**	**0.79**		**0.03**		**26**
Ecology 1993a	**Jul-93**	**B-47**	**12**	**TCE**	**0.75**		**0.03**		**25**
TV-F&S 2000a	**Jul-99**	**TW-3**	**13.0**	**TCE**	**0.69**		**0.03**		**23**
Hart Crowser 1993a	**Aug-92**	**B-32**	**0-3**	**TCE**	**0.66**		**0.03**		**22**
Ecology 1993a	**Jul-93**	**B-49**	**15**	**TCE**	**0.66**		**0.03**		**22**
Ecology 1993a	**Jul-93**	**B-49 (DUP)**	**15**	**TCE**	**0.64**	**J**	**0.03**		**21**
Hart Crowser 1992b	**Apr-92**	**B-21 (DUP)**	**48-49.5**	**TCE**	**0.57**		**0.03**		**19**
Hart Crowser 1993a	**Jun-93**	**B-46**	**10**	**TCE**	**0.48**		**0.03**		**16**
Hart Crowser 1992a	**Jan-91**	**SB-12**	**2.5**	**TCE**	**0.47**		**0.03**		**16**
Hart Crowser 1993a	**Jul-93**	**B-50**	**11**	**TCE**	**0.46**		**0.03**		**15**
Hart Crowser 1993a	**Jul-93**	**B-50**	**12**	**TCE**	**0.46**		**0.03**		**15**
Hart Crowser 1992b	**Mar-92**	**B-22 (DUP)**	**10.5-12**	**TCE**	**0.39**		**0.03**		**13**
Hart Crowser 1992a	**Jan-91**	**SB-11**	**13**	**TCE**	**0.37**		**0.03**		**12**
Hart Crowser 1990b	**Sep-90**	**B-9/S-6**	**15**	**TCE**	**0.3**		**0.03**		**10**
Hart Crowser 1993a	Jun-93	B-45	14	TCE	0.28		0.03		9.3
Hart Crowser 1993a	Jun-93	B-45 (DUP)	14	TCE	0.28		0.03		9.3
TV-F&S 2000a	Jul-99	B-61	43.5	TCE	0.26		0.03		8.7
Hart Crowser 1992b	Apr-92	B-21	22.5-24	TCE	0.22		0.03		7.3
Ecology 1993d	Jul-93	B-51	12	TCE	0.22		0.03		7.3
TV-F&S 2000a	Jul-99	B-64	10.0	TCE	0.14		0.03		4.7
TV-F&S 2000a	Feb-99	B-54	14.0	TCE	0.13		0.03		4.3
TV-F&S 2000a	Jul-99	TW-1	11.0	TCE	0.12		0.03		4.0
Ecology 1993b	Jun-93	278089		TCE	0.11		0.03		3.7
Ecology 1993b	Jun-93	278090 (DUP)		TCE	0.1		0.03		3.3
Hart Crowser 1992a	Oct-91	Comp A	0-1	TCE	0.094		0.03		3.1
Ecology 1993b	Jun-93	278090		TCE	0.091		0.03		3.0

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990a	May-89	B-1		TCE	0.071		0.03		2.4
Hart Crowser 1992b	Mar-92	B-26 (DUP)	12-13.5	TCE	0.07		0.03		2.3
Ecology 1993b	Jun-93	278088		TCE	0.017	J	0.03		0.6
Hart Crowser 1992a	Jan-91	SB-12	13	TCE	0.015		0.03		0.5
Hart Crowser 1990b	Sep-90	B-8/S-7	18	TCE	0.014		0.03		0.5
Hart Crowser 1990b	Sep-90	B-6/S-11	27	TCE	0.008		0.03		0.3
Hart Crowser 1992a	Jan-91	B-15	17	TCE	0.003		0.03		0.1
Hart Crowser 1993a	Aug-92	B-38	9-11	Tetrachlorophenols (total)	38				
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Tetrachlorophenols (total)	0.9				
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Tetrachlorophenols (total)	0.79				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Tetrachlorophenols (total)	0.73				
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Tetrachlorophenols (total)	0.02				
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Thinner Hydrocarbons	2300				
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Thinner Hydrocarbons	2300				
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Thinner Hydrocarbons	2100				
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Thinner Hydrocarbons	1400				
Hart Crowser 1993a	Aug-92	B-37	2-4	Thinner Hydrocarbons	1310				
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Thinner Hydrocarbons	1100				
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Thinner Hydrocarbons	580				
Hart Crowser 1993a	Aug-92	B-38	9-11	Thinner Hydrocarbons	45				
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Thinner Hydrocarbons	39				
Hart Crowser 1990b	**1990**	**PT-3**		**Toluene**	**1,800**	**J**	**7**		**257**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Toluene**	**1,500**		**7**		**214**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Toluene**	**1,100**		**7**		**157**
Hart Crowser 1990b	**1990**	**PT-1**		**Toluene**	**800**	**J**	**7**		**114**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Toluene**	**630**		**7**		**90**
Hart Crowser 1990b	**1990**	**PT-1**		**Toluene**	**250**		**7**		**36**
Hart Crowser 1990b	**1990**	**PT-2**		**Toluene**	**230**		**7**		**33**
Hart Crowser 1990b	**1990**	**PT-5**		**Toluene**	**180**		**7**		**26**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Toluene**	**160**		**7**		**23**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Toluene**	**140**		**7**		**20**
Hart Crowser 1990b	**1990**	**PT-4**		**Toluene**	**140**		**7**		**20**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Toluene**	**110**		**7**		**16**
Hart Crowser 1992a	Jan-91	SB-10	12.5	Toluene	46		7		6.6
Hart Crowser 1990a	May-90	B2-S3	10	Toluene	40		7		5.7
Hart Crowser 1990b	1990	25-S		Toluene	37		7		5.3
Hart Crowser 1990b	1990	25-S		Toluene	30		7		4.3
Hart Crowser 1990a	May-90	B2-S3	10	Toluene	30	K	7		4.3
Hart Crowser 1990b	1990	21-C		Toluene	28		7		4.0

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Fox Avenue Building (Former Great Western Chemical)

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Hart Crowser 1995	Jul-95	HC-GW-1		Toluene	28		7		4.0
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Toluene	27		7		3.9
Hart Crowser 1990b	Oct-90	B-7/S-7B		Toluene	21		7		3.0
Hart Crowser 1990b	1990	SP-2		Toluene	21		7		3.0
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Toluene	10		7		1.4
Hart Crowser 1992a	Jan-91	SB-12	2.5	Toluene	4.7		7		0.7
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Toluene	4.3		7		0.6
Ecology 1993a	Jul-93	B-47	12	Toluene	3.9		7		0.6
Hart Crowser 1990b	1990	SB3/S2		Toluene	2.7		7		0.4
Hart Crowser 1990b	Oct-90	SB4/S1	1.5	Toluene	2.1		7		0.3
Hart Crowser 1990b	Oct-90	B-11/S-4	10	Toluene	1.8		7		0.3
Hart Crowser 1990b	Oct-90	SB9/S2	7.5	Toluene	1.2		7		0.2
Ecology 1993a	Jul-93	B-49	15	Toluene	1.1		7		0.2
Ecology 1993a	Jul-93	B-48	12	Toluene	1		7		0.1
Ecology 1993a	Jul-93	B-49 (DUP)	15	Toluene	0.88		7		0.1
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Toluene	0.55		7		0.1
Hart Crowser 1990b	1990	SB1/S3		Toluene	0.500		7		0.1
Ecology 1993a	Jul-93	B-50	10	Toluene	0.47	J	7		0.1
Ecology 1993b	Jun-93	278089		Toluene	0.44		7		0.1
Hart Crowser 1990b	1990	17/18-C		Toluene	0.430		7		0.1
Hart Crowser 1992a	Jan-91	SB-11	2.5	Toluene	0.35		7		0.1
Hart Crowser 1992a	Jan-91	SB-11	13	Toluene	0.34		7		0.0
Hart Crowser 1990b	Oct-90	B-10A/S-1	7.5	Toluene	0.28		7		0.0
Hart Crowser 1993a	Aug-92	B-35	28-30	Toluene	0.23		7		0.0
Hart Crowser 1990b	1990	7/8-S		Toluene	0.180		7		0.0
Hart Crowser 1992a	Jan-91	SB-12	13	Toluene	0.18		7		0.0
TV-F&S 2000a	Jul-99	TW-1	11.0	Toluene	0.12		7		0.0
Ecology 1993d	Jul-93	B-51	12	Toluene	0.096		7		0.0
Ecology 1993d	Jul-93	B-52	12	Toluene	0.088		7		0.0
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Toluene	0.08		7		0.0
Hart Crowser 1990b	1990	19/20-S		Toluene	0.077		7		0.0
Hart Crowser 1990b	1990	SP-6		Toluene	0.062		7		0.0
Ecology 1993b	Jun-93	278087		Toluene	0.042	J	7		0.0
Hart Crowser 1992a	Jan-91	B-15	17	Toluene	0.034		7		0.0
Hart Crowser 1990b	1990	SP-3		Toluene	0.026		7		0.0
Hart Crowser 1990b	1990	15/16-S		Toluene	0.016		7		0.0
Hart Crowser 1990b	1990	SW-13		Toluene	0.013		7		0.0
Hart Crowser 1990b	1990	7/8-S		Toluene	0.011		7		0.0
Hart Crowser 1990b	1990	1/2-C		Toluene	0.010		7		0.0

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Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Ecology 1993b	Jun-93	278090		Toluene	0.007	J	7		0.0
Ecology 1993b	Jun-93	278090 (DUP)		Toluene	0.006	J	7		0.0
Ecology 1991b	Aug-91	B-16	15	Toluene	0.0039		7		0.0
Hart Crowser 1990b	Oct-90	B-12/S-1	2.5	Total Hydrocarbons	531		2,000		0.3
Hart Crowser 1990b	1990	PT-5		Total Hydrocarbons (Heavy)	210		2,000		0.1
Hart Crowser 1990b	1990	PT-3		Total Hydrocarbons (Heavy)	0.760		2,000		0.0
Hart Crowser 1990b	**1990**	**PT-3**		**Total Hydrocarbons (Light)**	**20,000**		**30**		**667**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Total Hydrocarbons (Light)**	**14,000**		**30**		**467**
Hart Crowser 1990b	**1990**	**PT-5**		**Total Hydrocarbons (Light)**	**13,000**		**30**		**433**
Hart Crowser 1990b	**1990**	**PT-4**		**Total Hydrocarbons (Light)**	**6,400**		**30**		**213**
Hart Crowser 1990b	**1990**	**SB3/S2**		**Total Hydrocarbons (Light)**	**6,400**		**30**		**213**
Hart Crowser 1990b	**1990**	**PT-2**		**Total Hydrocarbons (Light)**	**4,200**		**30**		**140**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Total Hydrocarbons (Light)**	**2,100**		**30**		**70**
Hart Crowser 1990b	**Oct-90**	**SB5/S3**	**12.5**	**Total Hydrocarbons (Light)**	**700**		**30**		**23**
Hart Crowser 1990b	**1990**	**SB1/S3**		**Total Hydrocarbons (Light)**	**400**		**30**		**13**
Hart Crowser 1990b	**Oct-90**	**B-7/S-7B**		**Total Hydrocarbons (Light)**	**310**		**30**		**10**
Hart Crowser 1990a	May-90	B2-S3	10	Total Petroleum Hydrocarbons	1,900		2,000		0.95
Hart Crowser 1990a	May-90	B3-S3	10	Total Petroleum Hydrocarbons	1,500		2,000		0.8
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Vinyl Chloride	0.2		0.67		0.3
TV-F&S 2000a	Jul-99	TW-1	11.0	Vinyl Chloride	0.18		0.67		0.3
TV-F&S 2000a	Jul-99	B-58	12.5	Vinyl Chloride	0.16		0.67		0.2
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Vinyl Chloride	0.14		0.67		0.2
Ecology 1993a	Jul-93	B-48	12	Vinyl Chloride	0.12		0.67		0.2
Hart Crowser 1992a	**Jan-91**	**SB-10**	**17**	**Xylenes (total)**	**1,200**		**9**		**133**
Hart Crowser 1990b	**1990**	**PT-1**		**Xylenes (total)**	**960**		**9**		**107**
Hart Crowser 1992a	**Jan-91**	**SB-10**	**2.5**	**Xylenes (total)**	**880**		**9**		**98**
Hart Crowser 1990b	**1990**	**PT-3**		**Xylenes (total)**	**840**		**9**		**93**
Hart Crowser 1990b	**1990**	**25-S**		**Xylenes (total)**	**820**		**9**		**91**
Hart Crowser 1990b	**1990**	**25-S**		**Xylenes (total)**	**680**		**9**		**76**
Hart Crowser 1990b	**Oct-90**	**B-7/S-3**	**7.5**	**Xylenes (total)**	**570**		**9**		**63**
Hart Crowser 1992b	**Apr-92**	**B-30**	**14.5-16**	**Xylenes (total)**	**410**		**9**		**46**
Hart Crowser 1990b	**1990**	**PT-5**		**Xylenes (total)**	**370**		**9**		**41**
Hart Crowser 1990b	**1990**	**PT-1**		**Xylenes (total)**	**340**		**9**		**38**
Hart Crowser 1990a	**May-90**	**B2-S3**	**10**	**Xylenes (total)**	**270**		**9**		**30**
Hart Crowser 1990b	**1990**	**PT-4**		**Xylenes (total)**	**180**		**9**		**20**
Hart Crowser 1990b	**Oct-90**	**SB4/S1**	**1.5**	**Xylenes (total)**	**150**		**9**		**17**
Hart Crowser 1992b	**Apr-92**	**B-30**	**10-11.5**	**Xylenes (total)**	**140**		**9**		**16**
Hart Crowser 1992b	**Apr-92**	**B-30 (DUP)**	**10-11.5**	**Xylenes (total)**	**130**		**9**		**14**
Hart Crowser 1990b	1990	21-C		Xylenes (total)	61		9		6.8

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	1990	PT-2		Xylenes (total)	50		9		5.6
Hart Crowser 1992a	Jan-91	SB-10	12.5	Xylenes (total)	47		9		5.2
Hart Crowser 1990b	1990	17/18-C		Xylenes (total)	27		9		3.0
Hart Crowser 1995	Jul-95	HC-GW-1 (DUP)		Xylenes (total)	27		9		3.0
Hart Crowser 1995	Jul-95	HC-GW-1		Xylenes (total)	25		9		2.8
Hart Crowser 1990b	Oct-90	B-7/S-7B		Xylenes (total)	20		9		2.2
Hart Crowser 1990a	May-90	B3-S3	10	Xylenes (total)	13	M	9		1.4
Hart Crowser 1990b	Oct-90	SB7/S3	12.5	Xylenes (total)	7.2		9		0.8
Hart Crowser 1990b	Oct-90	SB5/S3	12.5	Xylenes (total)	6.3		9		0.7
Hart Crowser 1992a	Jan-91	B-15	2.5	Xylenes (total)	3.9		9		0.4
Hart Crowser 1990b	1990	SB1/S3		Xylenes (total)	3.8		9		0.4
Hart Crowser 1990b	Oct-90	B-10A/S-1	7.5	Xylenes (total)	1.9		9		0.2
ATI 1991a	Aug-91	B-16/S2	10	Xylenes (total)	1.9		9		0.2
Ecology 1993a	Jul-93	B-50	10	Xylenes (total)	1.9		9		0.2
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Xylenes (total)	1.7		9		0.2
Hart Crowser 1992a	Jan-91	SB-12	13	Xylenes (total)	1.3		9		0.1
Hart Crowser 1990b	1990	SB3/S2		Xylenes (total)	1.3		9		0.1
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Xylenes (total)	1.1		9		0.1
Ecology 1993a	Jul-93	B-47	12	Xylenes (total)	1		9		0.1
Hart Crowser 1990b	Oct-90	B-11/S-4	10	Xylenes (total)	0.780		9		0.1
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Xylenes (total)	0.78		9		0.1
Ecology 1993a	Jul-93	B-49	15	Xylenes (total)	0.52		9		0.1
Ecology 1993a	Jul-93	B-49 (DUP)	15	Xylenes (total)	0.42	J	9		0.0
Hart Crowser 1990b	1990	19/20-S		Xylenes (total)	0.410		9		0.0
ATI 1991a	Aug-91	B-17/S1	18	Xylenes (total)	0.37		9		0.0
Hart Crowser 1990b	1990	SP-6		Xylenes (total)	0.320		9		0.0
Ecology 1993a	Jul-93	B-48	12	Xylenes (total)	0.23		9		0.0
ATI 1991a	Aug-91	B-16/S7	16	Xylenes (total)	0.20		9		0.0
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Xylenes (total)	0.18		9		0.0
Ecology 1991b	Aug-91	B-16	15	Xylenes (total)	0.15		9		0.0
ATI 1991a	Aug-91	B-16/S7	16	Xylenes (total)	0.15		9		0.0
Hart Crowser 1992a	Jan-91	SB-11	7.5	Xylenes (total)	0.13		9		0.0
Ecology 1993b	Jun-93	278089		Xylenes (total)	0.12		9		0.0
Ecology 1993d	Jul-93	B-52	12	Xylenes (total)	0.11		9		0.0
Hart Crowser 1990b	1990	15/16-S		Xylenes (total)	0.057		9		0.0
Ecology 1993d	Jul-93	B-51	12	Xylenes (total)	0.052	J	9		0.0
Hart Crowser 1990b	1990	SW-19E		Xylenes (total)	0.048		9		0.0
Hart Crowser 1990b	1990	SW-19E		Xylenes (total)	0.031		9		0.0
Hart Crowser 1990b	1990	SW-13		Xylenes (total)	0.028		9		0.0

Table E-1
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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1990b	Sep-90	B-8/S-7	18	Xylenes (total)	0.016		9		0.0
Hart Crowser 1990b	1990	15/16-N		Xylenes (total)	0.009		9		0.0
Hart Crowser 1992a	Jan-91	B-15	17	Xylenes (total)	0.009		9		0.0
Hart Crowser 1992a	Jan-91	B-15	12.5	Xylenes (total)	0.007		9		0.0
Hart Crowser 1990b	1990	7/8-S		Xylenes (total)	0.006		9		0.0
Ecology 1991b	Aug-91	B-16	13.5	Xylenes (total)	0.0051		9		0.0
Ecology 1993b	Jun-93	278090		Xylenes (total)	0.002	J	9		0.0
Ecology 1993b	Jun-93	278090 (DUP)		Xylenes (total)	0.002	J	9		0.0
Hart Crowser 1992b	Apr-92	B-5 (surface fines)	0	Zinc	1,100		24,000	770	1.4
Hart Crowser 1992b	Apr-92	B-5 (surface total)	0	Zinc	880		24,000	770	1.1
Hart Crowser 1992b	Apr-92	B-29 (surface fines)	0	Zinc	360		24,000	770	0.5
Hart Crowser 1992b	Apr-92	B-29 (surface total)	0	Zinc	330		24,000	770	0.4
Hart Crowser 1992b	Apr-92	B-28 (surface total)	0	Zinc	310		24,000	770	0.4
Hart Crowser 1992b	Apr-92	B-28 (surface fines)	0	Zinc	280		24,000	770	0.4
Hart Crowser 1993a	Aug-92	B-36 (DUP)	9-11	Zinc	220		24,000	38	5.8
Hart Crowser 1992a	Jan-91	SB-10	2.5	Zinc	200		24,000	770	0.3
Hart Crowser 1993a	Aug-92	B-36	9-11	Zinc	180		24,000	38	4.7
Hart Crowser 1992b	Mar-92	B-22	1.5-3	Zinc	170		24,000	770	0.2
Hart Crowser 1993a	Aug-92	B-35	8-10	Zinc	150		24,000	38	3.9
Hart Crowser 1992b	Apr-92	B-29	13.5-15	Zinc	130		24,000	38	3.4
Hart Crowser 1992b	Mar-92	B-18	3-4.5	Zinc	110		24,000	770	0.1
Hart Crowser 1992b	Apr-92	B-31 (surface total)	0	Zinc	91		24,000	770	0.1
Hart Crowser 1992b	Apr-92	B-29	3-4.5	Zinc	74		24,000	770	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface fines)	0	Zinc	71		24,000	770	0.1
Hart Crowser 1992b	Apr-92	B-30 (surface total)	0	Zinc	71		24,000	770	0.1
Hart Crowser 1993a	Aug-92	B-38	9-11	Zinc	69		24,000	38	1.8
Hart Crowser 1992b	Apr-92	B-30	4-5.5	Zinc	59		24,000	770	0.1
ATI 1991a	Aug-91	B-16/S2	10	Zinc	51		24,000	38	1.3
Hart Crowser 1993a	Aug-92	B-32	0-3	Zinc	51		24,000	770	0.1
Hart Crowser 1992a	Jan-91	B-15	17	Zinc	49		24,000	38	1.3
Hart Crowser 1992a	Jan-91	B-15	2.5	Zinc	45		24,000	770	0.1
Hart Crowser 1992b	Apr-92	B-31 (surface fines)	0	Zinc	42		24,000	770	0.1
ATI 1991a	Aug-91	B-17/S1	18	Zinc	36		24,000	38	0.9
Hart Crowser 1992a	Jan-91	SB-12	2.5	Zinc	32		24,000	770	0.0
Hart Crowser 1992a	Jan-91	SB-11	13	Zinc	30		24,000	38	0.8
Ecology 1991a	Aug-91	B-16	13.5	Zinc	29.2		24,000	38	0.8
Hart Crowser 1992a	Jan-91	SB-12	13	Zinc	29		24,000	38	0.8
Hart Crowser 1992a	Oct-91	H-3	7.5	Zinc	28.5		24,000	38	0.8
Hart Crowser 1992a	Jan-91	SB-10	17	Zinc	28		24,000	38	0.7

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1993a	Aug-92	B-33	38.5-40	Zinc	27		24,000	38	0.7
Hart Crowser 1993a	Aug-92	B-34	12.5-14.5	Zinc	26		24,000	38	0.7
Hart Crowser 1992b	Mar-92	B-24	3-4.5	Zinc	25		24,000	770	0.0
Hart Crowser 1992b	Apr-92	B-27	47.5-49	Zinc	25		24,000	38	0.7
Hart Crowser 1992a	Jan-91	SB-11	2.5	Zinc	25		24,000	770	0.0
Hart Crowser 1993a	Aug-92	B-37	2-4	Zinc	24		24,000	770	0.0
Hart Crowser 1992b	Mar-92	B-22	6-7.5	Zinc	23		24,000	38	0.6
Ecology 1991a	Aug-91	B-16	15	Zinc	22.8		24,000	38	0.6
Hart Crowser 1992b	Mar-92	B-20	3-4.5	Zinc	22		24,000	770	0.0
Hart Crowser 1992b	Mar-92	B-28	13.5-15	Zinc	22		24,000	38	0.6
Hart Crowser 1992b	Mar-92	B-22 (DUP)	10.5-12	Zinc	21		24,000	38	0.6
Hart Crowser 1992b	Apr-92	B-31	1.5-3	Zinc	21		24,000	770	0.0
Hart Crowser 1992b	Mar-92	B-22	10.5-12	Zinc	20		24,000	38	0.5
Hart Crowser 1992b	Mar-92	B-24	10.5-12	Zinc	20		24,000	38	0.5
Hart Crowser 1992b	Apr-92	B-31	10.5-12	Zinc	20		24,000	38	0.5
Hart Crowser 1992a	Jan-91	SB-10	12.5	Zinc	20		24,000	38	0.5
Hart Crowser 1992a	Jan-91	SB-12	7.5	Zinc	19		24,000	38	0.5
Hart Crowser 1992b	Apr-92	B-21	42-43.5	Zinc	18		24,000	38	0.5
Hart Crowser 1992b	Mar-92	B-26	12-13.5	Zinc	18		24,000	38	0.5
Hart Crowser 1992b	Apr-92	B-29	9-10.5	Zinc	18		24,000	38	0.5
Hart Crowser 1992b	Apr-92	B-30	14.5-16	Zinc	18		24,000	38	0.5
Hart Crowser 1992a	Jan-91	SB-11	7.5	Zinc	18		24,000	38	0.5
ATI 1991a	Aug-91	B-16/S7	16	Zinc	17		24,000	38	0.4
Hart Crowser 1992b	Apr-92	B-21 (DUP)	48-49.5	Zinc	17		24,000	38	0.4
Hart Crowser 1992a	Jan-91	B-15	12.5	Zinc	16		24,000	38	0.4
ATI 1991a	Aug-91	B-17/S6	37	Zinc	16		24,000	38	0.4
Hart Crowser 1992b	Apr-92	B-30	10-11.5	Zinc	16		24,000	38	0.4
Hart Crowser 1993a	Aug-92	B-32	7-9	Zinc	16		24,000	38	0.4
ATI 1991a	Aug-91	B-17/S2	22	Zinc	15		24,000	38	0.4
ATI 1991a	Aug-91	B-17/S7	39	Zinc	15		24,000	38	0.4
Hart Crowser 1992b	Mar-92	B-20	12-13.5	Zinc	15		24,000	38	0.4
Hart Crowser 1992b	Apr-92	B-21	22.5-24	Zinc	15		24,000	38	0.4
Hart Crowser 1992b	Mar-92	B-26	3-4.5	Zinc	15		24,000	770	0.0
Hart Crowser 1992b	Apr-92	B-30 (DUP)	10-11.5	Zinc	15		24,000	38	0.4
ATI 1991a	Aug-91	B-17/S12	46	Zinc	14		24,000	38	0.4
Hart Crowser 1992b	Mar-92	B-18	15-16.5	Zinc	14		24,000	38	0.4
Hart Crowser 1992b	Apr-92	B-19	26.5-28	Zinc	14		24,000	38	0.4
Hart Crowser 1993a	Aug-92	B-35	28-30	Zinc	14		24,000	38	0.4
Hart Crowser 1992b	Mar-92	B-20	7.5-9	Zinc	13		24,000	38	0.3

Table E-1
Chemicals Detected in Soil
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Hart Crowser 1992b	Apr-92	B-21	48-49.5	Zinc	13		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-24	7.5-9	Zinc	13		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-26	6-7.5	Zinc	13		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-26 (DUP)	6-7.5	Zinc	13		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-28	4.5-6	Zinc	13		24,000	770	0.0
Hart Crowser 1992b	Apr-92	B-31	7.5-9	Zinc	13		24,000	38	0.3
Hart Crowser 1993a	Aug-92	B-37	22-24	Zinc	13		24,000	38	0.3
Hart Crowser 1992b	Apr-92	B-19	44.5-46	Zinc	12		24,000	38	0.3
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Zinc	12		24,000	38	0.3
Hart Crowser 1992b	Apr-92	B-27	44.5-46	Zinc	12		24,000	38	0.3
Hart Crowser 1993a	Aug-92	B-33	29.5-31	Zinc	12		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-18	7.5-9	Zinc	11		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-25	28-29.5	Zinc	11		24,000	38	0.3
Hart Crowser 1992b	Apr-92	B-23	47.5-49	Zinc	9.8		24,000	38	0.3
Hart Crowser 1992b	Mar-92	B-28	7.5-9	Zinc	9.2		24,000	38	0.2
Hart Crowser 1992b	Apr-92	B-23	26.5-28	Zinc	8.2		24,000	38	0.2

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database

b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight

CSL - Contaminant Screening Level from Washington Sediment Management Standards

NA - Not available

Notes:

(1) Table presents detected chemicals only.

(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.

(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Dec-98	B-13	1,1,1,2-TCA	1.59		1.7		0.9
Hart Crowser 1993a	**Jun-93**	**B-43**	**1,1,1-TCA**	**16,000**		**200**		**80**
Ecology 1993b	**Jun-93**	**278091**	**1,1,1-TCA**	**16,000**		**200**		**80**
Hart Crowser 1992b	**May-92**	**B-31**	**1,1,1-TCA**	**14,000**		**200**		**70**
Hart Crowser 1993a	**Jul-93**	**B-49**	**1,1,1-TCA**	**11,000**		**200**		**55**
Ecology 1993c	**Jul-93**	**B-49**	**1,1,1-TCA**	**11,000**		**200**		**55**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,1,1-TCA**	**10,000**		**200**		**50**
Hart Crowser 1993a	**Aug-93**	**B-51**	**1,1,1-TCA**	**9,600**		**200**		**48**
Ecology 1993c	**Jul-93**	**B-27**	**1,1,1-TCA**	**9,300**		**200**		**47**
Hart Crowser 1992b	**May-92**	**B-30**	**1,1,1-TCA**	**9,300**		**200**		**47**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**1,1,1-TCA**	**8,900**		**200**		**45**
Hart Crowser 1993a	**Jul-93**	**B-47**	**1,1,1-TCA**	**8,700**		**200**		**44**
Hart Crowser 1993a	**Jun-93**	**B-44**	**1,1,1-TCA**	**8,100**		**200**		**41**
Ecology 1993b	**Jun-93**	**278092**	**1,1,1-TCA**	**6,300**		**200**		**32**
Ecology 1993c	**Jul-93**	**B-48**	**1,1,1-TCA**	**6,200**		**200**		**31**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**1,1,1-TCA**	**6,000**		**200**		**30**
Hart Crowser 1993a	**Jul-93**	**B-48**	**1,1,1-TCA**	**5,600**		**200**		**28**
Hart Crowser 1992b	**May-92**	**B-11**	**1,1,1-TCA**	**3,400**		**200**		**17**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,1,1-TCA**	**2,600**		**200**		**13**
Hart Crowser 1993a	**Jun-93**	**B-46**	**1,1,1-TCA**	**2,500**		**200**		**13**
Hart Crowser 1992b	**May-92**	**B-15**	**1,1,1-TCA**	**2,500**		**200**		**13**
Hart Crowser 1997	**Dec-96**	**B-31**	**1,1,1-TCA**	**2,400**		**200**		**12**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,1,1-TCA**	**2,200**		**200**		**11**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**1,1,1-TCA**	**2,100**	**J**	**200**		**11**
Hart Crowser 1997	Dec-96	B-20	1,1,1-TCA	960		200		4.8
TV-F&S 2000a	Nov-98	B-12	1,1,1-TCA	890		200		4.5
TV-F&S 2000a	Nov-98	B-42	1,1,1-TCA	880		200		4.4
TV-F&S 2000a	Oct-98	B-44	1,1,1-TCA	760		200		3.8
Hart Crowser 1993a	Aug-93	B-52 (DUP)	1,1,1-TCA	570		200		2.9
TV-F&S 2000a	Oct-98	B-20	1,1,1-TCA	470		200		2.4
Hart Crowser 1993a	Aug-93	B-52	1,1,1-TCA	460		200		2.3
Hart Crowser 1992b	May-92	B-16	1,1,1-TCA	360		200		1.8
ATI 1991b	Sep-91	B-16	1,1,1-TCA	290		200		1.5
TV-F&S 2000a	Nov-98	B-46 BAL	1,1,1-TCA	290		200		1.5

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-99	B-31	1,1,1-TCA	210		200		1.1
TV-F&S 2000a	Nov-98	B-46	1,1,1-TCA	200		200		1.0
Hart Crowser 1992b	May-92	B-20	1,1,1-TCA	160		200		0.8
Hart Crowser 1992b	May-92	B-29	1,1,1-TCA	150		200		0.8
TV-F&S 2000a	Nov-99	B-11	1,1,1-TCA	140		200		0.7
Hart Crowser 1992b	May-92	B-8	1,1,1-TCA	110		200		0.6
Hart Crowser 1992b	May-92	B-14	1,1,1-TCA	37		200		0.2
TV-F&S 2000a	Nov-98	B-52	1,1,1-TCA	36		200		0.2
TV-F&S 2000a	Jul-99	B-62	1,1,1-TCA	30		200		0.2
TV-F&S 2000a	Jul-99	B-62 (DUP)	1,1,1-TCA	27		200		0.1
Hart Crowser 1992b	May-92	B-18	1,1,1-TCA	21		200		0.1
Hart Crowser 1997	Dec-96	B-36	1,1,1-TCA	16		200		0.1
TV-F&S 2000a	Jan-99	TB-4	1,1,1-TCA	16		200		0.1
TV-F&S 2000a	Jul-99	TW-2	1,1,1-TCA	16		200		0.1
Hart Crowser 1997	Dec-96	B-10A	1,1,1-TCA	14		200		0.1
TV-F&S 2000a	Jan-99	TB-3	1,1,1-TCA	13		200		0.1
TV-F&S 2000a	Jul-99	TW-3 (DUP)	1,1,1-TCA	9.4		200		0.0
TV-F&S 2000a	Jul-99	TW-3	1,1,1-TCA	8.6		200		0.0
TV-F&S 2000a	Feb-99	B-57	1,1,1-TCA	8.4		200		0.0
Hart Crowser 1992b	May-92	B-13	1,1,1-TCA	8		200		0.0
TV-F&S 2000a	Dec-98	B-13	1,1,1-TCA	3.37		200		0.0
Hart Crowser 1992b	May-92	B-22	1,1,1-TCA	2		200		0.0
TV-F&S 2000a	Dec-98	B-22	1,1,1-TCA	1.55		200		0.0
Hart Crowser 1990b	1990	B-1	1,1,1-TCA	0.036		200		0.0
Hart Crowser 1990a	May-89	B-1	1,1,1-TCA	0.031		200		0.0
Hart Crowser 1990b	1990	B-14	1,1,1-TCA	0.019		200		0.0
Hart Crowser 1990b	1990	B-8	1,1,1-TCA	0.005		200		0.0
Ecology 1993b	**Jun-93**	**278091**	**1,1,2-TCA**	**68**	**J**	**0.77**		**88**
Hart Crowser 1992b	**May-92**	**B-30**	**1,1,2-TCA**	**48**		**0.77**		**62**
Ecology 1993b	**Jun-93**	**278092**	**1,1,2-TCA**	**45**	**J**	**0.77**		**58**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,1,2-TCA**	**19**		**0.77**		**25**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,1,2-TCA**	**18**		**0.77**		**23**
Hart Crowser 1993a	Sep-92	B-30	1,1-DCA	1,900		800		2.4
Hart Crowser 1993a	Sep-92	B-31	1,1-DCA	1,500		800		1.9

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-31	1,1-DCA	1,500		800		1.9
Hart Crowser 1993a	Aug-93	B-30	1,1-DCA	1,400		800		1.8
Hart Crowser 1992b	May-92	B-31	1,1-DCA	1,300		800		1.6
Hart Crowser 1992b	May-92	B-30	1,1-DCA	1,200		800		1.5
Hart Crowser 1992b	May-92	B-15	1,1-DCA	1,100		800		1.4
Ecology 1993b	Jun-93	278091	1,1-DCA	1,000		800		1.3
Hart Crowser 1993a	Jun-93	B-43	1,1-DCA	810		800		1.0
Hart Crowser 1993a	Jun-93	B-44	1,1-DCA	770		800		0.96
Ecology 1993b	Jun-93	278092	1,1-DCA	730		800		0.9
Hart Crowser 1993a	Sep-92	B-15	1,1-DCA	720		800		0.9
Hart Crowser 1992b	May-92	B-11	1,1-DCA	570		800		0.7
Hart Crowser 1997	Dec-96	B-35	1,1-DCA	560		800		0.7
Hart Crowser 1993a	Aug-93	B-51	1,1-DCA	500		800		0.6
TV-F&S 2000a	Oct-98	B-21	1,1-DCA	490		800		0.6
Hart Crowser 1993a	Aug-93	B-15	1,1-DCA	470		800		0.6
TV-F&S 2000a	Oct-98	B-20	1,1-DCA	470		800		0.6
Hart Crowser 1993a	Sep-92	B-35	1,1-DCA	450		800		0.6
Hart Crowser 1997	Dec-96	B-44	1,1-DCA	450		800		0.6
Hart Crowser 1993a	Sep-92	B-20	1,1-DCA	310		800		0.4
Hart Crowser 1992b	May-92	B-16	1,1-DCA	290		800		0.4
Hart Crowser 1992b	May-92	B-29	1,1-DCA	290		800		0.4
TV-F&S 2000a	Nov-98	B-49	1,1-DCA	260		800		0.3
Hart Crowser 1997	Dec-96	B-39	1,1-DCA	250		800		0.3
Hart Crowser 1997	Dec-96	B-20	1,1-DCA	230		800		0.3
TV-F&S 2000a	Oct-99	B-35	1,1-DCA	220		800		0.3
TV-F&S 2000a	Oct-98	B-35	1,1-DCA	210		800		0.3
Hart Crowser 1993a	Sep-92	B-36	1,1-DCA	170		800		0.2
Hart Crowser 1993a	Aug-93	B-20	1,1-DCA	170		800		0.2
Hart Crowser 1997	Dec-96	B-21	1,1-DCA	170		800		0.2
TV-F&S 2000a	Nov-98	B-12	1,1-DCA	170		800		0.2
TV-F&S 2000a	Oct-99	B-33A	1,1-DCA	170		800		0.2
ATI 1991b	Sep-91	B-16	1,1-DCA	160		800		0.2
Hart Crowser 1997	Dec-96	B-10A	1,1-DCA	130	J	800		0.2
Hart Crowser 1993a	Sep-92	B-10A	1,1-DCA	110		800		0.1

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-10A	1,1-DCA	110		800		0.1
Hart Crowser 1997	Dec-96	B-33A	1,1-DCA	110	J	800		0.1
Hart Crowser 1992b	May-92	B-18	1,1-DCA	100		800		0.1
Hart Crowser 1993a	Aug-93	B-21	1,1-DCA	93		800		0.1
Hart Crowser 1992b	May-92	B-10A	1,1-DCA	84		800		0.1
Hart Crowser 1993a	Sep-92	B-33A	1,1-DCA	73		800		0.1
TV-F&S 2000a	Oct-99	B-18	1,1-DCA	69		800		0.1
Hart Crowser 1993a	Aug-93	B-34	1,1-DCA	62		800		0.1
Hart Crowser 1992b	May-92	B-21	1,1-DCA	61		800		0.1
Hart Crowser 1992b	May-92	B-1	1,1-DCA	58		800		0.1
Hart Crowser 1992b	May-92	B-20	1,1-DCA	54		800		0.1
Hart Crowser 1993a	Aug-93	B-35	1,1-DCA	49		800		0.1
TV-F&S 2000a	Jul-99	B-65	1,1-DCA	47		800		0.1
Hart Crowser 1993a	Sep-92	B-21	1,1-DCA	40		800		0.1
TV-F&S 2000a	Nov-98	B-52	1,1-DCA	36		800		0.0
TV-F&S 2000a	Jul-99	B-63	1,1-DCA	27		800		0.0
TV-F&S 2000a	Jul-99	B-63 (DUP)	1,1-DCA	25		800		0.0
Hart Crowser 1997	Dec-96	B-31	1,1-DCA	23		800		0.0
TV-F&S 2000a	Apr-99	B-56	1,1-DCA	20		800		0.0
Hart Crowser 1992b	May-92	B-14	1,1-DCA	15		800		0.0
Hart Crowser 1993a	Aug-93	B-36	1,1-DCA	13		800		0.0
TV-F&S 2000a	Jul-99	B-61	1,1-DCA	13		800		0.0
TV-F&S 2000a	Oct-99	B-57	1,1-DCA	13		800		0.0
TV-F&S 2000a	Apr-99	B-57	1,1-DCA	12		800		0.0
Hart Crowser 1997	Dec-96	B-45	1,1-DCA	11		800		0.0
Ecology 1993b	Jun-93	278093	1,1-DCA	10		800		0.0
TV-F&S 2000a	Feb-99	B-56	1,1-DCA	10		800		0.0
TV-F&S 2000a	Oct-99	B-36	1,1-DCA	9.5		800		0.0
Hart Crowser 1993a	Sep-92	B-34	1,1-DCA	8		800		0.0
Hart Crowser 1997	Dec-96	B-36	1,1-DCA	8		800		0.0
TV-F&S 2000a	Oct-99	B-56	1,1-DCA	6.8		800		0.0
TV-F&S 2000a	Oct-99	B-16	1,1-DCA	6.1		800		0.0
TV-F&S 2000a	Jul-99	TW-2	1,1-DCA	5.9		800		0.0
TV-F&S 2000a	Feb-99	B-57	1,1-DCA	5.8		800		0.0

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-8	1,1-DCA	5		800		0.0
Hart Crowser 1993a	Aug-93	B-33A	1,1-DCA	5		800		0.0
TV-F&S 2000a	Nov-98	B-18	1,1-DCA	4.6		800		0.0
Hart Crowser 1993a	Sep-92	B-13	1,1-DCA	3		800		0.0
Hart Crowser 1990b	1990	B-8	1,1-DCA	2.5		800		0.0
TV-F&S 2000a	Oct-98	B-36	1,1-DCA	2.5		800		0.0
TV-F&S 2000a	Jul-99	TW-3 (DUP)	1,1-DCA	2.5		800		0.0
TV-F&S 2000a	Jul-99	TW-3	1,1-DCA	2.4		800		0.0
TV-F&S 2000a	Oct-98	B-36 (DUP)	1,1-DCA	2.3		800		0.0
TV-F&S 2000a	Jul-99	TW-1	1,1-DCA	2.2		800		0.0
TV-F&S 2000a	Jul-99	B-62	1,1-DCA	2.2		800		0.0
TV-F&S 2000a	Jul-99	B-62 (DUP)	1,1-DCA	2.1		800		0.0
Hart Crowser 1993a	Aug-93	B-26	1,1-DCA	2		800		0.0
Hart Crowser 1993a	Aug-93	B-9	1,1-DCA	2		800		0.0
Hart Crowser 1992b	May-92	B-13	1,1-DCA	2		800		0.0
Hart Crowser 1992b	May-92	B-22	1,1-DCA	2		800		0.0
TV-F&S 2000a	Dec-98	B-22	1,1-DCA	1.97		800		0.0
TV-F&S 2000a	Dec-98	B-13	1,1-DCA	1.31		800		0.0
Hart Crowser 1993a	Sep-92	B-26	1,1-DCA	1		800		0.0
Hart Crowser 1993a	Sep-92	B-9	1,1-DCA	1		800		0.0
Hart Crowser 1997	Dec-96	B-9	1,1-DCA	1		800		0.0
TV-F&S 2000a	Oct-99	B-13	1,1-DCA	1		800		0.0
Hart Crowser 1990a	May-89	B-1	1,1-DCA	0.019		800		0.0
Hart Crowser 1990b	1990	B-8	1,1-DCA	0.004		800		0.0
Hart Crowser 1990b	1990	B-5	1,1-DCA	0.003		800		0.0
Hart Crowser 1993a	Jun-93	B-43	1,1-DCE	810		400		2.0
Hart Crowser 1993a	Sep-92	B-31	1,1-DCE	290		400		0.7
Ecology 1993b	Jun-93	278091	1,1-DCE	260	J	400		0.7
TV-F&S 2000a	Oct-99	B-65	1,1-DCE	260	J	400		0.7
Hart Crowser 1993a	Aug-93	B-31	1,1-DCE	230		400		0.6
TV-F&S 2000a	Jul-99	B-65	1,1-DCE	230	J	400		0.6
Hart Crowser 1993a	Sep-92	B-30	1,1-DCE	210		400		0.5
Hart Crowser 1997	Dec-96	B-33A	1,1-DCE	210		400		0.5
Hart Crowser 1997	Oct-95	B-31	1,1-DCE	200		400		0.5

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-30	1,1-DCE	190		400		0.5
Ecology 1993b	Jun-93	278092	1,1-DCE	180		400		0.5
TV-F&S 2000a	Oct-98	B-33A	1,1-DCE	170	J	400		0.4
Hart Crowser 1993a	Aug-93	B-15	1,1-DCE	150		400		0.4
Hart Crowser 1992b	May-92	B-30	1,1-DCE	150		400		0.4
TV-F&S 2000a	Nov-98	B-49	1,1-DCE	140	J	400		0.4
TV-F&S 2000a	Oct-99	B-18	1,1-DCE	140		400		0.4
Hart Crowser 1993a	Aug-93	B-34	1,1-DCE	120		400		0.3
Hart Crowser 1997	Dec-96	B-44	1,1-DCE	92		400		0.2
Hart Crowser 1993a	Sep-92	B-33A	1,1-DCE	90		400		0.2
Hart Crowser 1997	Oct-95	B-33A	1,1-DCE	85		400		0.2
Hart Crowser 1993a	Sep-92	B-20	1,1-DCE	84		400		0.2
Hart Crowser 1997	Dec-96	B-10A	1,1-DCE	66	J	400		0.2
Hart Crowser 1993a	Sep-92	B-21	1,1-DCE	65		400		0.2
Hart Crowser 1993a	Aug-93	B-20	1,1-DCE	63		400		0.2
Hart Crowser 1997	Dec-96	B-20	1,1-DCE	60		400		0.2
Hart Crowser 1997	Dec-96	B-21	1,1-DCE	58		400		0.1
Hart Crowser 1992b	May-92	B-21	1,1-DCE	57		400		0.1
Hart Crowser 1997	Dec-96	B-39	1,1-DCE	52		400		0.1
TV-F&S 2000a	Jul-99	B-61	1,1-DCE	51	J	400		0.1
ATI 1991b	Sep-91	B-16	1,1-DCE	48		400		0.1
TV-F&S 2000a	Jul-99	B-63	1,1-DCE	44	J	400		0.1
TV-F&S 2000a	Jul-99	B-63 (DUP)	1,1-DCE	42	J	400		0.1
Hart Crowser 1997	Oct-95	B-20	1,1-DCE	41		400		0.1
Hart Crowser 1997	Dec-96	B-45	1,1-DCE	35		400		0.1
Hart Crowser 1993a	Sep-92	B-36	1,1-DCE	32		400		0.1
Hart Crowser 1997	Dec-96	B-35	1,1-DCE	26		400		0.1
Hart Crowser 1997	Oct-95	B-10A	1,1-DCE	22		400		0.1
Hart Crowser 1993a	Aug-93	B-10A	1,1-DCE	20		400		0.1
Hart Crowser 1997	Oct-95	B-45	1,1-DCE	20		400		0.1
TV-F&S 2000a	Nov-98	B-52	1,1-DCE	15		400		0.0
Hart Crowser 1993a	Sep-92	B-10A	1,1-DCE	12		400		0.0
Hart Crowser 1997	Dec-96	B-31	1,1-DCE	12		400		0.0
TV-F&S 2000a	Jul-99	B-58	1,1-DCE	12	J	400		0.0

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	Jun-93	278093	1,1-DCE	11		400		0.0
Hart Crowser 1993a	Aug-93	B-35	1,1-DCE	11		400		0.0
Hart Crowser 1992b	May-92	B-20	1,1-DCE	11		400		0.0
TV-F&S 2000a	Nov-98	B-18	1,1-DCE	6		400		0.0
Hart Crowser 1992b	May-92	B-22	1,1-DCE	5		400		0.0
Hart Crowser 1997	Dec-96	B-36	1,1-DCE	4		400		0.0
TV-F&S 2000a	Oct-98	B-8	1,1-DCE	2.4	J	400		0.0
TV-F&S 2000a	Jul-99	TW-2	1,1-DCE	2.2	J	400		0.0
Hart Crowser 1993a	Sep-92	B-8	1,1-DCE	2		400		0.0
Hart Crowser 1993a	Aug-93	B-36	1,1-DCE	2		400		0.0
TV-F&S 2000a	Oct-99	B-16	1,1-DCE	1.6		400		0.0
TV-F&S 2000a	Dec-98	B-22	1,1-DCE	1.01		400		0.0
Hart Crowser 1990b	1990	B-8	1,1-DCE	0.004		400		0.0
TV-F&S 2000a	**Oct-99**	**B-49**	**1,2,4-Trimethylbenzene**	**11,000**		**400**		**28**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,2,4-Trimethylbenzene**	**6,400**		**400**		**16**
TV-F&S 2000a	Oct-99	B-39	1,2,4-Trimethylbenzene	2,300	J	400		5.8
TV-F&S 2000a	Oct-99	B-47	1,2,4-Trimethylbenzene	2,100		400		5.3
TV-F&S 2000a	Oct-99	B-47 (DUP)	1,2,4-Trimethylbenzene	1,500		400		3.8
TV-F&S 2000a	Oct-99	B-42	1,2,4-Trimethylbenzene	1,400		400		3.5
TV-F&S 2000a	Oct-99	B-38	1,2,4-Trimethylbenzene	1,000	J	400		2.5
TV-F&S 2000a	Nov-98	B-42	1,2,4-Trimethylbenzene	810		400		2.0
TV-F&S 2000a	Oct-98	B-21	1,2,4-Trimethylbenzene	540		400		1.4
TV-F&S 2000a	Oct-99	B-10A	1,2,4-Trimethylbenzene	490		400		1.2
TV-F&S 2000a	Nov-98	B-12	1,2,4-Trimethylbenzene	450		400		1.1
TV-F&S 2000a	Nov-98	B-49	1,2,4-Trimethylbenzene	410		400		1.0
TV-F&S 2000a	Oct-98	B-44	1,2,4-Trimethylbenzene	360		400		0.9
TV-F&S 2000a	Nov-98	B-46 BAL	1,2,4-Trimethylbenzene	200		400		0.5
TV-F&S 2000a	Nov-98	B-46	1,2,4-Trimethylbenzene	130		400		0.3
TV-F&S 2000a	Oct-99	B-44	1,2,4-Trimethylbenzene	120		400		0.3
TV-F&S 2000a	Nov-98	B-10A	1,2,4-Trimethylbenzene	110		400		0.3
TV-F&S 2000a	Nov-98	B-52	1,2,4-Trimethylbenzene	110		400		0.3
TV-F&S 2000a	Oct-98	B-35	1,2,4-Trimethylbenzene	57		400		0.1
TV-F&S 2000a	Jul-99	B-63	1,2,4-Trimethylbenzene	7.2		400		0.0
TV-F&S 2000a	Jul-99	B-63 (DUP)	1,2,4-Trimethylbenzene	7.2		400		0.0

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-14	1,2,4-Trimethylbenzene	1.5		400		0.0
TV-F&S 2000a	Oct-98	B-8	1,2,4-Trimethylbenzene	1.2		400		0.0
Ecology 1993b	**Jun-93**	**278092**	**1,2-DCA**	**200**		**5**		**40**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCA**	**140**	**J**	**5**		**28**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,2-DCA**	**97**		**5**		**19**
Hart Crowser 1993a	**Sep-92**	**B-31**	**1,2-DCA**	**76**		**5**		**15**
Hart Crowser 1997	**Oct-95**	**B-10A**	**1,2-DCA**	**76**		**5**		**15**
Hart Crowser 1993a	**Sep-92**	**B-10A**	**1,2-DCA**	**71**		**5**		**14**
Hart Crowser 1997	**Oct-95**	**B-31**	**1,2-DCA**	**69**		**5**		**14**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,2-DCA**	**60**		**5**		**12**
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-DCA**	**50**	**J**	**5**		**10**
TV-F&S 2000a	**Oct-99**	**B-9**	**1,2-DCA**	**50**		**5**		**10**
Hart Crowser 1993a	Aug-93	B-9	1,2-DCA	48		5		9.6
TV-F&S 2000a	Nov-98	B-9	1,2-DCA	45		5		9.0
Hart Crowser 1997	Oct-95	B-9	1,2-DCA	44		5		8.8
Hart Crowser 1997	Dec-96	B-9	1,2-DCA	44		5		8.8
Hart Crowser 1993a	Sep-92	B-9	1,2-DCA	42		5		8.4
Hart Crowser 1992b	May-92	B-9	1,2-DCA	18		5		3.6
Hart Crowser 1993a	Sept 1992	B-20	1,2-DCA	16		5		3.2
Hart Crowser 1997	Oct-95	B-20	1,2-DCA	13		5		2.6
TV-F&S 2000a	Nov-98	B-52	1,2-DCA	3.6		5		0.7
Hart Crowser 1997	Dec-96	B-35	1,2-DCA	3		5		0.6
TV-F&S 2000a	Nov-98	B-18	1,2-DCA	1.4		5		0.3
Hart Crowser 1990b	1990	B-10	1,2-DCA	0.3		5		0.1
Hart Crowser 1990b	1990	B-9	1,2-DCA	0.078		5		0.0
Hart Crowser 1990b	1990	B-9	1,2-DCA	0.022		5		0.0
Ecology 1993c	**Jul-93**	**B-27**	**1,2-DCE (total)**	**73,000**		**72**		**1,014**
Ecology 1993c	**Jul-93**	**B-50**	**1,2-DCE (total)**	**67,000**		**72**		**931**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**1,2-DCE (total)**	**54,000**		**72**		**750**
Ecology 1993b	**Jun-93**	**278094**	**1,2-DCE (total)**	**47,000**		**72**		**653**
Hart Crowser 1997	**Dec-96**	**B-21**	**1,2-DCE (total)**	**47,000**		**72**		**653**
Ecology 1993b	**Jun-93**	**278092**	**1,2-DCE (total)**	**46,000**		**72**		**639**
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-DCE (total)**	**45,000**		**72**		**625**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCE (total)**	**44,000**		**72**		**611**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
ATI 1991b	**Sep-91**	**B-16**	**1,2-DCE (total)**	**42,000**		**72**		**583**
Ecology 1993b	**Jun-93**	**278091**	**1,2-DCE (total)**	**40,000**		**72**		**556**
Hart Crowser 1992b	**May-92**	**B-30**	**1,2-DCE (total)**	**38,000**		**72**		**528**
Hart Crowser 1992b	**May-92**	**B-21**	**1,2-DCE (total)**	**37,000**		**72**		**514**
Hart Crowser 1997	**Dec-96**	**B-33A**	**1,2-DCE (total)**	**36,000**		**72**		**500**
Hart Crowser 1997	**Dec-96**	**B-44**	**1,2-DCE (total)**	**35,000**		**72**		**486**
Ecology 1993c	**Jul-93**	**B-49**	**1,2-DCE (total)**	**32,000**		**72**		**444**
Hart Crowser 1992b	**May-92**	**B-16**	**1,2-DCE (total)**	**30,000**		**72**		**417**
Hart Crowser 1992b	**May-92**	**B-15**	**1,2-DCE (total)**	**26,000**		**72**		**361**
Hart Crowser 1997	**Dec-96**	**B-39**	**1,2-DCE (total)**	**23,000**		**72**		**319**
Hart Crowser 1997	**Dec-96**	**B-45**	**1,2-DCE (total)**	**20,000**		**72**		**278**
Hart Crowser 1992b	**May-92**	**B-31**	**1,2-DCE (total)**	**20,000**		**72**		**278**
Hart Crowser 1997	**Dec-96**	**B-20**	**1,2-DCE (total)**	**19,000**		**72**		**264**
Hart Crowser 1992b	**May-92**	**B-11**	**1,2-DCE (total)**	**16,000**		**72**		**222**
Hart Crowser 1992b	**May-92**	**B-29**	**1,2-DCE (total)**	**16,000**		**72**		**222**
Ecology 1993c	**Jul-93**	**B-48**	**1,2-DCE (total)**	**14,000**		**72**		**194**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**1,2-DCE (total)**	**13,000**		**72**		**181**
Hart Crowser 1997	**Dec-96**	**B-8**	**1,2-DCE (total)**	**9,000**		**72**		**125**
Hart Crowser 1997	**Dec-96**	**B-35**	**1,2-DCE (total)**	**8,000**		**72**		**111**
Hart Crowser 1992b	**May-92**	**B-10A**	**1,2-DCE (total)**	**6,300**		**72**		**88**
Ecology 1993b	**Jun-93**	**278093**	**1,2-DCE (total)**	**5,200**		**72**		**72**
Hart Crowser 1992b	**May-92**	**B-18**	**1,2-DCE (total)**	**1,400**		**72**		**19**
Hart Crowser 1992b	**May-92**	**B-8**	**1,2-DCE (total)**	**1,300**		**72**		**18**
Hart Crowser 1992b	**May-92**	**B-1**	**1,2-DCE (total)**	**1,200**		**72**		**17**
Hart Crowser 1997	**Dec-96**	**B-31**	**1,2-DCE (total)**	**1,100**		**72**		**15**
Hart Crowser 1992b	May-92	B-14	1,2-DCE (total)	600		72		8.3
Hart Crowser 1992b	May-92	B-22	1,2-DCE (total)	440		72		6.1
Hart Crowser 1992b	May-92	B-13	1,2-DCE (total)	260		72		3.6
Hart Crowser 1997	Dec-96	B-26	1,2-DCE (total)	96		72		1.3
Hart Crowser 1992b	May-92	B-9	1,2-DCE (total)	93		72		1.3
Hart Crowser 1997	Dec-96	B-9	1,2-DCE (total)	61		72		0.8
Hart Crowser 1997	Dec-96	B-36	1,2-DCE (total)	57		72		0.8
Hart Crowser 1992b	May-92	B-72	1,2-DCE (total)	29		72		0.4
Hart Crowser 1992b	May-92	B-19	1,2-DCE (total)	28		72		0.4

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-34	1,2-DCE (total)	27		72		0.4
ATI 1991b	Sep-91	B-17	1,2-DCE (total)	26		72		0.4
Hart Crowser 1992b	May-92	B-26	1,2-DCE (total)	16		72		0.2
Hart Crowser 1992b	May-92	B-5	1,2-DCE (total)	16		72		0.2
Hart Crowser 1992b	May-92	B-5 (DUP)	1,2-DCE (total)	16		72		0.2
Hart Crowser 1992b	May-92	B-27	1,2-DCE (total)	10		72		0.1
Hart Crowser 1992b	May-92	B-23	1,2-DCE (total)	9		72		0.1
Hart Crowser 1990b	1990	B-10A	1,2-DCE (total)	6.3		72		0.1
Hart Crowser 1992b	May-92	B-23 (DUP)	1,2-DCE (total)	6		72		0.1
Hart Crowser 1992b	May-92	B-17	1,2-DCE (total)	5		72		0.1
Hart Crowser 1992b	May-92	B-6	1,2-DCE (total)	5		72		0.1
Hart Crowser 1992b	May-92	B-24	1,2-DCE (total)	4		72		0.1
Hart Crowser 1992b	May-92	B-25	1,2-DCE (total)	2		72		0.0
Hart Crowser 1990b	1990	B-8	1,2-DCE (total)	0.490		72		0.0
Hart Crowser 1990b	1990	B-14	1,2-DCE (total)	0.44		72		0.0
Hart Crowser 1990b	1990	B-9	1,2-DCE (total)	0.048		72		0.0
Hart Crowser 1990b	1990	B-5	1,2-DCE (total)	0.019		72		0.0
Hart Crowser 1990b	1990	B-6	1,2-DCE (total)	0.018		72		0.0
TV-F&S 2000a	**Nov-98**	**B-42**	**1,2-Dichlorobenzene**	**1,000**		**720**	**5.2**	**192**
Hart Crowser 1992b	**May-92**	**B-29**	**1,2-Dichlorobenzene**	**510**		**720**	**5.2**	**98**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**1,2-Dichlorobenzene**	**440**		**720**	**5.2**	**85**
TV-F&S 2000a	**Oct-98**	**B-44**	**1,2-Dichlorobenzene**	**380**		**720**	**5.2**	**73**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,2-Dichlorobenzene**	**360**		**720**	**5.2**	**69**
TV-F&S 2000a	**Oct-99**	**B-47**	**1,2-Dichlorobenzene**	**350**		**720**	**5.2**	**67**
TV-F&S 2000a	**Oct-99**	**B-42**	**1,2-Dichlorobenzene**	**340**		**720**	**5.2**	**65**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,2-Dichlorobenzene**	**320**		**720**	**5.2**	**62**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichlorobenzene**	**250**		**720**	**5.2**	**48**
TV-F&S 2000a	**Nov-98**	**B-42**	**1,2-Dichlorobenzene**	**230**	**J**	**720**	**5.2**	**44**
TV-F&S 2000a	**Nov-98**	**B-46 BAL**	**1,2-Dichlorobenzene**	**220**		**720**	**5.2**	**42**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,2-Dichlorobenzene**	**190**		**720**	**5.2**	**37**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,2-Dichlorobenzene**	**180**		**720**	**5.2**	**35**
Ecology 1993b	**Jun-93**	**278092**	**1,2-Dichlorobenzene**	**170**		**720**	**5.2**	**33**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,2-Dichlorobenzene**	**170**		**720**	**5.2**	**33**
TV-F&S 2000a	**Oct-99**	**B-44**	**1,2-Dichlorobenzene**	**160**		**720**	**5.2**	**31**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993c	**Jul-93**	**B-27**	**1,2-Dichlorobenzene**	**150**		**720**	**5.2**	**29**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,2-Dichlorobenzene**	**150**		**720**	**5.2**	**29**
TV-F&S 2000a	**Nov-98**	**B-39**	**1,2-Dichlorobenzene**	**130**		**720**	**5.2**	**25**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,2-Dichlorobenzene**	**130**		**720**	**5.2**	**25**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,2-Dichlorobenzene**	**120**		**720**	**5.2**	**23**
TV-F&S 2000a	**Oct-99**	**B-49**	**1,2-Dichlorobenzene**	**110**		**720**	**5.2**	**21**
TV-F&S 2000a	**Nov-99**	**B-12**	**1,2-Dichlorobenzene**	**110**		**720**	**5.2**	**21**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,2-Dichlorobenzene**	**100**		**720**	**5.2**	**19**
TV-F&S 2000a	**Oct-99**	**B-44**	**1,2-Dichlorobenzene**	**88**		**720**	**5.2**	**17**
TV-F&S 2000a	**Oct-99**	**B-39**	**1,2-Dichlorobenzene**	**81**	**J**	**720**	**5.2**	**16**
TV-F&S 2000a	**Oct-98**	**B-44**	**1,2-Dichlorobenzene**	**80**		**720**	**5.2**	**15**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,2-Dichlorobenzene**	**55**		**720**	**5.2**	**11**
Ecology 1993c	**Jul-93**	**B-50**	**1,2-Dichlorobenzene**	**53**		**720**	**5.2**	**10**
TV-F&S 2000a	Jul-99	B-58	1,2-Dichlorobenzene	35		720	5.2	6.7
Ecology 1993b	Jun-93	278092	1,2-Dichlorobenzene	26		720	5.2	5.0
ATI 1991b	Sep-91	B-16	1,2-Dichlorobenzene	22		720	5.2	4.2
Hart Crowser 1992b	May-92	B-21	1,2-Dichlorobenzene	21		720	5.2	4.0
TV-F&S 2000a	Oct-99	B-21	1,2-Dichlorobenzene	19		720	5.2	3.7
Hart Crowser 1992b	May-92	B-16	1,2-Dichlorobenzene	17		720	5.2	3.3
Ecology 1993b	Jun-93	278094	1,2-Dichlorobenzene	16	J	720	5.2	3.1
TV-F&S 2000a	Oct-98	B-21	1,2-Dichlorobenzene	16	J	720	5.2	3.1
TV-F&S 2000a	Jul-99	B-58	1,2-Dichlorobenzene	14		720	5.2	2.7
TV-F&S 2000a	Oct-98	B-20	1,2-Dichlorobenzene	12		720	5.2	2.3
TV-F&S 2000a	Oct-99	B-58 (DUP)	1,2-Dichlorobenzene	8.3		720	5.2	1.6
TV-F&S 2000a	Oct-99	B-58	1,2-Dichlorobenzene	7		720	5.2	1.3
TV-F&S 2000a	Oct-98	B-8	1,2-Dichlorobenzene	5.1		720	5.2	1.0
Hart Crowser 1997	Dec-96	B-8	1,2-Dichlorobenzene	5	J	720	5.2	1.0
TV-F&S 2000a	Oct-99	B-10A	1,2-Dichlorobenzene	4.1		720	5.2	0.8
TV-F&S 2000a	Nov-98	B-10A	1,2-Dichlorobenzene	4		720	5.2	0.8
TV-F&S 2000a	Nov-98	B-45	1,2-Dichlorobenzene	3.5		720	5.2	0.7
Ecology 1993b	Jun-93	278093	1,2-Dichlorobenzene	3	J	720	5.2	0.6
Hart Crowser 1997	Dec-96	B-31	1,2-Dichlorobenzene	3	J	720	5.2	0.6

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-45 (DUP)	1,2-Dichlorobenzene	2.7		720	5.2	0.5
TV-F&S 2000a	Oct-99	B-45	1,2-Dichlorobenzene	2.6		720	5.2	0.5
TV-F&S 2000a	Oct-98	B-8	1,2-Dichlorobenzene	2.5		720	5.2	0.5
TV-F&S 2000a	Oct-99	B-35	1,2-Dichlorobenzene	2.2		720	5.2	0.4
TV-F&S 2000a	Oct-99	B-60	1,2-Dichlorobenzene	2		720	5.2	0.4
TV-F&S 2000a	Jul-99	B-61	1,2-Dichlorobenzene	1.9		720	5.2	0.4
TV-F&S 2000a	Oct-99	B-61	1,2-Dichlorobenzene	1.8		720	5.2	0.3
TV-F&S 2000a	Oct-98	B-35	1,2-Dichlorobenzene	1.5	J	720	5.2	0.3
TV-F&S 2000a	Jul-99	B-60	1,2-Dichlorobenzene	1.2		720	5.2	0.2
TV-F&S 2000a	Oct-99	B-16	1,2-Dichlorobenzene	1.1		720	5.2	0.2
Hart Crowser 1997	**Dec-96**	**B-10A**	**1,2-Dichloropropane**	**82**	**J**	**0.64**		**128**
Ecology 1993b	**Jun-93**	**278092**	**1,2-Dichloropropane**	**40**	**J**	**0.64**		**63**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,2-Dichloropropane**	**11**		**0.64**		**17**
Hart Crowser 1990b	1990	B-1	1,2-Dichloropropane	0.013		0.64		0.0
Hart Crowser 1990a	May-89	B-1	1,2-Dichloropropane	0.008		0.64		0.0
Hart Crowser 1992b	May-92	B-16	1,2-Propanediol	3,100	J			
Hart Crowser 1992b	May-92	B-15	1,2-Propanediol	2,600	J			
TV-F&S 2000a	**Oct-99**	**B-49**	**1,3,5-Trimethylbenzene**	**9,600**		**400**		**24**
TV-F&S 2000a	Oct-99	B-46	1,3,5-Trimethylbenzene	1,700		400		4.3
TV-F&S 2000a	Nov-98	B-42	1,3,5-Trimethylbenzene	300		400		0.8
TV-F&S 2000a	Nov-98	B-12	1,3,5-Trimethylbenzene	240		400		0.6
TV-F&S 2000a	Oct-99	B-38	1,3,5-Trimethylbenzene	240		400		0.6
TV-F&S 2000a	Nov-98	B-49	1,3,5-Trimethylbenzene	210		400		0.5
TV-F&S 2000a	Oct-99	B-10A	1,3,5-Trimethylbenzene	200		400		0.5
TV-F&S 2000a	Oct-98	B-44	1,3,5-Trimethylbenzene	180		400		0.5
TV-F&S 2000a	Oct-98	B-21	1,3,5-Trimethylbenzene	140		400		0.4
TV-F&S 2000a	Nov-98	B-46 BAL	1,3,5-Trimethylbenzene	130		400		0.3
TV-F&S 2000a	Nov-98	B-52	1,3,5-Trimethylbenzene	39		400		0.1
TV-F&S 2000a	Oct-98	B-35	1,3,5-Trimethylbenzene	18		400		0.0
Hart Crowser 1992b	May-92	B-29	1,3-Dichlorobenzene	91				
TV-F&S 2000a	Nov-98	B-39	1,3-Dichlorobenzene	39				
TV-F&S 2000a	Nov-98	B-42	1,3-Dichlorobenzene	22				
TV-F&S 2000a	Oct-98	B-44	1,3-Dichlorobenzene	21				
TV-F&S 2000a	Nov-98	B-52	1,3-Dichlorobenzene	20				

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-42	1,3-Dichlorobenzene	20				
TV-F&S 2000a	Oct-99	B-47 (DUP)	1,3-Dichlorobenzene	17				
TV-F&S 2000a	Nov-98	B-12	1,3-Dichlorobenzene	13				
TV-F&S 2000a	Oct-99	B-47	1,3-Dichlorobenzene	13				
TV-F&S 2000a	Nov-98	B-52	1,3-Dichlorobenzene	12				
TV-F&S 2000a	Nov-98	B-46	1,3-Dichlorobenzene	11				
TV-F&S 2000a	Nov-98	B-52 (DUP)	1,3-Dichlorobenzene	11				
TV-F&S 2000a	Nov-99	B-12	1,3-Dichlorobenzene	6.8				
TV-F&S 2000a	Oct-99	B-46	1,3-Dichlorobenzene	6.2				
TV-F&S 2000a	Oct-99	B-52	1,3-Dichlorobenzene	5.7				
TV-F&S 2000a	Nov-98	B-49	1,3-Dichlorobenzene	5.3				
TV-F&S 2000a	Jul-99	B-58	1,3-Dichlorobenzene	1.2				
TV-F&S 2000a	Oct-99	B-58 (DUP)	1,3-Dichlorobenzene	0.77				
TV-F&S 2000a	Oct-99	B-21	1,3-Dichlorobenzene	0.75				
TV-F&S 2000a	Oct-99	B-58	1,3-Dichlorobenzene	0.68				
TV-F&S 2000a	Oct-99	B-10A	1,3-Dichlorobenzene	0.6				
TV-F&S 2000a	**Nov-98**	**B-42**	**1,4-Dichlorobenzene**	**290**		**1.8**	**21**	**161**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,4-Dichlorobenzene**	**140**		**1.8**	**21**	**78**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**1,4-Dichlorobenzene**	**140**		**1.8**	**21**	**78**
TV-F&S 2000a	**Oct-99**	**B-42**	**1,4-Dichlorobenzene**	**120**		**1.8**	**21**	**67**
TV-F&S 2000a	**Nov-98**	**B-42**	**1,4-Dichlorobenzene**	**110**		**1.8**	**21**	**61**
TV-F&S 2000a	**Oct-99**	**B-47**	**1,4-Dichlorobenzene**	**100**		**1.8**	**21**	**56**
Hart Crowser 1992b	**May-92**	**B-29**	**1,4-Dichlorobenzene**	**70**		**1.8**	**21**	**39**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,4-Dichlorobenzene**	**67**		**1.8**	**21**	**37**
TV-F&S 2000a	**Nov-98**	**B-12**	**1,4-Dichlorobenzene**	**63**		**1.8**	**21**	**35**
TV-F&S 2000a	**Nov-98**	**B-46**	**1,4-Dichlorobenzene**	**54**		**1.8**	**21**	**30**
Ecology 1993b	**Jun-93**	**278092**	**1,4-Dichlorobenzene**	**49**	**J**	**1.8**	**21**	**27**
TV-F&S 2000a	**Nov-98**	**B-52**	**1,4-Dichlorobenzene**	**39**		**1.8**	**21**	**22**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**1,4-Dichlorobenzene**	**37**		**1.8**	**21**	**21**
Ecology 1993c	**Jul-93**	**B-27**	**1,4-Dichlorobenzene**	**36**	**J**	**1.8**	**21**	**20**
TV-F&S 2000a	**Nov-98**	**B-49**	**1,4-Dichlorobenzene**	**36**		**1.8**	**21**	**20**
TV-F&S 2000a	**Nov-99**	**B-12**	**1,4-Dichlorobenzene**	**36**		**1.8**	**21**	**20**
TV-F&S 2000a	**Oct-99**	**B-46**	**1,4-Dichlorobenzene**	**33**		**1.8**	**21**	**18**
TV-F&S 2000a	**Oct-99**	**B-49**	**1,4-Dichlorobenzene**	**28**		**1.8**	**21**	**16**

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-99**	**B-44**	**1,4-Dichlorobenzene**	**23**		**1.8**	**21**	**13**
TV-F&S 2000a	**Oct-99**	**B-39**	**1,4-Dichlorobenzene**	**22**	**J**	**1.8**	**21**	**12**
TV-F&S 2000a	**Oct-99**	**B-52**	**1,4-Dichlorobenzene**	**20**		**1.8**	**21**	**11**
Ecology 1993c	Jul-93	B-50	1,4-Dichlorobenzene	17	J	1.8	21	9.4
TV-F&S 2000a	Jul-99	B-58	1,4-Dichlorobenzene	7.4		1.8	21	4.1
Ecology 1993b	Jun-93	278092	1,4-Dichlorobenzene	5	J	1.8	21	2.8
TV-F&S 2000a	Oct-99	B-21	1,4-Dichlorobenzene	4.4		1.8	21	2.4
TV-F&S 2000a	Jul-99	B-58	1,4-Dichlorobenzene	3.3		1.8	21	1.8
Ecology 1993b	Jun-93	278094	1,4-Dichlorobenzene	3	J	1.8	21	1.7
TV-F&S 2000a	Oct-99	B-58 (DUP)	1,4-Dichlorobenzene	2		1.8	21	1.1
TV-F&S 2000a	Oct-99	B-58	1,4-Dichlorobenzene	1.8		1.8	21	1.0
TV-F&S 2000a	Oct-98	B-8	1,4-Dichlorobenzene	1.4		1.8	21	0.8
Hart Crowser 1997	Dec-96	B-8	1,4-Dichlorobenzene	1	J	1.8	21	0.6
TV-F&S 2000a	Oct-99	B-10A	1,4-Dichlorobenzene	0.71		1.8	21	0.4
TV-F&S 2000a	Oct-99	B-60	1,4-Dichlorobenzene	0.61		1.8	21	0.3
TV-F&S 2000a	Oct-99	B-45 (DUP)	1,4-Dichlorobenzene	0.53		1.8	21	0.3
Hart Crowser 1992b	May-92	B-10A	2,3,5-Trichlorophenol	1.9				
TV-F&S 2000a	Oct-98	B-20	2,4,5-Trichlorophenol	5.1		800		0.0
Hart Crowser 1997	Dec-96	B-10A	2,4,5-Trichlorophenol	1.7	P	800		0.0
Hart Crowser 1997	Dec-96	B-8	2,4,5-Trichlorophenol	1	J	800		0.0
Hart Crowser 1997	Dec-96	B-20	2,4,5-Trichlorophenol	0.81	P	800		0.0
Hart Crowser 1997	Dec-96	B-31	2,4,5-Trichlorophenol	0.32	P	800		0.0
Hart Crowser 1997	Dec-96	B-31	2,4-Dichlorophenol	1.8	P	24		0.1
Hart Crowser 1997	Dec-96	B-10A	2,4-Dichlorophenol	1.4	P	24		0.1
Hart Crowser 1997	Dec-96	B-21	2,4-Dichlorophenol	0.81	J	24		0.0
Hart Crowser 1992b	May-92	B-29	2,4-Dimethylphenol	500		160		3.1
Hart Crowser 1992b	May-92	B-15	2,4-Dimethylphenol	480		160		3.0
ATI 1991b	Sep-91	B-16	2,4-Dimethylphenol	45		160		0.3
Ecology 1993b	Jun-93	278094	2,4-Dimethylphenol	42		160		0.3
TV-F&S 2000a	Nov-99	B-12	2,4-Dimethylphenol	30		160		0.2
Hart Crowser 1992b	May-92	B-16	2,4-Dimethylphenol	24		160		0.2
Hart Crowser 1997	Dec-96	B-31	2,4-Dimethylphenol	19		160		0.1
Hart Crowser 1992b	May-92	B-10A	2,4-Dimethylphenol	16		160		0.1
Ecology 1993c	Jul-93	B-48	2,4-Dimethylphenol	4	J	160		0.0

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993c	Jul-93	B-48 (DUP)	2,4-Dimethylphenol	3	J	160		0.0
TV-F&S 2000a	Oct-99	B-10A	2,4-Dimethylphenol	1.1		160		0.0
TV-F&S 2000a	Nov-99	B-11	2,4-Dimethylphenol	1		160		0.0
TV-F&S 2000a	Oct-99	B-15	2,4-Dimethylphenol	0.66		160		0.0
TV-F&S 2000a	Nov-99	B-31	2,4-Dimethyphenol	310		160		1.9
TV-F&S 2000a	Nov-98	B-42	2,4-Dimethyphenol	66		160		0.4
TV-F&S 2000a	Nov-98	B-39	2,4-Dimethyphenol	39		160		0.2
TV-F&S 2000a	Oct-99	B-52	2,4-Dimethyphenol	27		160		0.2
TV-F&S 2000a	Oct-98	B-20	2,4-Dimethyphenol	22		160		0.1
TV-F&S 2000a	Oct-99	B-46	2,4-Dimethyphenol	16		160		0.1
TV-F&S 2000a	Oct-98	B-44	2,4-Dimethyphenol	13		160		0.1
TV-F&S 2000a	Nov-98	B-49	2,4-Dimethyphenol	13		160		0.1
TV-F&S 2000a	Oct-99	B-44	2,4-Dimethyphenol	12		160		0.1
TV-F&S 2000a	Oct-99	B-39	2,4-Dimethyphenol	7.2	J	160		0.0
Hart Crowser 1992b	**May-92**	**B-15**	**2-Butanone**	**170,000**		**4,800**		**35**
Hart Crowser 1992b	May-92	B-11	2-Butanone	6,700		4,800		1.4
Ecology 1993b	Jun-93	278092	2-Butanone	5,500		4,800		1.1
Ecology 1993c	Jul-93	B-27	2-Butanone	4,800	J	4,800		1.0
Hart Crowser 1992b	May-92	B-30	2-Butanone	3,700		4,800		0.8
Ecology 1993b	Jun-93	278091	2-Butanone	3,600		4,800		0.8
Hart Crowser 1992b	May-92	B-16	2-Butanone	1,500		4,800		0.3
Hart Crowser 1992b	May-92	B-20	2-Butanone	230		4,800		0.0
Hart Crowser 1997	Dec-96	B-44	2-Butanone	170		4,800		0.0
Hart Crowser 1990b	1990	B-8	2-Butanone	0.006		4,800		0.0
TV-F&S 2000a	Jul-99	B-61	2-Chloronaphthalene	18				
TV-F&S 2000a	Oct-99	B-38	2-Chloronaphthalene	2.1				
Ecology 1993c	Jul-93	B-49	2-Methylnaphthalate	42				
Hart Crowser 1992b	May-92	B-10A	2-Methylnaphthalene	91		32	31	2.9
TV-F&S 2000a	Oct-99	B-38	2-Methylnaphthalene	26		32	31	0.8
TV-F&S 2000a	Nov-98	B-10A	2-Methylnaphthalene	10		32	31	0.3
TV-F&S 2000a	Oct-99	B-10A	2-Methylnaphthalene	9.2		32	31	0.3
TV-F&S 2000a	Nov-98	B-49	2-Methylnaphthalene	7.5		32	31	0.2
Ecology 1993b	Jun-93	278092	2-Methylnaphthalene	4	J	32	31	0.1
Hart Crowser 1997	Dec-96	B-31	2-Methylnaphthalene	4	J	32	31	0.1

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Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-98	B-12	2-Methylnaphthalene	3.9		32	31	0.1
TV-F&S 2000a	Nov-98	B-46	2-Methylnaphthalene	3.2		32	31	0.1
TV-F&S 2000a	Nov-98	B-42	2-Methylnaphthalene	2.3		32	31	0.1
TV-F&S 2000a	Oct-98	B-44	2-Methylnaphthalene	1.9		32	31	0.1
TV-F&S 2000a	Nov-98	B-39	2-Methylnaphthalene	1.7		32	31	0.1
TV-F&S 2000a	Nov-99	B-12	2-Methylnaphthalene	1.6		32	31	0.1
TV-F&S 2000a	Nov-98	B-52	2-Methylnaphthalene	1.1		32	31	0.0
TV-F&S 2000a	Nov-98	B-52 (DUP)	2-Methylnaphthalene	1.1		32	31	0.0
Hart Crowser 1997	Dec-96	B-8	2-Methylnaphthalene	1	J	32	31	0.0
Hart Crowser 1992b	**May-92**	**B-29**	**2-Methylphenol**	**750**		**400**	**7.1**	**106**
Hart Crowser 1992b	**May-92**	**B-11**	**2-Methylphenol**	**630**		**400**	**7.1**	**89**
Hart Crowser 1992b	**May-92**	**B-15**	**2-Methylphenol**	**440**		**400**	**7.1**	**62**
Ecology 1993b	**Jun-93**	**278092**	**2-Methylphenol**	**270**		**400**	**7.1**	**38**
Ecology 1993b	**Jun-93**	**278091**	**2-Methylphenol**	**210**	**J**	**400**	**7.1**	**30**
Ecology 1993c	**Jul-93**	**B-27**	**2-Methylphenol**	**210**		**400**	**7.1**	**30**
Ecology 1993c	**Jul-93**	**B-49**	**2-Methylphenol**	**140**		**400**	**7.1**	**20**
Hart Crowser 1992b	**May-92**	**B-30**	**2-Methylphenol**	**110**		**400**	**7.1**	**15**
TV-F&S 2000a	Oct-99	B-49	2-Methylphenol	67		400	7.1	9.4
Ecology 1993b	Jun-93	278094	2-Methylphenol	66		400	7.1	9.3
TV-F&S 2000a	Nov-99	B-31	2-Methylphenol	60		400	7.1	8.5
TV-F&S 2000a	Nov-98	B-49	2-Methylphenol	52		400	7.1	7.3
TV-F&S 2000a	Oct-99	B-47 (DUP)	2-Methylphenol	52		400	7.1	7.3
Ecology 1993c	Jul-93	B-50	2-Methylphenol	47		400	7.1	6.6
TV-F&S 2000a	Oct-99	B-47	2-Methylphenol	39		400	7.1	5.5
Hart Crowser 1992b	May-92	B-16	2-Methylphenol	34		400	7.1	4.8
TV-F&S 2000a	Nov-98	B-39	2-Methylphenol	31		400	7.1	4.4
TV-F&S 2000a	Nov-98	B-42	2-Methylphenol	29		400	7.1	4.1
TV-F&S 2000a	Oct-99	B-42	2-Methylphenol	28		400	7.1	3.9
ATI 1991b	Sep-91	B-16	2-Methylphenol	27		400	7.1	3.8
TV-F&S 2000a	Oct-98	B-20	2-Methylphenol	27		400	7.1	3.8
TV-F&S 2000a	Oct-98	B-44	2-Methylphenol	20		400	7.1	2.8
TV-F&S 2000a	Nov-99	B-12	2-Methylphenol	19		400	7.1	2.7
TV-F&S 2000a	Oct-99	B-44	2-Methylphenol	18		400	7.1	2.5
TV-F&S 2000a	Nov-98	B-46	2-Methylphenol	14		400	7.1	2.0

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-52	2-Methylphenol	11		400	7.1	1.5
TV-F&S 2000a	Oct-99	B-39	2-Methylphenol	11	J	400	7.1	1.5
TV-F&S 2000a	Oct-99	B-46	2-Methylphenol	9.1		400	7.1	1.3
Ecology 1993c	Jul-93	B-48	2-Methylphenol	9	J	400	7.1	1.3
Ecology 1993c	Jul-93	B-48 (DUP)	2-Methylphenol	8	J	400	7.1	1.1
TV-F&S 2000a	Nov-98	B-12	2-Methylphenol	7.5		400	7.1	1.1
Hart Crowser 1992b	May-92	B-30	2-Propanol	8,400				
Hart Crowser 1992b	May-92	B-11	2-Propanol	5,700				
Hart Crowser 1992b	May-92	B-15	2-Propanol	3,800				
Hart Crowser 1992b	May-92	B-31	2-Propanol	2,900				
TV-F&S 2000a	Nov-98	B-52	4,6-Dinitro-2-methylphenol	15				
TV-F&S 2000a	Oct-99	B-38	4,6-Dinitro-2-methylphenol	6.5	J			
TV-F&S 2000a	Oct-99	B-38	4-Chloro-3-methylphenol	3.8				
Ecology 1993c	Jul-93	B-48	4-Chloro-3-Methylphenol	3	J			
Ecology 1993c	Jul-93	B-48 (DUP)	4-Chloro-3-Methylphenol	3	J			
Ecology 1993b	**Jun-93**	**278091**	**4-Methyl-2-Pentanone**	**14,000**		**640**		**22**
Ecology 1993c	**Jul-93**	**B-27**	**4-Methyl-2-Pentanone**	**7,700**		**640**		**12**
Ecology 1993c	**Jul-93**	**B-49**	**4-Methyl-2-Pentanone**	**7,000**		**640**		**11**
Ecology 1993b	**Jun-93**	**278092**	**4-Methyl-2-Pentanone**	**6,800**		**640**		**11**
Hart Crowser 1992b	May-92	B-30	4-Methyl-2-Pentanone	5,800		640		9.1
Hart Crowser 1992b	May-92	B-15	4-Methyl-2-Pentanone	4,500		640		7.0
Hart Crowser 1997	Dec-96	B-44	4-Methyl-2-Pentanone	1,500		640		2.3
Ecology 1993b	Jun-93	278094	4-Methyl-2-Pentanone	1,300	J	640		2.0
Hart Crowser 1997	Dec-96	B-39	4-Methyl-2-Pentanone	1,000		640		1.6
Hart Crowser 1992b	May-92	B-16	4-Methyl-2-Pentanone	870	J	640		1.4
Hart Crowser 1992b	May-92	B-20	4-Methyl-2-Pentanone	120		640		0.2
Ecology 1993b	Jun-93	278093	4-Methyl-2-Pentanone	26		640		0.0
Ecology 1993c	Jul-93	B-27	4-Methylphenol	1,200				
Ecology 1993b	Jun-93	278092	4-Methylphenol	720				
Hart Crowser 1992b	May-92	B-29	4-Methylphenol	540				
Ecology 1993b	Jun-93	278091	4-Methylphenol	300	J			
Ecology 1993c	Jul-93	B-49	4-Methylphenol	200				
Ecology 1993c	Jul-93	B-50	4-Methylphenol	200				
Hart Crowser 1992b	May-92	B-30	4-Methylphenol	190				

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	Jun-93	278094	4-Methylphenol	120				
Hart Crowser 1992b	May-92	B-11	4-Methylphenol	100				
TV-F&S 2000a	Oct-98	B-20	4-Methylphenol	76				
Hart Crowser 1992b	May-92	B-16	4-Methylphenol	68				
TV-F&S 2000a	Oct-99	B-47 (DUP)	4-Methylphenol	66				
TV-F&S 2000a	Oct-99	B-42	4-Methylphenol	54				
TV-F&S 2000a	Oct-99	B-47	4-Methylphenol	51				
TV-F&S 2000a	Oct-99	B-49	4-Methylphenol	49				
TV-F&S 2000a	Nov-98	B-49	4-Methylphenol	34				
TV-F&S 2000a	Nov-98	B-12	4-Methylphenol	16				
TV-F&S 2000a	Nov-98	B-46	4-Methylphenol	16				
TV-F&S 2000a	Oct-99	B-52	4-Methylphenol	15				
TV-F&S 2000a	Oct-99	B-44	4-Methylphenol	15				
TV-F&S 2000a	Nov-99	B-12	4-Methylphenol	14				
Hart Crowser 1992b	May-92	B-20	4-Methylphenol	14				
Ecology 1993c	Jul-93	B-48	4-Methylphenol	12				
Ecology 1993c	Jul-93	B-48 (DUP)	4-Methylphenol	11				
TV-F&S 2000a	Oct-99	B-39	4-Methylphenol	10	J			
TV-F&S 2000a	Oct-99	B-46	4-Methylphenol	7.4				
TV-F&S 2000a	Nov-99	B-31	4-Methylphenol	6.2				
TV-F&S 2000a	Nov-99	B-11	4-Methylphenol	4.9				
TV-F&S 2000a	Oct-99	B-38	4-Methylphenol	0.88				
TV-F&S 2000a	Nov-98	B-49	Acenaphthene	6.4		960	9.3	0.7
Ecology 1993b	Jun-93	278092	Acenaphthene	6	J	960	9.3	0.6
TV-F&S 2000a	Nov-98	B-46	Acenaphthene	2.8		960	9.3	0.3
TV-F&S 2000a	Nov-98	B-12	Acenaphthene	1.7		960	9.3	0.2
TV-F&S 2000a	Oct-98	B-44	Acenaphthene	1.5		960	9.3	0.2
TV-F&S 2000a	Nov-98	B-52	Acenaphthene	1.2		960	9.3	0.1
TV-F&S 2000a	Nov-98	B-52 (DUP)	Acenaphthene	1.2		960	9.3	0.1
Hart Crowser 1997	Dec-96	B-31	Acenaphthene	1	J	960	9.3	0.1
TV-F&S 2000a	Oct-99	B-58 (DUP)	Acenaphthene	0.77		960	9.3	0.1
TV-F&S 2000a	Oct-99	B-58	Acenaphthene	0.68		960	9.3	0.1
TV-F&S 2000a	Nov-99	B-12	Acenaphthene	0.68		960	9.3	0.1
Hart Crowser 1992b	**May-92**	**B-15**	**Acetone**	**18,000**		**800**		**23**

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	**Jun-93**	**278091**	**Acetone**	**17,000**		**800**		**21**
Ecology 1993b	**Jun-93**	**278092**	**Acetone**	**13,000**		**800**		**16**
Hart Crowser 1992b	**May-92**	**B-11**	**Acetone**	**11,000**	**B**	**800**		**14**
Ecology 1993c	**Jul-93**	**B-27**	**Acetone**	**10,000**	**J**	**800**		**13**
Hart Crowser 1992b	**May-92**	**B-31**	**Acetone**	**10,000**	**B**	**800**		**13**
Hart Crowser 1992b	May-92	B-16	Acetone	7,200	B	800		9.0
Ecology 1993c	Jul-93	B-49	Acetone	5,700	J	800		7.1
Ecology 1993b	Jun-93	278094	Acetone	3,300		800		4.1
Ecology 1993b	Jun-93	278094 (DUP)	Acetone	3,000	J	800		3.8
Hart Crowser 1992b	May-92	B-8	Acetone	1,200	B	800		1.5
Hart Crowser 1992b	May-92	B-20	Acetone	820	B	800		1.0
Hart Crowser 1992b	May-92	B-10A	Acetone	610	B	800		0.8
Hart Crowser 1997	Dec-96	B-44	Acetone	590		800		0.7
Hart Crowser 1997	Dec-96	B-39	Acetone	390		800		0.5
Hart Crowser 1997	Dec-96	B-20	Acetone	190		800		0.2
Hart Crowser 1992b	May-92	B-18	Acetone	120	B	800		0.2
Hart Crowser 1997	Dec-96	B-31	Acetone	110		800		0.1
Ecology 1993b	Jun-93	278093	Acetone	61		800		0.1
Hart Crowser 1992b	May-92	B-9	Acetone	51	B	800		0.1
Hart Crowser 1997	Dec-96	B-35	Acetone	36		800		0.0
Hart Crowser 1992b	May-92	B-21	Acetone	24	B	800		0.0
ATI 1991b	Sep-91	B-16	Acetone	20	B	800		0.0
Hart Crowser 1990b	Jun-05	B-14	Acetone	0.068		800		0.0
Hart Crowser 1990b	Jun-05	B-8	Acetone	0.033		800		0.0
Hart Crowser 1990b	Jun-05	B-5	Acetone	0.010		800		0.0
Hart Crowser 1992b	May-92	B-30	Aluminum (dissolved)	660				
Hart Crowser 1992b	May-92	B-15	Aluminum (dissolved)	160				
Hart Crowser 1992b	May-92	B-31	Aluminum (dissolved)	100				
Hart Crowser 1992b	May-92	B-23	Aluminum (dissolved)	96				
Hart Crowser 1992b	May-92	B-5 (DUP)	Aluminum (dissolved)	94				
Hart Crowser 1992b	May-92	B-5	Aluminum (dissolved)	90				
Hart Crowser 1992b	May-92	B-22	Aluminum (dissolved)	67				
Hart Crowser 1992b	May-92	B-24	Aluminum (dissolved)	62				
Hart Crowser 1992b	May-92	B-27	Aluminum (dissolved)	57				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-25	Aluminum (dissolved)	56				
Hart Crowser 1992b	May-92	B-29	Aluminum (dissolved)	56				
Hart Crowser 1992b	May-92	B-20	Aluminum (dissolved)	55				
Hart Crowser 1992b	May-92	B-11	Aluminum (dissolved)	51				
Hart Crowser 1992b	May-92	B-15	Aluminum (total)	200,000				
Hart Crowser 1992b	May-92	B-31	Aluminum (total)	110,000				
Hart Crowser 1992b	May-92	B-23	Aluminum (total)	64,000				
Hart Crowser 1992b	May-92	B-22	Aluminum (total)	55,000				
Hart Crowser 1992b	May-92	B-72	Aluminum (total)	51,000				
Hart Crowser 1992b	May-92	B-24	Aluminum (total)	49,000				
Hart Crowser 1992b	May-92	B-14	Aluminum (total)	43,000				
Hart Crowser 1992b	May-92	B-26	Aluminum (total)	36,000				
Hart Crowser 1992b	May-92	B-11	Aluminum (total)	29,000				
Hart Crowser 1992b	May-92	B-16	Aluminum (total)	26,000				
Hart Crowser 1992b	May-92	B-18	Aluminum (total)	15,000				
Hart Crowser 1992b	May-92	B-30	Aluminum (total)	15,000				
Hart Crowser 1992b	May-92	B-29	Aluminum (total)	13,000				
Hart Crowser 1992b	May-92	B-1	Aluminum (total)	7,100				
Hart Crowser 1992b	May-92	B-27	Aluminum (total)	1,900				
Hart Crowser 1992b	May-92	B-19	Aluminum (total)	1,700				
Hart Crowser 1992b	May-92	B-23 (DUP)	Aluminum (total)	820				
Hart Crowser 1992b	May-92	B-20	Aluminum (total)	590				
Hart Crowser 1992b	May-92	B-9	Aluminum (total)	470				
Hart Crowser 1992b	May-92	B-25	Aluminum (total)	320				
Hart Crowser 1992b	May-92	B-17	Aluminum (total)	300				
Hart Crowser 1992b	May-92	B-21	Aluminum (total)	300				
Hart Crowser 1992b	May-92	B-8	Aluminum (total)	270				
Hart Crowser 1992b	May-92	B-5 (DUP)	Aluminum (total)	260				
Hart Crowser 1992b	May-92	B-5	Aluminum (total)	250				
Hart Crowser 1992b	May-92	B-6	Aluminum (total)	180				
Hart Crowser 1992b	May-92	B-28	Aluminum (total)	91				
Hart Crowser 1992b	May-92	B-10A	Aluminum (total)	75				
TV-F&S 2000a	Oct-99	B-47	Ammonia (total as nitrogen)	25,000				
TV-F&S 2000a	Oct-99	B-42	Ammonia (total as nitrogen)	22,000				

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-99	B-31	Ammonia (total as nitrogen)	14,000				
TV-F&S 2000a	Oct-99	B-49	Ammonia (total as nitrogen)	11,000				
TV-F&S 2000a	Nov-99	B-12	Ammonia (total as nitrogen)	9,200				
TV-F&S 2000a	Oct-99	B-44	Ammonia (total as nitrogen)	9,100				
TV-F&S 2000a	Oct-99	B-46	Ammonia (total as nitrogen)	6,400				
TV-F&S 2000a	Nov-99	B-11	Ammonia (total as nitrogen)	3,600				
TV-F&S 2000a	Oct-99	B-15	Ammonia (total as nitrogen)	2,900				
TV-F&S 2000a	Oct-99	B-58	Ammonia (total as nitrogen)	1,900				
TV-F&S 2000a	Oct-99	B-25	Ammonia (total as nitrogen)	1,600				
TV-F&S 2000a	Oct-99	B-16	Ammonia (total as nitrogen)	1,300				
TV-F&S 2000a	Oct-99	B-27	Ammonia (total as nitrogen)	690				
TV-F&S 2000a	Oct-99	B-17	Ammonia (total as nitrogen)	680				
TV-F&S 2000a	Oct-99	B-65	Ammonia (total as nitrogen)	610				
TV-F&S 2000a	Oct-99	B-33A	Ammonia (total as nitrogen)	600				
TV-F&S 2000a	Oct-99	B-59	Ammonia (total as nitrogen)	530				
TV-F&S 2000a	Oct-99	B-8	Ammonia (total as nitrogen)	320				
TV-F&S 2000a	Oct-99	B-45	Ammonia (total as nitrogen)	290				
TV-F&S 2000a	Oct-99	B-35	Ammonia (total as nitrogen)	280				
TV-F&S 2000a	Oct-99	B-6	Ammonia (total as nitrogen)	270				
TV-F&S 2000a	Oct-99	B-61	Ammonia (total as nitrogen)	260				
TV-F&S 2000a	Oct-99	B-36	Ammonia (total as nitrogen)	130				
TV-F&S 2000a	Oct-99	B-26	Ammonia (total as nitrogen)	110				
TV-F&S 2000a	Oct-99	B-34	Ammonia (total as nitrogen)	96				
TV-F&S 2000a	Oct-99	B-20A	Ammonia (total as nitrogen)	87				
TV-F&S 2000a	Oct-99	B-23	Ammonia (total as nitrogen)	73				
TV-F&S 2000a	Oct-99	B-24	Ammonia (total as nitrogen)	70				
TV-F&S 2000a	Oct-99	B-21	Ammonia (total as nitrogen)	64				
TV-F&S 2000a	Oct-99	B-60	Ammonia (total as nitrogen)	48				
TV-F&S 2000a	Oct-99	B-63	Ammonia (total as nitrogen)	0.35				
Ecology 1993c	Jul-93	B-49	Anthracene	9	J	4,800	59	0.2
Ecology 1993b	Jun-93	278092	Anthracene	4	J	4,800	59	0.1
Hart Crowser 1992b	May-92	B-30	Arsenic (dissolved)	22		5	370	4.4
Hart Crowser 1992b	May-92	B-16	Arsenic (dissolved)	19		5	370	3.8
Hart Crowser 1992b	May-92	B-31	Arsenic (dissolved)	18		5	370	3.6

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-18	Arsenic (dissolved)	7.1		5	370	1.4
Hart Crowser 1992b	May-92	B-20	Arsenic (dissolved)	7		5	370	1.4
Hart Crowser 1992b	May-92	B-15	Arsenic (dissolved)	6.6		5	370	1.3
Hart Crowser 1992b	May-92	B-1	Arsenic (dissolved)	6.2		5	370	1.2
Hart Crowser 1992b	**May-92**	**B-15**	**Arsenic (total)**	**140**		**5**	**370**	**28**
Hart Crowser 1992b	May-92	B-24	Arsenic (total)	49		5	370	9.8
Hart Crowser 1992b	May-92	B-23	Arsenic (total)	42		5	370	8.4
Hart Crowser 1992b	May-92	B-31	Arsenic (total)	39		5	370	7.8
Hart Crowser 1992b	May-92	B-16	Arsenic (total)	24		5	370	4.8
Hart Crowser 1992b	May-92	B-22	Arsenic (total)	22		5	370	4.4
Hart Crowser 1992b	May-92	B-30	Arsenic (total)	20		5	370	4.0
Hart Crowser 1992b	May-92	B-1	Arsenic (total)	17		5	370	3.4
Hart Crowser 1992b	May-92	B-26	Arsenic (total)	13		5	370	2.6
Hart Crowser 1992b	May-92	B-18	Arsenic (total)	11		5	370	2.2
Hart Crowser 1992b	May-92	B-14	Arsenic (total)	10		5	370	2.0
Hart Crowser 1992b	May-92	B-11	Arsenic (total)	9.7		5	370	1.9
Hart Crowser 1992b	May-92	B-20	Arsenic (total)	8		5	370	1.6
Hart Crowser 1992b	May-92	B-29	Arsenic (total)	5.3		5	370	1.1
Hart Crowser 1992b	May-92	B-27	Arsenic (total)	5.2		5	370	1.0
Hart Crowser 1992b	May-92	B-29	Barium (dissolved)	81		3,200		0.0
Hart Crowser 1992b	May-92	B-23	Barium (dissolved)	19		3,200		0.0
Hart Crowser 1992b	May-92	B-23 (DUP)	Barium (dissolved)	19		3,200		0.0
Hart Crowser 1992b	May-92	B-5	Barium (dissolved)	19		3,200		0.0
Hart Crowser 1992b	May-92	B-5 (DUP)	Barium (dissolved)	18		3,200		0.0
Hart Crowser 1992b	May-92	B-10A	Barium (dissolved)	15		3,200		0.0
Hart Crowser 1992b	May-92	B-22	Barium (dissolved)	15		3,200		0.0
Hart Crowser 1992b	May-92	B-25	Barium (dissolved)	12		3,200		0.0
Hart Crowser 1992b	May-92	B-6	Barium (dissolved)	12		3,200		0.0
Hart Crowser 1992b	May-92	B-72	Barium (dissolved)	12		3,200		0.0
Hart Crowser 1992b	May-92	B-19	Barium (dissolved)	11		3,200		0.0
Hart Crowser 1992b	May-92	B-24	Barium (dissolved)	11		3,200		0.0
Hart Crowser 1992b	May-92	B-14	Barium (dissolved)	10		3,200		0.0
Hart Crowser 1992b	May-92	B-18	Barium (dissolved)	10		3,200		0.0
Hart Crowser 1992b	May-92	B-15	Barium (total)	550		3,200		0.2

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-31	Barium (total)	280		3,200		0.1
Hart Crowser 1992b	May-92	B-23	Barium (total)	240		3,200		0.1
Hart Crowser 1992b	May-92	B-24	Barium (total)	240		3,200		0.1
Hart Crowser 1992b	May-92	B-22	Barium (total)	170		3,200		0.1
Hart Crowser 1992b	May-92	B-29	Barium (total)	170		3,200		0.1
Hart Crowser 1992b	May-92	B-8	Barium (total)	170		3,200		0.1
Hart Crowser 1992b	May-92	B-14	Barium (total)	130		3,200		0.0
Hart Crowser 1992b	May-92	B-11	Barium (total)	120		3,200		0.0
Hart Crowser 1992b	May-92	B-26	Barium (total)	110		3,200		0.0
Hart Crowser 1992b	May-92	B-16	Barium (total)	89		3,200		0.0
Hart Crowser 1992b	May-92	B-18	Barium (total)	59		3,200		0.0
Hart Crowser 1992b	May-92	B-30	Barium (total)	54		3,200		0.0
Hart Crowser 1992b	May-92	B-9	Barium (total)	41		3,200		0.0
Hart Crowser 1992b	May-92	B-1	Barium (total)	31		3,200		0.0
Hart Crowser 1992b	May-92	B-19	Barium (total)	30		3,200		0.0
Hart Crowser 1992b	May-92	B-72	Barium (total)	29		3,200		0.0
Hart Crowser 1992b	May-92	B-27	Barium (total)	23		3,200		0.0
Hart Crowser 1992b	May-92	B-5	Barium (total)	23		3,200		0.0
Hart Crowser 1992b	May-92	B-5 (DUP)	Barium (total)	23		3,200		0.0
Hart Crowser 1992b	May-92	B-23 (DUP)	Barium (total)	21		3,200		0.0
Hart Crowser 1992b	May-92	B-21	Barium (total)	17		3,200		0.0
Hart Crowser 1992b	May-92	B-25	Barium (total)	15		3,200		0.0
Hart Crowser 1992b	May-92	B-10A	Barium (total)	14		3,200		0.0
Hart Crowser 1992b	May-92	B-20	Barium (total)	14		3,200		0.0
Hart Crowser 1992b	May-92	B-6	Barium (total)	11		3,200		0.0
Hart Crowser 1992b	**May-92**	**B-30**	**Benzene**	**1,300**		**0.8**		**1,625**
Ecology 1993b	**Jun-93**	**278092**	**Benzene**	**710**		**0.8**		**888**
Hart Crowser 1992b	**May-92**	**B-31**	**Benzene**	**630**		**0.8**		**788**
Ecology 1993b	**Jun-93**	**278091**	**Benzene**	**600**		**0.8**		**750**
TV-F&S 2000a	**Nov-98**	**B-49**	**Benzene**	**440**		**0.8**		**550**
Hart Crowser 1997	**Dec-96**	**B-44**	**Benzene**	**310**		**0.8**		**388**
TV-F&S 2000a	**Oct-98**	**B-20**	**Benzene**	**300**		**0.8**		**375**
Hart Crowser 1997	**Dec-96**	**B-39**	**Benzene**	**210**		**0.8**		**263**
Hart Crowser 1992b	**May-92**	**B-29**	**Benzene**	**190**		**0.8**		**238**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-98**	**B-44**	**Benzene**	**170**		**0.8**		**213**
TV-F&S 2000a	**Oct-98**	**B-21**	**Benzene**	**130**		**0.8**		**163**
TV-F&S 2000a	**Nov-98**	**B-12**	**Benzene**	**120**		**0.8**		**150**
Hart Crowser 1992b	**May-92**	**B-15**	**Benzene**	**120**		**0.8**		**150**
Hart Crowser 1997	**Dec-96**	**B-10A**	**Benzene**	**88**	**J**	**0.8**		**110**
Hart Crowser 1997	**Dec-96**	**B-20**	**Benzene**	**88**		**0.8**		**110**
TV-F&S 2000a	**Oct-98**	**B-35**	**Benzene**	**64**		**0.8**		**80**
Hart Crowser 1997	**Dec-96**	**B-35**	**Benzene**	**56**		**0.8**		**70**
Hart Crowser 1997	**Dec-96**	**B-31**	**Benzene**	**43**		**0.8**		**54**
Hart Crowser 1997	**Dec-96**	**B-21**	**Benzene**	**29**		**0.8**		**36**
TV-F&S 2000a	**Nov-98**	**B-52**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-5**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-5 (DUP)**	**Benzene**	**21**		**0.8**		**26**
Hart Crowser 1992b	**May-92**	**B-20**	**Benzene**	**20**		**0.8**		**25**
Hart Crowser 1997	**Dec-96**	**B-33A**	**Benzene**	**18**	**J**	**0.8**		**23**
ATI 1991b	**Sep-91**	**B-16**	**Benzene**	**17**		**0.8**		**21**
Hart Crowser 1997	**Dec-96**	**B-45**	**Benzene**	**15**		**0.8**		**19**
Hart Crowser 1992b	**May-92**	**B-21**	**Benzene**	**15**		**0.8**		**19**
TV-F&S 2000a	**Jul-99**	**B-65**	**Benzene**	**8.7**		**0.8**		**11**
TV-F&S 2000a	**Jul-99**	**B-63**	**Benzene**	**8.1**		**0.8**		**10**
ATI 1991b	**Sep-91**	**B-17**	**Benzene**	**8**		**0.8**		**10**
TV-F&S 2000a	Jul-99	B-63 (DUP)	Benzene	7.5		0.8		9.4
TV-F&S 2000a	Jul-99	B-61	Benzene	6.2		0.8		7.8
Hart Crowser 1992b	May-92	B-27	Benzene	5		0.8		6.3
TV-F&S 2000a	Oct-99	B-26	Benzene	3.7		0.8		4.6
TV-F&S 2000a	Jul-99	TW-2	Benzene	3.1		0.8		3.9
TV-F&S 2000a	Oct-98	B-8	Benzene	3		0.8		3.8
Hart Crowser 1992b	May-92	B-17	Benzene	3		0.8		3.8
Hart Crowser 1992b	May-92	B-6	Benzene	3		0.8		3.8
TV-F&S 2000a	Oct-99	B-36	Benzene	2.7		0.8		3.4
Hart Crowser 1997	Dec-96	B-36	Benzene	2		0.8		2.5
Hart Crowser 1997	Dec-96	B-24	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-19	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-24	Benzene	2		0.8		2.5

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-25	Benzene	2		0.8		2.5
Hart Crowser 1992b	May-92	B-72	Benzene	2		0.8		2.5
TV-F&S 2000a	Oct-98	B-36	Benzene	1.3		0.8		1.6
TV-F&S 2000a	Oct-98	B-36 (DUP)	Benzene	1.3		0.8		1.6
TV-F&S 2000a	Nov-98	B-18	Benzene	1.2		0.8		1.5
Hart Crowser 1990b	1990	B-8	Benzene	0.89		0.8		1.1
Hart Crowser 1990b	1990	B-1	Benzene	0.026		0.8		0.0
Hart Crowser 1990b	1990	B-8	Benzene	0.021		0.8		0.0
Hart Crowser 1990b	1990	B-5	Benzene	0.008		0.8		0.0
Ecology 1993b	Jun-93	278092	Benzo(a)anthracene	2	J		0.63	3.2
Hart Crowser 1992b	May-92	B-16	Benzoic Acid	110		64,000	2,200	0.1
TV-F&S 2000a	Jul-99	B-58	Benzoic Acid	14		64,000	2,200	0.0
Hart Crowser 1997	Dec-96	B-24	Benzoic Acid	1	J	64,000	2,200	0.0
TV-F&S 2000a	Nov-98	B-49	Benzyl alcohol	17		2,400	230	0.1
Hart Crowser 1997	Dec-96	B-31	Benzyl Alcohol	4	J	2,400	230	0.0
Hart Crowser 1997	**Dec-96**	**B-31**	**Bis(2-Ethylhexyl)Phthalate**	**76**		**6.3**	**0.47**	**162**
Hart Crowser 1992b	**May-92**	**B-72**	**Bis(2-Ethylhexyl)Phthalate**	**60**		**6.3**	**0.47**	**128**
Hart Crowser 1992b	**May-92**	**B-25**	**Bis(2-Ethylhexyl)Phthalate**	**36**		**6.3**	**0.47**	**77**
Hart Crowser 1992b	**May-92**	**B-8**	**Bis(2-Ethylhexyl)Phthalate**	**25**		**6.3**	**0.47**	**53**
Hart Crowser 1992b	**May-92**	**B-5 (DUP)**	**Bis(2-Ethylhexyl)Phthalate**	**20**		**6.3**	**0.47**	**43**
Hart Crowser 1992b	**May-92**	**B-17**	**Bis(2-Ethylhexyl)Phthalate**	**18**		**6.3**	**0.47**	**38**
Hart Crowser 1992b	**May-92**	**B-20**	**Bis(2-Ethylhexyl)Phthalate**	**17**		**6.3**	**0.47**	**36**
Hart Crowser 1992b	**May-92**	**B-27**	**Bis(2-Ethylhexyl)Phthalate**	**17**		**6.3**	**0.47**	**36**
Hart Crowser 1992b	**May-92**	**B-23 (DUP)**	**Bis(2-Ethylhexyl)Phthalate**	**12**		**6.3**	**0.47**	**26**
Hart Crowser 1997	**Dec-96**	**B-8**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-21**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-23**	**Bis(2-Ethylhexyl)Phthalate**	**11**		**6.3**	**0.47**	**23**
Hart Crowser 1992b	**May-92**	**B-19**	**Bis(2-Ethylhexyl)Phthalate**	**10**		**6.3**	**0.47**	**21**
TV-F&S 2000a	**Jul-99**	**B-58**	**Bis(2-Ethylhexyl)Phthalate**	**8.8**		**6.3**	**0.47**	**19**
ATI 1991b	**Sep-91**	**B-17**	**Bis(2-Ethylhexyl)Phthalate**	**8.5**	**J**	**6.3**	**0.47**	**18**
Ecology 1993b	Jun-93	278093	Bis(2-Ethylhexyl)Phthalate	3	J	6.3	0.47	6.4
TV-F&S 2000a	Feb-99	B-53	Bis(2-Ethylhexyl)Phthalate	2.1		6.3	0.47	4.5
TV-F&S 2000a	Jul-99	B-59	Bis(2-Ethylhexyl)Phthalate	1.6		6.3	0.47	3.4
TV-F&S 2000a	Feb-99	B-57	Bis(2-Ethylhexyl)Phthalate	1.6		6.3	0.47	3.4

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Jul-99	B-61	Bis(2-Ethylhexyl)Phthalate	1.5		6.3	0.47	3.2
TV-F&S 2000a	Oct-98	B-36 (DUP)	bis(2-Ethylhexyl)phthalate	1.1		6.3	0.47	2.3
TV-F&S 2000a	Feb-99	B-28	Bis(2-Ethylhexyl)Phthalate	1.1		6.3	0.47	2.3
TV-F&S 2000a	Nov-98	B-42	bis(2-Ethylhexyl)phthalate	1		6.3	0.47	2.1
TV-F&S 2000a	Feb-99	B-56	Bis(2-Ethylhexyl)Phthalate	1		6.3	0.47	2.1
Hart Crowser 1992b	May-92	B-25	Cadmium (dissolved)	5.8		5	3.4	1.7
Hart Crowser 1992b	May-92	B-15	Cadmium (dissolved)	0.78		5	3.4	0.2
Hart Crowser 1992b	May-92	B-19	Cadmium (dissolved)	0.73		5	3.4	0.2
Hart Crowser 1992b	May-92	B-27	Cadmium (dissolved)	0.64		5	3.4	0.2
Hart Crowser 1992b	May-92	B-72	Cadmium (dissolved)	0.46		5	3.4	0.1
Hart Crowser 1992b	May-92	B-9	Cadmium (dissolved)	0.36		5	3.4	0.1
Hart Crowser 1992b	May-92	B-26	Cadmium (dissolved)	0.26		5	3.4	0.1
Hart Crowser 1992b	May-92	B-9	Cadmium (total)	16		5	3.4	4.7
Hart Crowser 1992b	May-92	B-15	Cadmium (total)	7.9		5	3.4	2.3
Hart Crowser 1992b	May-92	B-72	Cadmium (total)	7		5	3.4	2.1
Hart Crowser 1992b	May-92	B-19	Cadmium (total)	6.6		5	3.4	1.9
Hart Crowser 1992b	May-92	B-8	Cadmium (total)	4.1		5	3.4	1.2
Hart Crowser 1992b	May-92	B-17	Cadmium (total)	2.1		5	3.4	0.6
Hart Crowser 1992b	May-92	B-27	Cadmium (total)	1.9		5	3.4	0.6
Hart Crowser 1992b	May-92	B-31	Cadmium (total)	1.7		5	3.4	0.5
Hart Crowser 1992b	May-92	B-24	Cadmium (total)	1		5	3.4	0.3
Hart Crowser 1992b	May-92	B-25	Cadmium (total)	0.98		5	3.4	0.3
Hart Crowser 1992b	May-92	B-14	Cadmium (total)	0.89		5	3.4	0.3
Hart Crowser 1992b	May-92	B-16	Cadmium (total)	0.83		5	3.4	0.2
Hart Crowser 1992b	May-92	B-26	Cadmium (total)	0.79		5	3.4	0.2
Hart Crowser 1992b	May-92	B-22	Cadmium (total)	0.75		5	3.4	0.2
Hart Crowser 1992b	May-92	B-23	Cadmium (total)	0.66		5	3.4	0.2
Hart Crowser 1992b	May-92	B-29	Cadmium (total)	0.37		5	3.4	0.1
Hart Crowser 1992b	May-92	B-11	Cadmium (total)	0.32		5	3.4	0.1
Hart Crowser 1992b	May-92	B-30	Cadmium (total)	0.3		5	3.4	0.1
Ecology 1993c	Jul-93	B-49	Carbazole	23	J	4.4		5.2
Ecology 1993b	Jun-93	278092	Carbazole	13	J	4.4		3.0
Ecology 1993b	Jun-93	278091	Carbon Disulfide	140	J	800		0.2
Ecology 1993b	Jun-93	278092	Carbon Disulfide	93	J	800		0.1

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-34	Chloride	11,000,000				
TV-F&S 2000a	Oct-99	B-33A	Chloride	730,000				
TV-F&S 2000a	Oct-99	B-42	Chloride	130,000				
TV-F&S 2000a	Oct-99	B-44	Chloride	130,000				
TV-F&S 2000a	Oct-99	B-47	Chloride	130,000				
TV-F&S 2000a	Oct-99	B-49	Chloride	130,000				
TV-F&S 2000a	Oct-99	B-17	Chloride	110,000				
TV-F&S 2000a	Oct-99	B-27	Chloride	110,000				
TV-F&S 2000a	Nov-99	B-31	Chloride	110,000				
TV-F&S 2000a	Nov-99	B-12	Chloride	97,000				
TV-F&S 2000a	Oct-99	B-25	Chloride	92,000				
TV-F&S 2000a	Oct-99	B-65	Chloride	88,000				
TV-F&S 2000a	Oct-99	B-15	Chloride	82,000				
TV-F&S 2000a	Oct-99	B-46	Chloride	74,000				
TV-F&S 2000a	Oct-99	B-6	Chloride	54,000				
TV-F&S 2000a	Oct-99	B-61	Chloride	47,000				
TV-F&S 2000a	Nov-99	B-11	Chloride	43,000				
TV-F&S 2000a	Oct-99	B-21	Chloride	39,000				
TV-F&S 2000a	Oct-99	B-35	Chloride	36,000				
TV-F&S 2000a	Oct-99	B-59	Chloride	32,000				
TV-F&S 2000a	Oct-99	B-45	Chloride	28,000				
TV-F&S 2000a	Oct-99	B-58	Chloride	26,000				
TV-F&S 2000a	Oct-99	B-23	Chloride	18,000				
TV-F&S 2000a	Oct-99	B-62	Chloride	12,000				
TV-F&S 2000a	Oct-99	B-20A	Chloride	11,000				
TV-F&S 2000a	Oct-99	B-28	Chloride	9,300				
TV-F&S 2000a	Oct-99	B-60	Chloride	9,300				
TV-F&S 2000a	Oct-99	B-13	Chloride	8,900				
TV-F&S 2000a	Oct-99	B-8	Chloride	7,700				
TV-F&S 2000a	Oct-99	B-53	Chloride	6,400				
TV-F&S 2000a	Oct-99	B-55	Chloride	5,500				
TV-F&S 2000a	Oct-99	B-54	Chloride	5,300				
TV-F&S 2000a	Oct-99	B-26	Chloride	4,600				
TV-F&S 2000a	Oct-99	B-36	Chloride	4,500				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-16	Chloride	4,100				
TV-F&S 2000a	Oct-99	B-24	Chloride	3,900				
TV-F&S 2000a	Oct-99	B-22	Chloride	3,000				
TV-F&S 2000a	Oct-99	B-64	Chloride	2,200				
TV-F&S 2000a	Oct-99	B-63	Chloride	17				
Hart Crowser 1997	Dec-96	B-20	Chlorobenzene	20		160		0.1
Ecology 1993b	Jun-93	278092	Chlorobenzene	10	J	160		0.1
TV-F&S 2000a	Nov-98	B-52	Chlorobenzene	2.7		160		0.0
Hart Crowser 1997	Dec-96	B-35	Chloroethane	25				
Ecology 1993b	Jun-93	278091	Chloroform	66	J	7.2		9.2
Hart Crowser 1992b	May-92	B-30	Chloroform	61		7.2		8.5
Ecology 1993b	Jun-93	278092	Chloroform	52	J	7.2		7.2
Hart Crowser 1997	Dec-96	B-44	Chloroform	26		7.2		3.6
Hart Crowser 1992b	May-92	B-27	Chloroform	20		7.2		2.8
Hart Crowser 1997	Dec-96	B-39	Chloroform	19		7.2		2.6
TV-F&S 2000a	Jul-99	B-63 (DUP)	Chloroform	14		7.2		1.9
Hart Crowser 1990b	Jun-05	B-7	Chloroform	13		7.2		1.8
TV-F&S 2000a	Jul-99	B-63	Chloroform	13		7.2		1.8
Hart Crowser 1992b	May-92	B-72	Chloroform	13		7.2		1.8
Hart Crowser 1997	Dec-96	B-31	Chloroform	12		7.2		1.7
Hart Crowser 1992b	May-92	B-19	Chloroform	12		7.2		1.7
Hart Crowser 1992b	May-92	B-13	Chloroform	3		7.2		0.4
TV-F&S 2000a	Jul-99	TW-2	Chloroform	2.5		7.2		0.3
TV-F&S 2000a	Nov-98	B-52	Chloroform	2.1		7.2		0.3
Hart Crowser 1997	Dec-96	B-10A	Chloroform	2	J	7.2		0.3
TV-F&S 2000a	Jul-99	TW-3 (DUP)	Chloroform	1.2		7.2		0.2
TV-F&S 2000a	Dec-98	B-13	Chloroform	1.19		7.2		0.2
TV-F&S 2000a	Jul-99	TW-3	Chloroform	1		7.2		0.1
Hart Crowser 1992b	May-92	B-21	Chloroform	1		7.2		0.1
Hart Crowser 1992b	May-92	B-22	Chloroform	1		7.2		0.1
Hart Crowser 1990a	May-89	B-1	Chloroform	0.017		7.2		0.0
Hart Crowser 1990b	Jun-05	B-6	Chloroform	0.003		7.2		0.0
Hart Crowser 1992b	May-92	B-13	Chromium (dissolved)	5		50	320	0.1
Hart Crowser 1992b	May-92	B-10A	Chromium (dissolved)	0.011		50	320	0.0

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	**May-92**	**B-15**	**Chromium (total)**	**16,000**		**50**	**320**	**320**
Hart Crowser 1992b	May-92	B-11	Chromium (total)	140		50	320	2.8
Hart Crowser 1992b	May-92	B-31	Chromium (total)	140		50	320	2.8
Hart Crowser 1992b	May-92	B-16	Chromium (total)	110		50	320	2.2
Hart Crowser 1992b	May-92	B-22	Chromium (total)	94		50	320	1.9
Hart Crowser 1992b	May-92	B-30	Chromium (total)	94		50	320	1.9
Hart Crowser 1992b	May-92	B-23	Chromium (total)	92		50	320	1.8
Hart Crowser 1992b	May-92	B-14	Chromium (total)	69		50	320	1.4
Hart Crowser 1992b	May-92	B-24	Chromium (total)	68		50	320	1.4
Hart Crowser 1992b	May-92	B-1	Chromium (total)	61		50	320	1.2
Hart Crowser 1992b	May-92	B-26	Chromium (total)	59		50	320	1.2
Hart Crowser 1992b	May-92	B-29	Chromium (total)	37		50	320	0.7
Hart Crowser 1992b	May-92	B-5 (DUP)	Chromium (total)	27		50	320	0.5
Hart Crowser 1992b	May-92	B-18	Chromium (total)	26		50	320	0.5
Hart Crowser 1992b	May-92	B-19	Chromium (total)	25		50	320	0.5
Hart Crowser 1992b	May-92	B-72	Chromium (total)	25		50	320	0.5
Hart Crowser 1992b	May-92	B-27	Chromium (total)	24		50	320	0.5
Hart Crowser 1992b	May-92	B-8	Chromium (total)	24		50	320	0.5
Hart Crowser 1992b	May-92	B-25	Chromium (total)	18		50	320	0.4
Hart Crowser 1992b	May-92	B-9	Chromium (total)	17		50	320	0.3
Hart Crowser 1992b	May-92	B-5	Chromium (total)	14		50	320	0.3
Hart Crowser 1992b	May-92	B-17	Chromium (total)	9.5		50	320	0.2
Hart Crowser 1992b	May-92	B-23 (DUP)	Chromium (total)	7.4		50	320	0.1
Hart Crowser 1992b	May-92	B-21	Chromium (total)	5.3		50	320	0.1
Hart Crowser 1992b	May-92	B-13	Chromium (total)	5		50	320	0.1
Hart Crowser 1992b	May-92	B-10A	Chromium (total)	0.012		50	320	0.0
Ecology 1993b	Jun-93	278092	Chrysene	2	J		1.9	1.1
Hart Crowser 1990b	1990	B-12	cis-1,2-DCA	41				
Hart Crowser 1990b	1990	B-11	cis-1,2-DCA	24				
Hart Crowser 1990b	1990	B-7	cis-1,2-DCA	1.7				
Hart Crowser 1990b	1990	B-9	cis-1,2-DCA	0.12				
Hart Crowser 1990b	1990	B-10	cis-1,2-DCA	0.038				
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**cis-1,2-DCE**	**75,000**		**80**		**938**
Hart Crowser 1993a	**Jul-93**	**B-50**	**cis-1,2-DCE**	**74,000**		**80**		**925**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Jul-93	B-47	cis-1,2-DCE	72,000		80		900
Hart Crowser 1993a	Jun-93	B-46	cis-1,2-DCE	61,000		80		763
Hart Crowser 1993a	Jun-93	B-44	cis-1,2-DCE	58,000		80		725
TV-F&S 2000a	Jul-99	B-65	cis-1,2-DCE	47,000		80		588
TV-F&S 2000a	Oct-99	B-65	cis-1,2-DCE	40,000	J	80		500
Hart Crowser 1993a	Jun-93	B-43	cis-1,2-DCE	38,000		80		475
Hart Crowser 1993a	Jul-93	B-49	cis-1,2-DCE	34,000		80		425
TV-F&S 2000a	Oct-99	B-47	cis-1,2-DCE	33,000		80		413
TV-F&S 2000a	Oct-99	B-47 (DUP)	cis-1,2-DCE	29,000		80		363
TV-F&S 2000a	Oct-99	B-21	cis-1,2-DCE	28,000		80		350
TV-F&S 2000a	Oct-99	B-42	cis-1,2-DCE	28,000		80		350
Hart Crowser 1993a	Aug-93	B-52 (DUP)	cis-1,2-DCE	27,000		80		338
TV-F&S 2000a	Jul-99	B-61	cis-1,2-DCE	27,000	J	80		338
TV-F&S 2000a	Oct-98	B-33A	cis-1,2-DCE	26,000		80		325
TV-F&S 2000a	Nov-98	B-46 BAL	cis-1,2-DCE	26,000		80		325
Hart Crowser 1993a	Aug-93	B-52	cis-1,2-DCE	25,000		80		313
TV-F&S 2000a	Oct-99	B-49	cis-1,2-DCE	25,000		80		313
Hart Crowser 1993a	Aug-93	B-51	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-98	B-20	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-98	B-21	cis-1,2-DCE	23,000		80		288
TV-F&S 2000a	Oct-99	B-58	cis-1,2-DCE	22,000		80		275
TV-F&S 2000a	Oct-99	B-61	cis-1,2-DCE	22,000		80		275
TV-F&S 2000a	Nov-98	B-46	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Jul-99	B-58	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-45	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-33A	cis-1,2-DCE	21,000		80		263
TV-F&S 2000a	Oct-99	B-45 (DUP)	cis-1,2-DCE	20,000		80		250
TV-F&S 2000a	Oct-99	B-58 (DUP)	cis-1,2-DCE	18,000	J	80		225
TV-F&S 2000a	Nov-98	B-12	cis-1,2-DCE	16,000		80		200
TV-F&S 2000a	Oct-98	B-44	cis-1,2-DCE	15,000		80		188
TV-F&S 2000a	Nov-98	B-42	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-45	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-45 BAL	cis-1,2-DCE	14,000		80		175
TV-F&S 2000a	Nov-98	B-49	cis-1,2-DCE	14,000		80		175

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**cis-1,2-DCE**	**14,000**		**80**		**175**
TV-F&S 2000a	**Nov-99**	**B-11**	**cis-1,2-DCE**	**14,000**		**80**		**175**
Hart Crowser 1993a	**Jul-93**	**B-48**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-52**	**cis-1,2-DCE**	**13,000**	**J**	**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-10A**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Oct-99**	**B-46**	**cis-1,2-DCE**	**13,000**		**80**		**163**
TV-F&S 2000a	**Nov-98**	**B-39**	**cis-1,2-DCE**	**12,000**		**80**		**150**
TV-F&S 2000a	**Oct-99**	**B-39**	**cis-1,2-DCE**	**11,000**	**J**	**80**		**138**
TV-F&S 2000a	**Oct-99**	**B-44**	**cis-1,2-DCE**	**10,000**		**80**		**125**
TV-F&S 2000a	**Nov-98**	**B-52**	**cis-1,2-DCE**	**8,300**		**80**		**104**
TV-F&S 2000a	**Nov-98**	**B-10A**	**cis-1,2-DCE**	**6,400**		**80**		**80**
TV-F&S 2000a	**Nov-98**	**B-52 (DUP)**	**cis-1,2-DCE**	**6,200**		**80**		**78**
TV-F&S 2000a	**Oct-99**	**B-18**	**cis-1,2-DCE**	**6,000**		**80**		**75**
TV-F&S 2000a	**Oct-99**	**B-63**	**cis-1,2-DCE**	**5,400**		**80**		**68**
TV-F&S 2000a	**Nov-99**	**B-12**	**cis-1,2-DCE**	**4,500**		**80**		**56**
Hart Crowser 1993a	**Jun-93**	**B-45**	**cis-1,2-DCE**	**4,400**		**80**		**55**
Hart Crowser 1993a	**Jun-93**	**B-45 (DUP)**	**cis-1,2-DCE**	**4,200**		**80**		**53**
TV-F&S 2000a	**Jul-99**	**B-63**	**cis-1,2-DCE**	**3,700**		**80**		**46**
TV-F&S 2000a	**Jul-99**	**B-63 (DUP)**	**cis-1,2-DCE**	**3,500**		**80**		**44**
TV-F&S 2000a	**Oct-99**	**B-15**	**cis-1,2-DCE**	**2,100**		**80**		**26**
TV-F&S 2000a	**Oct-98**	**B-8**	**cis-1,2-DCE**	**1,500**		**80**		**19**
TV-F&S 2000a	**Oct-99**	**B-60**	**cis-1,2-DCE**	**960**		**80**		**12**
TV-F&S 2000a	**Oct-99**	**B-62**	**cis-1,2-DCE**	**930**		**80**		**12**
TV-F&S 2000a	Jul-99	TW-3 (DUP)	cis-1,2-DCE	780		80		9.8
TV-F&S 2000a	Jul-99	TW-3	cis-1,2-DCE	780		80		9.8
TV-F&S 2000a	Oct-99	B-8	cis-1,2-DCE	660		80		8.3
TV-F&S 2000a	Jul-99	TW-2	cis-1,2-DCE	640		80		8.0
TV-F&S 2000a	Jul-99	TW-5	cis-1,2-DCE	550		80		6.9
TV-F&S 2000a	Oct-99	B-16	cis-1,2-DCE	460		80		5.8
TV-F&S 2000a	Oct-99	B-35	cis-1,2-DCE	450		80		5.6
TV-F&S 2000a	Nov-99	B-31	cis-1,2-DCE	450		80		5.6
TV-F&S 2000a	Dec-98	B-22	cis-1,2-DCE	403		80		5.0
TV-F&S 2000a	Nov-98	B-18	cis-1,2-DCE	360		80		4.5
TV-F&S 2000a	Jul-99	B-59	cis-1,2-DCE	350		80		4.4

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Feb-99	B-22	cis-1,2-DCE	320		80		4.0
TV-F&S 2000a	Oct-99	B-36	cis-1,2-DCE	290		80		3.6
TV-F&S 2000a	Oct-99	B-59	cis-1,2-DCE	280		80		3.5
TV-F&S 2000a	Jul-99	B-60	cis-1,2-DCE	220		80		2.8
TV-F&S 2000a	Oct-99	B-22	cis-1,2-DCE	190		80		2.4
TV-F&S 2000a	Oct-99	B-54	cis-1,2-DCE	150		80		1.9
TV-F&S 2000a	Jul-99	B-13	cis-1,2-DCE	120		80		1.5
TV-F&S 2000a	Apr-99	B-13	cis-1,2-DCE	100		80		1.3
TV-F&S 2000a	Jul-99	TW-1	cis-1,2-DCE	95		80		1.2
TV-F&S 2000a	Jul-99	TW-6	cis-1,2-DCE	86		80		1.1
TV-F&S 2000a	Oct-99	B-13	cis-1,2-DCE	76		80		0.95
TV-F&S 2000a	Feb-99	B-13	cis-1,2-DCE	74		80		0.9
TV-F&S 2000a	Dec-98	B-13	cis-1,2-DCE	72.6		80		0.9
TV-F&S 2000a	Oct-99	B-20A	cis-1,2-DCE	72		80		0.9
TV-F&S 2000a	Oct-98	B-34	cis-1,2-DCE	61		80		0.8
TV-F&S 2000a	Jan-99	TB-2	cis-1,2-DCE	60		80		0.8
TV-F&S 2000a	Nov-98	B-26	cis-1,2-DCE	57		80		0.7
TV-F&S 2000a	Jul-99	B-62	cis-1,2-DCE	57		80		0.7
TV-F&S 2000a	Jan-99	TB-1	cis-1,2-DCE	54		80		0.7
TV-F&S 2000a	Jul-99	B-62 (DUP)	cis-1,2-DCE	54		80		0.7
TV-F&S 2000a	Oct-98	B-36	cis-1,2-DCE	49		80		0.6
TV-F&S 2000a	Oct-98	B-36 (DUP)	cis-1,2-DCE	48		80		0.6
TV-F&S 2000a	Nov-98	B-9	cis-1,2-DCE	45		80		0.6
TV-F&S 2000a	Jan-99	TB-3	cis-1,2-DCE	41		80		0.5
TV-F&S 2000a	Oct-99	B-53	cis-1,2-DCE	41		80		0.5
TV-F&S 2000a	Oct-99	B-26	cis-1,2-DCE	41		80		0.5
TV-F&S 2000a	Oct-98	B-19	cis-1,2-DCE	37		80		0.5
TV-F&S 2000a	Oct-99	B-9	cis-1,2-DCE	35		80		0.4
TV-F&S 2000a	Oct-98	B-35	cis-1,2-DCE	33		80		0.4
TV-F&S 2000a	Jan-99	TB-4	cis-1,2-DCE	28		80		0.4
TV-F&S 2000a	Apr-99	B-56	cis-1,2-DCE	26		80		0.3
TV-F&S 2000a	Oct-99	B-19	cis-1,2-DCE	25		80		0.3
TV-F&S 2000a	Oct-99	B-57	cis-1,2-DCE	25		80		0.3
TV-F&S 2000a	Feb-99	B-56	cis-1,2-DCE	23		80		0.3

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Apr-99	B-55	cis-1,2-DCE	22		80		0.3
TV-F&S 2000a	Oct-99	B-38	cis-1,2-DCE	21		80		0.3
TV-F&S 2000a	Feb-99	B-53	cis-1,2-DCE	20		80		0.3
TV-F&S 2000a	Apr-99	B-57	cis-1,2-DCE	20		80		0.3
TV-F&S 2000a	Apr-99	B-53	cis-1,2-DCE	19		80		0.2
TV-F&S 2000a	Feb-99	B-55	cis-1,2-DCE	18		80		0.2
TV-F&S 2000a	Oct-99	B-55	cis-1,2-DCE	14	J	80		0.2
TV-F&S 2000a	Feb-99	B-57	cis-1,2-DCE	12		80		0.2
TV-F&S 2000a	Oct-99	B-56	cis-1,2-DCE	12		80		0.2
TV-F&S 2000a	Oct-99	B-34	cis-1,2-DCE	7.6		80		0.1
TV-F&S 2000a	Oct-99	B-64	cis-1,2-DCE	6.8		80		0.1
TV-F&S 2000a	Oct-99	B-28	cis-1,2-DCE	6.5		80		0.1
Hart Crowser 1990b	1990	B-10	cis-1,2-DCE	6.3		80		0.1
TV-F&S 2000a	Oct-99	B-17	cis-1,2-DCE	4.6		80		0.1
TV-F&S 2000a	Oct-99	B-23	cis-1,2-DCE	4		80		0.1
TV-F&S 2000a	Oct-99	B-14	cis-1,2-DCE	3.8		80		0.0
TV-F&S 2000a	Dec-98	B-23	cis-1,2-DCE	3.49		80		0.0
TV-F&S 2000a	Oct-99	B-6	cis-1,2-DCE	2.8		80		0.0
TV-F&S 2000a	Oct-99	B-27	cis-1,2-DCE	1.2		80		0.0
Hart Crowser 1990b	1990	B-8	cis-1,2-DCE	0.490		80		0.0
Hart Crowser 1990b	1990	B-14	cis-1,2-DCE	0.44		80		0.0
Hart Crowser 1990b	1990	B-9	cis-1,2-DCE	0.048		80		0.0
Hart Crowser 1990b	1990	B-5	cis-1,2-DCE	0.019		80		0.0
Hart Crowser 1990b	1990	B-6	cis-1,2-DCE	0.018		80		0.0
Hart Crowser 1992b	May-92	B-15	Copper (dissolved)	15		590	120	0.1
Hart Crowser 1992b	May-92	B-17	Copper (dissolved)	15		590	120	0.1
Hart Crowser 1992b	May-92	B-24	Copper (dissolved)	13		590	120	0.1
Hart Crowser 1992b	May-92	B-11	Copper (dissolved)	11		590	120	0.1
Hart Crowser 1992b	May-92	B-26	Copper (dissolved)	10		590	120	0.1
Hart Crowser 1992b	May-92	B-25	Copper (dissolved)	8.7		590	120	0.1
Hart Crowser 1992b	May-92	B-72	Copper (dissolved)	8.2		590	120	0.1
Hart Crowser 1992b	May-92	B-27	Copper (dissolved)	8.1		590	120	0.1
Hart Crowser 1992b	May-92	B-19	Copper (dissolved)	7.4		590	120	0.1
Hart Crowser 1992b	May-92	B-30	Copper (dissolved)	5.7		590	120	0.0

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-18	Copper (dissolved)	5.4		590	120	0.0
Hart Crowser 1992b	May-92	B-15	Copper (total)	1,100		590	120	9.2
Hart Crowser 1992b	May-92	B-31	Copper (total)	290		590	120	2.4
Hart Crowser 1992b	May-92	B-22	Copper (total)	130		590	120	1.1
Hart Crowser 1992b	May-92	B-24	Copper (total)	130		590	120	1.1
Hart Crowser 1992b	May-92	B-11	Copper (total)	120		590	120	1.0
Hart Crowser 1992b	May-92	B-23	Copper (total)	120		590	120	1.0
Hart Crowser 1992b	May-92	B-14	Copper (total)	97		590	120	0.8
Hart Crowser 1992b	May-92	B-26	Copper (total)	87		590	120	0.7
Hart Crowser 1992b	May-92	B-16	Copper (total)	65		590	120	0.5
Hart Crowser 1992b	May-92	B-18	Copper (total)	42		590	120	0.4
Hart Crowser 1992b	May-92	B-29	Copper (total)	42		590	120	0.4
Hart Crowser 1992b	May-92	B-30	Copper (total)	39		590	120	0.3
Hart Crowser 1992b	May-92	B-1	Copper (total)	23		590	120	0.2
Hart Crowser 1992b	May-92	B-19	Copper (total)	23		590	120	0.2
Hart Crowser 1992b	May-92	B-27	Copper (total)	23		590	120	0.2
Hart Crowser 1992b	May-92	B-72	Copper (total)	22		590	120	0.2
Hart Crowser 1992b	May-92	B-9	Copper (total)	18		590	120	0.2
Hart Crowser 1992b	May-92	B-8	Copper (total)	14		590	120	0.1
Hart Crowser 1992b	May-92	B-17	Copper (total)	12		590	120	0.1
TV-F&S 2001a	Jul-00	B-55	DCE	40				
TV-F&S 2001a	Jul-00	B-57	DCE	25				
TV-F&S 2001a	Jul-00	B-53	DCE	14				
TV-F&S 2001a	Jul-00	B-56	DCE	14				
TV-F&S 2001a	Jul-00	AGI-2	DCE	13				
TV-F&S 2001a	Jul-00	B-28	DCE	10				
TV-F&S 2001a	Jul-00	NW-6	DCE	2				
TV-F&S 2001a	Jul-00	NW-12	DCE	2				
Ecology 1993c	Jul-93	B-49	Dibenzofuran	24	J	32	5.1	4.7
Ecology 1993b	Jun-93	278092	Dibenzofuran	4	J	32	5.1	0.8
TV-F&S 2000a	Nov-98	B-49	Dibenzofuran	2.5		32	5.1	0.5
TV-F&S 2000a	Nov-98	B-46	Dibenzofuran	2.2		32	5.1	0.4
Hart Crowser 1997	Dec-96	B-31	Dibenzofuran	1	J	32	5.1	0.2
Hart Crowser 1992b	**May-92**	**B-31**	**Diesel-Range Hydrocarbons**	**19,000**		**500**		**38**

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	**May-92**	**B-24**	**Diesel-Range Hydrocarbons**	**7,000**		**500**		**14**
Hart Crowser 1992b	May-92	B-10A (DUP)	Diesel-Range Hydrocarbons	4,000		500		8.0
TV-F&S 2001a	Jul-00	AGI-2	Diesel-Range Hydrocarbons	3,400		500		6.8
Hart Crowser 1992b	May-92	B-10A	Diesel-Range Hydrocarbons	2,000		500		4.0
Hart Crowser 1992b	May-92	B-29	Diesel-Range Hydrocarbons	2,000		500		4.0
Hart Crowser 1992b	May-92	B-11	Diesel-Range Hydrocarbons	1,000		500		2.0
TV-F&S 2001a	Jul-00	NW-6	Diesel-Range Hydrocarbons	660		500		1.3
Hart Crowser 1992b	May-92	B-10A	Diethylene Glycol	3,700	J	32,000		0.1
Hart Crowser 1992b	May-92	B-30	Diethylene Glycol	700	J	32,000		0.0
Ecology 1993b	Jun-93	278091	Diethylphthalate	14	J	13,000	870	0.0
Ecology 1993b	Jun-93	278092	Diethylphthalate	9	J	13,000	870	0.0
Ecology 1993c	Jul-93	B-27	Diethylphthalate	9	J	13,000	870	0.0
Ecology 1993c	Jul-93	B-49	Diethylphthalate	6	J	13,000	870	0.0
Hart Crowser 1997	Dec-96	B-31	Diethylphthalate	4	J	13,000	870	0.0
Ecology 1993b	Jun-93	278093	Dimethyl phthalate	15	J	16,000	140	0.1
Ecology 1993c	Jul-93	B-27	Di-n-butyl phthalate	73			1,200	0.1
Ecology 1993b	Jun-93	278094	Di-n-butyl phthalate	18	J		1,200	0.0
Ecology 1993b	Jun-93	278092	Di-n-butyl phthalate	16	J		1,200	0.0
Ecology 1993c	Jul-93	B-48	Di-n-butyl phthalate	3	J		1,200	0.0
Hart Crowser 1997	Dec-96	B-31	Di-n-butyl phthalate	21			1,200	0.0
TV-F&S 2000a	Oct-98	B-33A	Ethane	98				
TV-F&S 2000a	Oct-99	B-26	Ethane	93				
TV-F&S 2000a	Oct-99	B-35	Ethane	26				
TV-F&S 2000a	Oct-98	B-35	Ethane	16				
TV-F&S 2000a	Oct-98	B-36 (DUP)	Ethane	4.9				
TV-F&S 2000a	Oct-98	B-36	Ethane	4.7				
TV-F&S 2000a	Oct-98	B-21	Ethane	3.5				
TV-F&S 2000a	Oct-99	B-45	Ethane	2.1				
TV-F&S 2000a	Oct-98	B-44	Ethane	1.8				
TV-F&S 2000a	Oct-99	B-15	Ethane	1.1				
TV-F&S 2000a	Oct-98	B-20	Ethane	1				
TV-F&S 2000a	Oct-98	B-8	Ethane	0.71				
Hart Crowser 1992b	May-92	B-30	Ethanol	9,800				
Hart Crowser 1992b	May-92	B-16	Ethanol	2,300				

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-98	B-35	Ethene	3,500				
TV-F&S 2000a	Oct-98	B-44	Ethene	1,800				
TV-F&S 2000a	Oct-98	B-20	Ethene	1,700				
TV-F&S 2000a	Oct-98	B-21	Ethene	750				
TV-F&S 2000a	Oct-98	B-33A	Ethene	480				
TV-F&S 2000a	Oct-99	B-46	Ethene	266				
TV-F&S 2000a	Oct-99	B-47	Ethene	246				
TV-F&S 2000a	Oct-99	B-49	Ethene	230				
TV-F&S 2000a	Oct-99	B-42	Ethene	131				
TV-F&S 2000a	Oct-99	B-33A	Ethene	83				
TV-F&S 2000a	Oct-99	B-35	Ethene	77				
TV-F&S 2000a	Oct-98	B-36 (DUP)	Ethene	57				
TV-F&S 2000a	Oct-98	B-36	Ethene	54				
TV-F&S 2000a	Oct-99	B-61	Ethene	45				
TV-F&S 2000a	Oct-99	B-63	Ethene	26.6				
TV-F&S 2000a	Oct-99	B-44	Ethene	9.9				
TV-F&S 2000a	Oct-99	B-58	Ethene	6.6				
TV-F&S 2000a	Oct-99	B-27	Ethene	6				
TV-F&S 2000a	Oct-99	B-21	Ethene	4				
TV-F&S 2000a	Oct-99	B-45	Ethene	2.1				
TV-F&S 2000a	Oct-99	B-65	Ethene	1.8				
TV-F&S 2000a	Oct-99	B-59	Ethene	1.4				
TV-F&S 2000a	Oct-99	B-36	Ethene	1.3				
TV-F&S 2000a	Oct-99	B-64	Ethene	0.83				
TV-F&S 2000a	Oct-99	B-62	Ethene	0.75				
TV-F&S 2000a	Nov-98	B-49	Ethylbenzene	2,200		700		3.1
Ecology 1993c	Jul-93	B-27	Ethylbenzene	2,000	J	700		2.9
TV-F&S 2000a	Nov-98	B-42	Ethylbenzene	1,800		700		2.6
Hart Crowser 1997	Dec-96	B-10A	Ethylbenzene	1,700		700		2.4
TV-F&S 2000a	Oct-99	B-47	Ethylbenzene	1,700		700		2.4
TV-F&S 2000a	Oct-99	B-47 (DUP)	Ethylbenzene	1,700		700		2.4
Ecology 1993b	Jun-93	278091	Ethylbenzene	1,500		700		2.1
Ecology 1993b	Jun-93	278092	Ethylbenzene	1,400		700		2.0
TV-F&S 2000a	Oct-98	B-21	Ethylbenzene	1,400		700		2.0

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-98	B-44	Ethylbenzene	1,300		700		1.9
Hart Crowser 1992b	May-92	B-30	Ethylbenzene	1,200		700		1.7
TV-F&S 2000a	Nov-98	B-12	Ethylbenzene	1,100		700		1.6
Hart Crowser 1992b	May-92	B-16	Ethylbenzene	1,100		700		1.6
TV-F&S 2000a	Nov-98	B-39	Ethylbenzene	1,000		700		1.4
TV-F&S 2000a	Oct-99	B-42	Ethylbenzene	1,000		700		1.4
ATI 1991b	Sep-91	B-16	Ethylbenzene	970		700		1.4
Hart Crowser 1992b	May-92	B-10A	Ethylbenzene	940		700		1.3
Ecology 1993c	Jul-93	B-49	Ethylbenzene	910	J	700		1.3
Hart Crowser 1997	Dec-96	B-21	Ethylbenzene	900		700		1.3
Hart Crowser 1992b	May-92	B-21	Ethylbenzene	800		700		1.1
Hart Crowser 1997	Dec-96	B-31	Ethylbenzene	790		700		1.1
TV-F&S 2000a	Oct-98	B-20	Ethylbenzene	740		700		1.1
Hart Crowser 1997	Dec-96	B-44	Ethylbenzene	700		700		1.0
Hart Crowser 1992b	May-92	B-29	Ethylbenzene	650		700		0.9
TV-F&S 2000a	Nov-98	B-46 BAL	Ethylbenzene	540		700		0.8
Hart Crowser 1997	Dec-96	B-39	Ethylbenzene	450		700		0.6
TV-F&S 2000a	Oct-99	B-21	Ethylbenzene	440		700		0.6
TV-F&S 2000a	Oct-98	B-35	Ethylbenzene	410		700		0.6
Hart Crowser 1992b	May-92	B-15	Ethylbenzene	380		700		0.5
TV-F&S 2000a	Nov-98	B-46	Ethylbenzene	370		700		0.5
TV-F&S 2000a	Oct-99	B-10A	Ethylbenzene	340		700		0.5
TV-F&S 2000a	Oct-99	B-44	Ethylbenzene	330		700		0.5
TV-F&S 2000a	Nov-98	B-52	Ethylbenzene	310		700		0.4
TV-F&S 2000a	Nov-98	B-52 (DUP)	Ethylbenzene	240		700		0.3
Hart Crowser 1997	Dec-96	B-20	Ethylbenzene	210		700		0.3
Hart Crowser 1997	Dec-96	B-35	Ethylbenzene	190		700		0.3
TV-F&S 2000a	Oct-99	B-35	Ethylbenzene	190		700		0.3
Hart Crowser 1997	Dec-96	B-8	Ethylbenzene	170		700		0.2
TV-F&S 2000a	Oct-99	B-52	Ethylbenzene	140		700		0.2
Hart Crowser 1997	Dec-96	B-45	Ethylbenzene	130		700		0.2
TV-F&S 2000a	Nov-98	B-45 BAL	Ethylbenzene	120		700		0.2
TV-F&S 2000a	Jul-99	B-65	Ethylbenzene	84		700		0.1
Ecology 1993b	Jun-93	278093	Ethylbenzene	79		700		0.1

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Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-20	Ethylbenzene	68		700		0.1
TV-F&S 2000a	Oct-98	B-8	Ethylbenzene	47		700		0.1
TV-F&S 2000a	Jul-99	B-63 (DUP)	Ethylbenzene	30		700		0.0
TV-F&S 2000a	Jul-99	B-63	Ethylbenzene	30		700		0.0
TV-F&S 2000a	Oct-99	B-38	Ethylbenzene	21		700		0.0
Hart Crowser 1992b	May-92	B-6	Ethylbenzene	18		700		0.0
Hart Crowser 1997	Dec-96	B-33A	Ethylbenzene	16	J	700		0.0
Hart Crowser 1992b	May-92	B-27	Ethylbenzene	12		700		0.0
TV-F&S 2000a	Jul-99	B-58	Ethylbenzene	11		700		0.0
Hart Crowser 1992b	May-92	B-9	Ethylbenzene	8		700		0.0
Hart Crowser 1992b	May-92	B-17	Ethylbenzene	7		700		0.0
Hart Crowser 1992b	May-92	B-25	Ethylbenzene	7		700		0.0
Hart Crowser 1992b	May-92	B-19	Ethylbenzene	6		700		0.0
Hart Crowser 1992b	May-92	B-72	Ethylbenzene	6		700		0.0
Hart Crowser 1990b	1990	B-7	Ethylbenzene	4.5		700		0.0
Hart Crowser 1992b	May-92	B-23	Ethylbenzene	4		700		0.0
Hart Crowser 1992b	May-92	B-23 (DUP)	Ethylbenzene	3		700		0.0
Hart Crowser 1992b	May-92	B-24	Ethylbenzene	3		700		0.0
TV-F&S 2000a	Oct-98	B-36	Ethylbenzene	2.8		700		0.0
TV-F&S 2000a	Oct-98	B-36 (DUP)	Ethylbenzene	2.6		700		0.0
ATI 1991b	Sep-91	B-17	Ethylbenzene	2		700		0.0
Hart Crowser 1997	Dec-96	B-24	Ethylbenzene	2		700		0.0
Hart Crowser 1990b	1990	B-8	Ethylbenzene	1.8		700		0.0
Hart Crowser 1990b	1990	B-10	Ethylbenzene	0.83		700		0.0
Hart Crowser 1990b	1990	B-12	Ethylbenzene	0.39		700		0.0
Hart Crowser 1990b	1990	B-8	Ethylbenzene	0.160		700		0.0
Hart Crowser 1990b	1990	B-11	Ethylbenzene	0.065		700		0.0
Hart Crowser 1990b	1990	B-1	Ethylbenzene	0.006		700		0.0
Hart Crowser 1990b	1990	B-8	Ethylbenzene	0.004		700		0.0
Hart Crowser 1992b	May-92	B-15	Ethylene Glycol	22,000		16,000		1.4
Hart Crowser 1992b	May-92	B-30	Ethylene Glycol	6,700		16,000		0.4
Hart Crowser 1992b	May-92	B-31	Ethylene Glycol	3,900	J	16,000		0.2
Hart Crowser 1992b	May-92	B-10A	Ethylene Glycol	3,500	J	16,000		0.2
Hart Crowser 1992b	May-92	B-21	Ethylene Glycol	2,200	J	16,000		0.1

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-6	Ethylene Glycol	1,000	J	16,000		0.1
Hart Crowser 1992b	May-92	B-11	Ethylene Glycol	900	J	16,000		0.1
Hart Crowser 1992b	May-92	B-25	Ethylene Glycol	700	J	16,000		0.0
Hart Crowser 1992b	May-92	B-72	Ethylene Glycol	600	J	16,000		0.0
Hart Crowser 1992b	May-92	B-19	Ethylene Glycol	500	J	16,000		0.0
Ecology 1993b	Jun-93	278092	Fluoranthene	9	J	640	17	0.5
Ecology 1993c	Jul-93	B-49	Fluoranthene	5	J	640	17	0.3
Ecology 1993c	Jul-93	B-49	Fluorene	32	J	640	7.0	4.6
Ecology 1993b	Jun-93	278092	Fluorene	6	J	640	7.0	0.9
TV-F&S 2000a	Nov-98	B-49	Fluorene	3.2		640	7.0	0.5
TV-F&S 2000a	Nov-98	B-46	Fluorene	2.8		640	7.0	0.4
TV-F&S 2000a	Nov-98	B-12	Fluorene	1.3		640	7.0	0.2
TV-F&S 2000a	Nov-98	B-52	Fluorene	1.1		640	7.0	0.2
TV-F&S 2000a	Nov-98	B-52 (DUP)	Fluorene	1.1		640	7.0	0.2
Hart Crowser 1997	Dec-96	B-31	Fluorene	1	J	640	7.0	0.1
TV-F&S 2000a	Nov-99	B-12	Fluorene	0.51		640	7.0	0.1
Hart Crowser 1992b	**May-92**	**B-30**	**Gasoline-Range Hydrocarbons**	**120,000**		**800**		**150**
Hart Crowser 1992b	**May-92**	**B-31**	**Gasoline-Range Hydrocarbons**	**90,000**		**800**		**113**
Hart Crowser 1992b	**May-92**	**B-15**	**Gasoline-Range Hydrocarbons**	**64,000**		**800**		**80**
Hart Crowser 1992b	**May-92**	**B-11**	**Gasoline-Range Hydrocarbons**	**48,000**		**800**		**60**
Hart Crowser 1992b	**May-92**	**B-10A**	**Gasoline-Range Hydrocarbons**	**15,000**		**800**		**19**
Hart Crowser 1992b	**May-92**	**B-10A (DUP)**	**Gasoline-Range Hydrocarbons**	**9,000**		**800**		**11**
Hart Crowser 1992b	**May-92**	**B-29**	**Gasoline-Range Hydrocarbons**	**9,000**		**800**		**11**
Hart Crowser 1992b	**May-92**	**B-13**	**Gasoline-Range Hydrocarbons**	**8,000**		**800**		**10**
Hart Crowser 1992b	**May-92**	**B-21**	**Gasoline-Range Hydrocarbons**	**8,000**		**800**		**10**
Hart Crowser 1992b	May-92	B-16	Gasoline-Range Hydrocarbons	7,000		800		8.8
Hart Crowser 1992b	May-92	B-8	Gasoline-Range Hydrocarbons	3,000		800		3.8
TV-F&S 2001a	Jul-00	B-54	Gasoline-Range Hydrocarbons	1,600		800		2.0
TV-F&S 2001a	Jul-00	B-13	Gasoline-Range Hydrocarbons	1,500		800		1.9
Hart Crowser 1992b	May-92	B-20	Gasoline-Range Hydrocarbons	1,000		800		1.3
TV-F&S 2001a	Jul-00	B-56	Gasoline-Range Hydrocarbons	550		800		0.7
TV-F&S 2001a	Jul-00	B-55	Gasoline-Range Hydrocarbons	500		800		0.6
TV-F&S 2001a	Jul-00	B-57	Gasoline-Range Hydrocarbons	460		800		0.6
TV-F&S 2001a	Jul-00	B-53	Gasoline-Range Hydrocarbons	420		800		0.5

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001a	Jul-00	AGI-2	Gasoline-Range Hydrocarbons	180		800		0.2
TV-F&S 2000a	Oct-99	B-47	Iron	92,000				
TV-F&S 2000a	Oct-99	B-42	Iron	79,000				
TV-F&S 2000a	Nov-99	B-31	Iron	46,000				
TV-F&S 2000a	Oct-99	B-26	Iron	45,000				
TV-F&S 2000a	Oct-99	B-33A	Iron	42,000				
TV-F&S 2000a	Oct-99	B-35	Iron	37,000				
TV-F&S 2000a	Nov-99	B-12	Iron	37,000				
TV-F&S 2000a	Oct-99	B-46	Iron	34,000				
TV-F&S 2000a	Oct-99	B-49	Iron	31,000				
TV-F&S 2000a	Oct-99	B-21	Iron	27,000				
TV-F&S 2000a	Oct-99	B-44	Iron	26,000				
TV-F&S 2000a	Oct-99	B-45	Iron	21,000				
TV-F&S 2000a	Oct-99	B-8	Iron	20,000				
TV-F&S 2000a	Nov-99	B-11	Iron	18,000				
TV-F&S 2000a	Oct-99	B-63	Iron	16,000				
TV-F&S 2000a	Oct-99	B-61	Iron	15,000				
TV-F&S 2000a	Oct-99	B-58	Iron	14,000				
TV-F&S 2000a	Oct-99	B-36	Iron	13,000				
TV-F&S 2000a	Oct-99	B-23	Iron	11,000				
TV-F&S 2000a	Oct-99	B-59	Iron	6,700				
TV-F&S 2000a	Oct-99	B-6	Iron	5,800				
TV-F&S 2000a	Oct-99	B-15	Iron	5,200				
TV-F&S 2000a	Oct-99	B-65	Iron	4,900				
TV-F&S 2000a	Oct-99	B-17	Iron	2,800				
TV-F&S 2000a	Oct-99	B-16	Iron	2,200				
TV-F&S 2000a	Oct-99	B-24	Iron	1,900				
TV-F&S 2000a	Oct-99	B-27	Iron	1,900				
TV-F&S 2000a	Oct-99	B-25	Iron	800				
TV-F&S 2000a	Oct-99	B-34	Iron	590				
TV-F&S 2000a	Oct-99	B-64	Iron	390				
TV-F&S 2000a	Oct-99	B-62	Iron	340				
TV-F&S 2000a	Oct-99	B-20A	Iron	290				
TV-F&S 2000a	Oct-99	B-60	Iron	270				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-28	Iron	110				
Hart Crowser 1992b	May-92	B-1	Iron (dissolved)	50,000				
Hart Crowser 1992b	May-92	B-11	Iron (dissolved)	1,300				
Hart Crowser 1992b	May-92	B-27	Iron (dissolved)	1,200				
Hart Crowser 1992b	May-92	B-17	Iron (dissolved)	820				
Hart Crowser 1992b	May-92	B-1	Iron (total)	57,000				
Hart Crowser 1992b	May-92	B-11	Iron (total)	38,000				
Hart Crowser 1992b	May-92	B-27	Iron (total)	3,300				
Hart Crowser 1992b	May-92	B-17	Iron (total)	2,000				
TV-F&S 2000a	Oct-99	B-38	Isophorone	2.5		46		0.1
TV-F&S 2000a	Oct-99	B-38	iso-Propyl benzene	56				
TV-F&S 2000a	Oct-99	B-38	iso-Propyl benzene	34				
TV-F&S 2000a	Nov-98	B-52	iso-Propyl benzene	11				
TV-F&S 2000a	Oct-98	B-8	iso-Propyl benzene	5.3				
TV-F&S 2000a	Oct-99	B-49	iso-Propyl toluene	7,300				
TV-F&S 2000a	Nov-98	B-52	iso-Propyl toluene	8.5				
Hart Crowser 1992b	May-92	B-29	Lead (dissolved)	5.3		15	13	0.4
Hart Crowser 1992b	May-92	B-6	Lead (dissolved)	3.7		15	13	0.3
Hart Crowser 1992b	May-92	B-28	Lead (dissolved)	3		15	13	0.2
Hart Crowser 1992b	**May-92**	**B-15**	**Lead (total)**	**140**		**15**	**13**	**11**
Hart Crowser 1992b	May-92	B-24	Lead (total)	33		15	13	2.5
Hart Crowser 1992b	May-92	B-31	Lead (total)	33		15	13	2.5
Hart Crowser 1992b	May-92	B-14	Lead (total)	27		15	13	2.1
Hart Crowser 1992b	May-92	B-11	Lead (total)	26		15	13	2.0
Hart Crowser 1992b	May-92	B-23	Lead (total)	25		15	13	1.9
Hart Crowser 1992b	May-92	B-22	Lead (total)	24		15	13	1.8
Hart Crowser 1992b	May-92	B-16	Lead (total)	21		15	13	1.6
Hart Crowser 1992b	May-92	B-26	Lead (total)	18		15	13	1.4
Hart Crowser 1992b	May-92	B-30	Lead (total)	12		15	13	0.9
Hart Crowser 1992b	May-92	B-27	Lead (total)	11		15	13	0.8
Hart Crowser 1992b	May-92	B-18	Lead (total)	10		15	13	0.8
Hart Crowser 1992b	May-92	B-10A	Lead (total)	7.9		15	13	0.6
Hart Crowser 1992b	May-92	B-29	Lead (total)	7.5		15	13	0.6
Hart Crowser 1992b	May-92	B-20	Lead (total)	7		15	13	0.5

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-1	Lead (total)	6.8		15	13	0.5
Hart Crowser 1992b	May-92	B-6	Lead (total)	6		15	13	0.5
Hart Crowser 1992b	May-92	B-9	Lead (total)	4.7		15	13	0.4
Hart Crowser 1992b	May-92	B-17	Lead (total)	4.2		15	13	0.3
Hart Crowser 1992b	May-92	B-8	Lead (total)	3.7		15	13	0.3
Hart Crowser 1992b	May-92	B-21	Lead (total)	3		15	13	0.2
Hart Crowser 1992b	May-92	B-25	Lead (total)	3		15	13	0.2
Hart Crowser 1992b	May-92	B-72	Lead (total)	3		15	13	0.2
Hart Crowser 1992b	May-92	B-1	Manganese (dissolved)	810		2,200		0.4
Hart Crowser 1992b	May-92	B-11	Manganese (dissolved)	340		2,200		0.2
Hart Crowser 1992b	May-92	B-27	Manganese (dissolved)	190		2,200		0.1
Hart Crowser 1992b	May-92	B-17	Manganese (dissolved)	89		2,200		0.0
Hart Crowser 1992b	May-92	B-1	Manganese (total)	930		2,200		0.4
Hart Crowser 1992b	May-92	B-11	Manganese (total)	830		2,200		0.4
Hart Crowser 1992b	May-92	B-17	Manganese (total)	730		2,200		0.3
Hart Crowser 1992b	May-92	B-27	Manganese (total)	140		2,200		0.1
Hart Crowser 1992b	**May-92**	**B-15**	**Mercury (total)**	**6.2**		**2**	**0.0074**	**838**
Hart Crowser 1992b	**May-92**	**B-16**	**Mercury (total)**	**1.2**		**2**	**0.0074**	**162**
Hart Crowser 1992b	**May-92**	**B-31**	**Mercury (total)**	**0.5**		**2**	**0.0074**	**68**
Hart Crowser 1992b	**May-92**	**B-22**	**Mercury (total)**	**0.22**		**2**	**0.0074**	**30**
Hart Crowser 1992b	**May-92**	**B-23**	**Mercury (total)**	**0.22**		**2**	**0.0074**	**30**
TV-F&S 2000a	Oct-98	B-20	Methane	5,000				
TV-F&S 2000a	Oct-98	B-33A	Methane	4,000				
TV-F&S 2000a	Oct-98	B-44	Methane	1,700				
TV-F&S 2000a	Oct-98	B-35	Methane	1,600				
TV-F&S 2000a	Oct-98	B-20	Methane	1,300				
TV-F&S 2000a	Oct-98	B-19	Methane	670				
TV-F&S 2000a	Oct-99	B-27	Methane	625				
TV-F&S 2000a	Oct-99	B-26	Methane	460				
TV-F&S 2000a	Oct-98	B-24	Methane	420				
TV-F&S 2000a	Oct-98	B-21	Methane	400				
TV-F&S 2000a	Oct-99	B-61	Methane	360				
TV-F&S 2000a	Oct-98	B-36 (DUP)	Methane	340				
TV-F&S 2000a	Oct-98	B-36	Methane	310				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-47	Methane	307				
TV-F&S 2000a	Oct-99	B-42	Methane	197				
TV-F&S 2000a	Oct-99	B-49	Methane	158				
TV-F&S 2000a	Oct-99	B-59	Methane	156				
TV-F&S 2000a	Oct-99	B-58	Methane	120				
TV-F&S 2000a	Oct-99	B-46	Methane	106				
TV-F&S 2000a	Oct-99	B-25	Methane	80				
TV-F&S 2000a	Oct-99	B-17	Methane	78				
TV-F&S 2000a	Oct-98	B-8	Methane	74				
TV-F&S 2000a	Oct-99	B-8	Methane	61				
TV-F&S 2000a	Oct-99	B-33A	Methane	58				
TV-F&S 2000a	Oct-99	B-65	Methane	40				
TV-F&S 2000a	Oct-99	B-35	Methane	34				
TV-F&S 2000a	Oct-99	B-63	Methane	24.9				
TV-F&S 2000a	Oct-99	B-21	Methane	15.1				
TV-F&S 2000a	Oct-99	B-6	Methane	13				
TV-F&S 2000a	Oct-99	B-44	Methane	12				
TV-F&S 2000a	Oct-99	B-45	Methane	9.8				
TV-F&S 2000a	Oct-99	B-60	Methane	7.4				
TV-F&S 2000a	Oct-99	B-23	Methane	4.2				
TV-F&S 2000a	Oct-99	B-53	Methane	3.9				
TV-F&S 2000a	Oct-98	B-34	Methane	2.4				
TV-F&S 2000a	Oct-99	B-36	Methane	2.2				
TV-F&S 2000a	Oct-99	B-62	Methane	1.96				
TV-F&S 2000a	Oct-99	B-24	Methane	1.8				
TV-F&S 2000a	Oct-99	B-16	Methane	1.4				
TV-F&S 2000a	Oct-99	B-15	Methane	1.4				
TV-F&S 2000a	Nov-99	B-31	Methane	1				
TV-F&S 2000a	Oct-99	B-54	Methane	0.98				
TV-F&S 2000a	Oct-99	B-22	Methane	0.86				
TV-F&S 2000a	Oct-99	B-64	Methane	0.82				
TV-F&S 2000a	Oct-99	B-55	Methane	0.65				
TV-F&S 2000a	Oct-99	B-20A	Methane	0.51				
TV-F&S 2000a	Oct-99	B-13	Methane	0.47	J			

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	**May-92**	**B-30**	**Methanol**	**40,000**		**4,000**		**10**
Hart Crowser 1992b	May-92	B-31	Methanol	8,000		4,000		2.0
Hart Crowser 1992b	May-92	B-11	Methanol	7,900		4,000		2.0
Hart Crowser 1992b	May-92	B-31 (DUP)	Methanol	7,300		4,000		1.8
Hart Crowser 1992b	May-92	B-16	Methanol	4,600		4,000		1.2
Hart Crowser 1993a	**Sep-92**	**B-30**	**Methylene Chloride**	**23,000**		**5**		**4,600**
Hart Crowser 1993a	**Aug-93**	**B-30**	**Methylene Chloride**	**16,000**		**5**		**3,200**
Hart Crowser 1993a	**Sep-92**	**B-31**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Ecology 1993b	**Jun-93**	**278091**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Ecology 1993c	**Jul-93**	**B-27**	**Methylene Chloride**	**15,000**		**5**		**3,000**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**Methylene Chloride**	**13,000**		**5**		**2,600**
Hart Crowser 1993a	**Jun-93**	**B-43**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1993a	**Jul-93**	**B-47**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1992b	**May-92**	**B-30**	**Methylene Chloride**	**12,000**		**5**		**2,400**
Hart Crowser 1993a	**Aug-93**	**B-31**	**Methylene Chloride**	**11,000**		**5**		**2,200**
Hart Crowser 1992b	**May-92**	**B-31**	**Methylene Chloride**	**11,000**	**B**	**5**		**2,200**
Ecology 1993b	**Jun-93**	**278092**	**Methylene Chloride**	**10,000**		**5**		**2,000**
Hart Crowser 1993a	**Jun-93**	**B-44**	**Methylene Chloride**	**9,700**		**5**		**1,940**
Ecology 1993c	**Jul-93**	**B-49**	**Methylene Chloride**	**9,600**		**5**		**1,920**
Hart Crowser 1993a	**Jul-93**	**B-49**	**Methylene Chloride**	**8,400**		**5**		**1,680**
Hart Crowser 1992b	**May-92**	**B-15**	**Methylene Chloride**	**7,500**	**B**	**5**		**1,500**
Hart Crowser 1997	**Oct-95**	**B-31**	**Methylene Chloride**	**6,900**	**J**	**5**		**1,380**
Hart Crowser 1993a	**Sep-92**	**B-15**	**Methylene Chloride**	**6,700**		**5**		**1,340**
Hart Crowser 1993a	**Aug-93**	**B-51**	**Methylene Chloride**	**3,800**		**5**		**760**
Hart Crowser 1997	**Oct-95**	**B-21**	**Methylene Chloride**	**2,000**	**JB**	**5**		**400**
Hart Crowser 1993a	**Aug-93**	**B-15**	**Methylene Chloride**	**1,500**		**5**		**300**
Ecology 1993b	**Jun-93**	**278094**	**Methylene Chloride**	**1,400**	**J**	**5**		**280**
Ecology 1993b	**Jun-93**	**278094 (DUP)**	**Methylene Chloride**	**1,400**	**J**	**5**		**280**
Hart Crowser 1997	**Dec-96**	**B-44**	**Methylene Chloride**	**1,400**		**5**		**280**
Hart Crowser 1993a	**Jun-93**	**B-46**	**Methylene Chloride**	**1,300**		**5**		**260**
Ecology 1993c	**Jul-93**	**B-48**	**Methylene Chloride**	**1,200**	**J**	**5**		**240**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**Methylene Chloride**	**1,200**	**J**	**5**		**240**
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**Methylene Chloride**	**1,200**		**5**		**240**
Hart Crowser 1997	**Oct-95**	**B-44**	**Methylene Chloride**	**1,100**	**B**	**5**		**220**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	**Jul-93**	**B-48**	**Methylene Chloride**	**880**		**5**		**176**
Hart Crowser 1997	**Dec-96**	**B-39**	**Methylene Chloride**	**710**		**5**		**142**
TV-F&S 2000a	**Oct-99**	**B-58 (DUP)**	**Methylene Chloride**	**690**		**5**		**138**
Hart Crowser 1992b	**May-92**	**B-29**	**Methylene Chloride**	**270**	**JB**	**5**		**54**
Hart Crowser 1992b	**May-92**	**B-8**	**Methylene Chloride**	**210**	**JB**	**5**		**42**
Hart Crowser 1992b	**May-92**	**B-10A**	**Methylene Chloride**	**140**	**JB**	**5**		**28**
TV-F&S 2000a	**Oct-99**	**B-20A**	**Methylene Chloride**	**120**		**5**		**24**
Hart Crowser 1993a	**Aug-93**	**B-20**	**Methylene Chloride**	**92**		**5**		**18**
Hart Crowser 1997	**Oct-95**	**B-9**	**Methylene Chloride**	**62**	**JB**	**5**		**12**
Hart Crowser 1992b	**May-92**	**B-20**	**Methylene Chloride**	**59**	**B**	**5**		**12**
Hart Crowser 1997	**Oct-95**	**B-33A**	**Methylene Chloride**	**57**	**JB**	**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-8**	**Methylene Chloride**	**55**	**JB**	**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-10A**	**Methylene Chloride**	**54**	**JB**	**5**		**11**
TV-F&S 2000a	**Oct-99**	**B-59**	**Methylene Chloride**	**53**		**5**		**11**
Hart Crowser 1997	Oct-95	B-20	Methylene Chloride	44	JB	5		8.8
Hart Crowser 1990b	1990	B-8	Methylene Chloride	43		5		8.6
Hart Crowser 1997	Oct-95	B-45	Methylene Chloride	40	JB	5		8.0
Hart Crowser 1992b	May-92	B-18	Methylene Chloride	27	JB	5		5.4
Hart Crowser 1992b	May-92	B-1	Methylene Chloride	26	JB	5		5.2
TV-F&S 2000a	Oct-99	B-36	Methylene Chloride	20		5		4.0
Hart Crowser 1992b	May-92	B-9	Methylene Chloride	14	JB	5		2.8
TV-F&S 2000a	Oct-99	B-25	Methylene Chloride	7.8		5		1.6
TV-F&S 2000a	Oct-99	B-28	Methylene Chloride	7.2		5		1.4
ATI 1991b	Sep-91	B-16	Methylene Chloride	7	B	5		1.4
ATI 1991b	Sep-91	B-17	Methylene Chloride	6	B	5		1.2
TV-F&S 2000a	Nov-98	B-52	Methylene Chloride	5.3		5		1.1
Hart Crowser 1992b	May-92	B-24	Methylene Chloride	4	JB	5		0.8
Hart Crowser 1997	Oct-95	B-35	Methylene Chloride	3	JB	5		0.6
Hart Crowser 1992b	May-92	B-19	Methylene Chloride	3	JB	5		0.6
Hart Crowser 1992b	May-92	B-25	Methylene Chloride	3	JB	5		0.6
Ecology 1993b	Jun-93	278093	Methylene Chloride	2	J	5		0.4
Hart Crowser 1990a	May-89	B-1	Methylene Chloride	0.013		5		0.0
Ecology 1993c	Jul-93	B-49	Naphthalene	430		160	92	4.7
Hart Crowser 1992b	May-92	B-10A	Naphthalene	160		160	92	1.7

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-38	Naphthalene	120		160	92	1.3
TV-F&S 2000a	Oct-98	B-20	Naphthalene	71		160	92	0.8
TV-F&S 2000a	Nov-98	B-10A	Naphthalene	43		160	92	0.5
Hart Crowser 1997	Dec-96	B-31	Naphthalene	34		160	92	0.4
Ecology 1993b	Jun-93	278092	Naphthalene	30		160	92	0.3
Ecology 1993c	Jul-93	B-27	Naphthalene	27	J	160	92	0.3
Hart Crowser 1992b	May-92	B-15	Naphthalene	24		160	92	0.3
TV-F&S 2000a	Nov-98	B-49	Naphthalene	23		160	92	0.3
Hart Crowser 1992b	May-92	B-21	Naphthalene	17		160	92	0.2
TV-F&S 2000a	Nov-98	B-12	Naphthalene	16		160	92	0.2
TV-F&S 2000a	Oct-98	B-35	Naphthalene	15	J	160	92	0.2
TV-F&S 2000a	Nov-98	B-42	Naphthalene	13		160	92	0.1
Ecology 1993c	Jul-93	B-50	Naphthalene	12	J	160	92	0.1
TV-F&S 2000a	Nov-98	B-46	Naphthalene	12		160	92	0.1
TV-F&S 2000a	Nov-98	B-39	Naphthalene	11		160	92	0.1
Ecology 1993b	Jun-93	278091	Naphthalene	10	J	160	92	0.1
TV-F&S 2000a	Oct-98	B-44	Naphthalene	10		160	92	0.1
TV-F&S 2000a	Oct-98	B-21	Naphthalene	6.7	J	160	92	0.1
TV-F&S 2000a	Jul-99	B-61	Naphthalene	5.8		160	92	0.1
TV-F&S 2000a	Nov-98	B-52	Naphthalene	4.4		160	92	0.0
TV-F&S 2000a	Nov-98	B-52 (DUP)	Naphthalene	4.3		160	92	0.0
Ecology 1993c	Jul-93	B-48	Naphthalene	4	J	160	92	0.0
Ecology 1993c	Jul-93	B-48 (DUP)	Naphthalene	4	J	160	92	0.0
Hart Crowser 1997	Dec-96	B-8	Naphthalene	3	J	160	92	0.0
TV-F&S 2000a	Nov-98	B-45	Naphthalene	2.6		160	92	0.0
TV-F&S 2000a	Nov-98	B-52	n-Butyl benzene	7				
Hart Crowser 1992b	May-92	B-15	Nickel (dissolved)	13				
Hart Crowser 1992b	May-92	B-15	Nickel (total)	870				
Hart Crowser 1992b	May-92	B-23	Nickel (total)	120				
Hart Crowser 1992b	May-92	B-31	Nickel (total)	89				
Hart Crowser 1992b	May-92	B-22	Nickel (total)	76				
Hart Crowser 1992b	May-92	B-24	Nickel (total)	74				
Hart Crowser 1992b	May-92	B-11	Nickel (total)	69				
Hart Crowser 1992b	May-92	B-16	Nickel (total)	66				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-30	Nickel (total)	51				
Hart Crowser 1992b	May-92	B-14	Nickel (total)	48				
Hart Crowser 1992b	May-92	B-26	Nickel (total)	45				
Hart Crowser 1992b	May-92	B-19	Nickel (total)	34				
Hart Crowser 1992b	May-92	B-72	Nickel (total)	32				
Hart Crowser 1992b	May-92	B-1	Nickel (total)	30				
Hart Crowser 1992b	May-92	B-18	Nickel (total)	29				
Hart Crowser 1992b	May-92	B-9	Nickel (total)	23				
Hart Crowser 1992b	May-92	B-27	Nickel (total)	21				
Hart Crowser 1992b	May-92	B-29	Nickel (total)	20				
Hart Crowser 1992b	May-92	B-8	Nickel (total)	18				
Hart Crowser 1992b	May-92	B-5 (DUP)	Nickel (total)	16				
Hart Crowser 1992b	May-92	B-25	Nickel (total)	12				
Hart Crowser 1992b	May-92	B-5	Nickel (total)	10				
TV-F&S 2000a	Oct-99	B-16	Nitrate	16,000				
TV-F&S 2000a	Oct-99	B-62	Nitrate	8,400				
TV-F&S 2000a	Oct-99	B-20A	Nitrate	8,100				
TV-F&S 2000a	Oct-99	B-60	Nitrate	5,300				
TV-F&S 2000a	Oct-99	B-13	Nitrate	4,600				
TV-F&S 2000a	Nov-99	B-31	Nitrate	4,600				
TV-F&S 2000a	Oct-99	B-22	Nitrate	3,500				
TV-F&S 2000a	Oct-99	B-15	Nitrate	3,100				
TV-F&S 2000a	Oct-99	B-55	Nitrate	2,500				
TV-F&S 2000a	Oct-99	B-64	Nitrate	2,000				
TV-F&S 2000a	Oct-99	B-44	Nitrate	1,700				
TV-F&S 2000a	Oct-99	B-49	Nitrate	1,600				
TV-F&S 2000a	Oct-99	B-54	Nitrate	1,400				
TV-F&S 2000a	Oct-99	B-28	Nitrate	970				
TV-F&S 2000a	Oct-99	B-47	Nitrate	690				
TV-F&S 2000a	Oct-99	B-34	Nitrate	550	J			
TV-F&S 2000a	Oct-99	B-53	Nitrate	540				
TV-F&S 2000a	Oct-99	B-58	Nitrate	510				
TV-F&S 2000a	Oct-99	B-24	Nitrate	390				
TV-F&S 2000a	Nov-99	B-12	Nitrate	330				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-36	Nitrate	250				
TV-F&S 2000a	Oct-99	B-42	Nitrate	200				
TV-F&S 2000a	Oct-99	B-46	Nitrate	140	J			
TV-F&S 2000a	Oct-99	B-6	Nitrate	24	J			
TV-F&S 2000a	Oct-99	B-27	Nitrate	24	J			
TV-F&S 2000a	Nov-99	B-11	Nitrate	20	J			
TV-F&S 2000a	Oct-99	B-65	Nitrate	14	J			
TV-F&S 2000a	Oct-99	B-26	Nitrate	8	J			
TV-F&S 2000a	Oct-99	B-34	Nitrite	11,000	J			
TV-F&S 2000a	Oct-99	B-16	Nitrite	670				
TV-F&S 2000a	Oct-99	B-47	Nitrite	230				
TV-F&S 2000a	Oct-99	B-49	Nitrite	220				
TV-F&S 2000a	Oct-99	B-42	Nitrite	190				
TV-F&S 2000a	Nov-99	B-31	Nitrite	190				
TV-F&S 2000a	Oct-99	B-46	Nitrite	160				
TV-F&S 2000a	Oct-99	B-58	Nitrite	150				
TV-F&S 2000a	Nov-99	B-12	Nitrite	150				
TV-F&S 2000a	Nov-99	B-11	Nitrite	110				
TV-F&S 2000a	Oct-99	B-6	Nitrite	48				
TV-F&S 2000a	Oct-99	B-24	Nitrite	26	J			
TV-F&S 2000a	Oct-99	B-28	Nitrite	20	J			
TV-F&S 2000a	Oct-99	B-13	Nitrite	16	J			
TV-F&S 2000a	Jul-99	B-61	n-Nitro-di-n-propylamine	5.4				
TV-F&S 2000a	Oct-98	B-44	n-Nitroso-di-n-propylamine	9.7				
TV-F&S 2000a	Oct-99	B-49	n-Propyl benzene	2,200				
TV-F&S 2000a	Oct-99	B-38	n-Propyl benzene	89				
TV-F&S 2000a	Nov-98	B-52	n-Propyl benzene	13				
TV-F&S 2000a	Oct-98	B-8	n-Propyl benzene	9.8				
Ecology 1993c	**Jul-93**	**B-50**	**PCE**	**160,000**		**5**		**32,000**
Hart Crowser 1997	**Oct-95**	**B-31**	**PCE**	**160,000**	**J**	**5**		**32,000**
Hart Crowser 1993a	**Jun-93**	**B-43**	**PCE**	**140,000**		**5**		**28,000**
Ecology 1993b	**Jun-93**	**278091**	**PCE**	**140,000**		**5**		**28,000**
Hart Crowser 1993a	**Jul-93**	**B-50**	**PCE**	**140,000**		**5**		**28,000**
Hart Crowser 1993a	**Sep-92**	**B-31**	**PCE**	**130,000**		**5**		**26,000**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Jun-93	B-44	PCE	120,000		5		24,000
Ecology 1993c	Jul-93	B-27	PCE	120,000		5		24,000
Hart Crowser 1993a	Aug-93	B-31	PCE	120,000		5		24,000
Hart Crowser 1993a	Sep-92	B-15	PCE	110,000		5		22,000
Hart Crowser 1993a	Sep-92	B-30	PCE	110,000		5		22,000
Ecology 1993b	Jun-93	278092	PCE	110,000		5		22,000
Hart Crowser 1993a	Jul-93	B-47 (DUP)	PCE	110,000		5		22,000
Ecology 1993c	Jul-93	B-49	PCE	110,000		5		22,000
Hart Crowser 1993a	Aug-93	B-30	PCE	110,000		5		22,000
Hart Crowser 1993a	Jul-93	B-49	PCE	103,000		5		20,600
Hart Crowser 1993a	Jul-93	B-47	PCE	100,000		5		20,000
Hart Crowser 1992b	May-92	B-30	PCE	100,000		5		20,000
Ecology 1993b	Jun-93	278094 (DUP)	PCE	88,000		5		17,600
TV-F&S 2000a	Nov-98	B-49	PCE	85,000		5		17,000
Hart Crowser 1992b	May-92	B-15	PCE	85,000		5		17,000
Hart Crowser 1997	Oct-95	B-44	PCE	81,000	J	5		16,200
Hart Crowser 1993a	Jun-93	B-46	PCE	80,000		5		16,000
Hart Crowser 1992b	May-92	B-11	PCE	80,000		5		16,000
Hart Crowser 1997	Dec-96	B-31	PCE	79,000		5		15,800
Hart Crowser 1992b	May-92	B-31	PCE	76,000		5		15,200
TV-F&S 2000a	Oct-99	B-49	PCE	69,000		5		13,800
Hart Crowser 1997	Dec-96	B-39	PCE	63,000		5		12,600
Ecology 1993b	Jun-93	278094	PCE	62,000		5		12,400
Hart Crowser 1993a	Aug-93	B-51	PCE	58,000		5		11,600
TV-F&S 2000a	Oct-99	B-44	PCE	57,000	J	5		11,400
TV-F&S 2000a	Oct-99	B-47 (DUP)	PCE	56,000		5		11,200
Hart Crowser 1993a	Aug-93	B-15	PCE	55,000		5		11,000
TV-F&S 2000a	Oct-99	B-47	PCE	54,000		5		10,800
Hart Crowser 1997	Dec-96	B-44	PCE	53,000		5		10,600
Hart Crowser 1993a	Aug-93	B-52 (DUP)	PCE	52,000		5		10,400
Hart Crowser 1993a	Aug-93	B-52	PCE	49,000		5		9,800
TV-F&S 2000a	Nov-98	B-12	PCE	47,000		5		9,400
TV-F&S 2000a	Nov-98	B-46	PCE	47,000		5		9,400
TV-F&S 2000a	Nov-98	B-39	PCE	40,000		5		8,000

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-39	PCE	40,000	J	5		8,000
TV-F&S 2000a	Nov-98	B-46 BAL	PCE	37,000		5		7,400
TV-F&S 2000a	Nov-98	B-42	PCE	36,000		5		7,200
TV-F&S 2000a	Oct-99	B-42	PCE	36,000		5		7,200
TV-F&S 2000a	Oct-99	B-46	PCE	31,000		5		6,200
Ecology 1993c	Jul-93	B-48	PCE	30,000		5		6,000
Ecology 1993c	Jul-93	B-48 (DUP)	PCE	30,000		5		6,000
Hart Crowser 1993a	Jul-93	B-48	PCE	25,000		5		5,000
Hart Crowser 1997	Oct-95	B-10A	PCE	25,000	J	5		5,000
TV-F&S 2000a	Oct-99	B-15	PCE	20,000		5		4,000
TV-F&S 2000a	Nov-99	B-12	PCE	19,000		5		3,800
TV-F&S 2000a	Jul-99	B-58	PCE	18,000		5		3,600
TV-F&S 2000a	Oct-98	B-44	PCE	14,000		5		2,800
TV-F&S 2000a	Nov-98	B-52	PCE	12,000		5		2,400
TV-F&S 2000a	Oct-99	B-54	PCE	9,800		5		1,960
TV-F&S 2000a	Oct-99	B-60	PCE	9,400		5		1,880
TV-F&S 2000a	Nov-98	B-52 (DUP)	PCE	9,000		5		1,800
Hart Crowser 1993a	Sep-92	B-13	PCE	8,500		5		1,700
Ecology 1993b	Jun-93	278093	PCE	8,000		5		1,600
Hart Crowser 1993a	Sep-92	B-8	PCE	7,600		5		1,520
Hart Crowser 1993a	Aug-93	B-13	PCE	7,300		5		1,460
TV-F&S 2000a	Jul-99	B-13	PCE	7,300		5		1,460
TV-F&S 2000a	Nov-99	B-31	PCE	7,300		5		1,460
Hart Crowser 1992b	May-92	B-13	PCE	6,500		5		1,300
TV-F&S 2000a	Oct-99	B-58	PCE	6,200		5		1,240
TV-F&S 2000a	Jul-99	B-60	PCE	5,600		5		1,120
Hart Crowser 1992b	May-92	B-8	PCE	4,800		5		960
TV-F&S 2000a	Oct-99	B-13	PCE	4,700		5		940
Hart Crowser 1993a	Aug-93	B-8	PCE	4,600		5		920
TV-F&S 2000a	Oct-99	B-58 (DUP)	PCE	4,600		5		920
TV-F&S 2000a	Jan-99	TB-1	PCE	4,300		5		860
TV-F&S 2000a	Feb-99	B-13	PCE	4,300		5		860
TV-F&S 2000a	Apr-99	B-54	PCE	4,100		5		820
TV-F&S 2000a	Nov-98	B-13	PCE	4,000		5		800

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Jul-99	TW-5	PCE	3,900		5		780
Hart Crowser 1992b	May-92	B-10A	PCE	3,900		5		780
TV-F&S 2000a	Dec-98	B-13	PCE	3,660		5		732
ATI 1991b	Sep-91	B-16	PCE	3,400		5		680
TV-F&S 2000a	Feb-99	B-54	PCE	3,400		5		680
TV-F&S 2000a	Jul-99	TW-6	PCE	3,300		5		660
TV-F&S 2000a	Oct-99	B-52	PCE	3,300		5		660
TV-F&S 2000a	Oct-98	B-8	PCE	3,100		5		620
TV-F&S 2000a	Oct-99	B-62	PCE	3,000		5		600
TV-F&S 2000a	Nov-99	B-11	PCE	3,000		5		600
TV-F&S 2000a	Jan-99	TB-2	PCE	2,700		5		540
TV-F&S 2000a	Jan-99	TB-4	PCE	2,400		5		480
Hart Crowser 1993a	Jun-93	B-45	PCE	2,300		5		460
Ecology 1993c	Jul-93	B-49	PCE	2,300		5		460
TV-F&S 2000a	Nov-98	B-45 BAL	PCE	2,300		5		460
TV-F&S 2001a	Jul-00	B-13	PCE	2,300	J	5		460
Hart Crowser 1992b	May-92	B-22	PCE	2,300		5		460
TV-F&S 2000a	Jan-99	TB-3	PCE	2,100		5		420
TV-F&S 2000a	Oct-99	B-22	PCE	2,100		5		420
Hart Crowser 1993a	Aug-93	B-20	PCE	2,000		5		400
TV-F&S 2001a	Jul-00	B-54	PCE	2,000	J	5		400
Hart Crowser 1990b	1990	B-12	PCE	1,900		5		380
TV-F&S 2000a	Feb-99	B-22	PCE	1,900		5		380
TV-F&S 2000a	Dec-98	B-22	PCE	1,850		5		370
Hart Crowser 1993a	Jun-93	B-45 (DUP)	PCE	1,700		5		340
Hart Crowser 1997	Oct-95	B-9	PCE	1,700		5		340
TV-F&S 2000a	Feb-99	B-56	PCE	1,700		5		340
Hart Crowser 1997	Dec-96	B-45	PCE	1,600		5		320
TV-F&S 2000a	Apr-99	B-56	PCE	1,600		5		320
Hart Crowser 1997	Oct-95	B-45	PCE	1,500		5		300
TV-F&S 2000a	Oct-99	B-45	PCE	1,400		5		280
Hart Crowser 1993a	Aug-93	B-10A	PCE	1,300		5		260
TV-F&S 2000a	Nov-98	B-45	PCE	1,300		5		260
Hart Crowser 1992b	May-92	B-14	PCE	1,300		5		260

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Feb-99	B-53	PCE	1,200		5		240
Hart Crowser 1997	Dec-96	B-8	PCE	1,100		5		220
TV-F&S 2000a	Feb-99	B-55	PCE	1,100		5		220
TV-F&S 2000a	Oct-99	B-45 (DUP)	PCE	1,000		5		200
Hart Crowser 1997	Dec-96	B-20	PCE	930		5		186
TV-F&S 2000a	Apr-99	B-53	PCE	930		5		186
TV-F&S 2000a	Oct-99	B-20A	PCE	920		5		184
Hart Crowser 1993a	Sep-92	B-10A	PCE	860		5		172
Hart Crowser 1997	Dec-96	B-10A	PCE	850		5		170
TV-F&S 2000a	Apr-99	B-55	PCE	780		5		156
Hart Crowser 1997	Oct-95	B-21	PCE	740		5		148
Hart Crowser 1992b	May-92	B-9	PCE	710		5		142
TV-F&S 2000a	Oct-99	B-53	PCE	620		5		124
Hart Crowser 1992b	May-92	B-20	PCE	540		5		108
TV-F&S 2000a	Jul-99	TW-2	PCE	500		5		100
TV-F&S 2000a	Oct-99	B-57	PCE	490	J	5		98
TV-F&S 2000a	Jul-99	B-62	PCE	470		5		94
TV-F&S 2000a	Oct-99	B-16	PCE	470		5		94
TV-F&S 2000a	Oct-99	B-56	PCE	460	J	5		92
TV-F&S 2000a	Jul-99	TW-1	PCE	430		5		86
TV-F&S 2000a	Jul-99	B-62 (DUP)	PCE	410		5		82
TV-F&S 2000a	Oct-99	B-8	PCE	410		5		82
TV-F&S 2000a	Apr-99	B-57	PCE	400		5		80
TV-F&S 2001a	Jul-00	B-56	PCE	380	J	5		76
TV-F&S 2000a	Oct-98	B-20	PCE	360		5		72
Hart Crowser 1992b	May-92	B-16	PCE	360		5		72
TV-F&S 2000a	Oct-98	B-19	PCE	350		5		70
TV-F&S 2000a	Feb-99	B-57	PCE	350		5		70
TV-F&S 2001a	Jul-00	B-55	PCE	350	J	5		70
Hart Crowser 1993a	Sep-92	B-36	PCE	330		5		66
TV-F&S 2001a	Jul-00	B-57	PCE	300	J	5		60
Hart Crowser 1997	Oct-95	B-8	PCE	290		5		58
Hart Crowser 1997	Dec-96	B-36	PCE	270		5		54
TV-F&S 2000a	Oct-99	B-55	PCE	230	J	5		46

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001a	**Jul-00**	**B-53**	**PCE**	**220**	**J**	**5**		**44**
TV-F&S 2000a	**Oct-99**	**B-36**	**PCE**	**180**		**5**		**36**
TV-F&S 2000a	**Oct-99**	**B-14**	**PCE**	**170**		**5**		**34**
Hart Crowser 1992b	**May-92**	**B-18**	**PCE**	**160**		**5**		**32**
TV-F&S 2000a	**Jul-99**	**TW-3 (DUP)**	**PCE**	**140**		**5**		**28**
TV-F&S 2000a	**Jul-99**	**TW-3**	**PCE**	**130**		**5**		**26**
TV-F&S 2000a	**Oct-99**	**B-18**	**PCE**	**130**		**5**		**26**
TV-F&S 2000a	**Oct-99**	**B-33A**	**PCE**	**130**		**5**		**26**
TV-F&S 2001a	**Jul-00**	**AGI-2**	**PCE**	**120**	**J**	**5**		**24**
Hart Crowser 1990b	**1990**	**B-12**	**PCE**	**95**		**5**		**19**
Hart Crowser 1990b	**1990**	**B-8**	**PCE**	**89**		**5**		**18**
Hart Crowser 1993a	**Aug-93**	**B-9**	**PCE**	**85**		**5**		**17**
Hart Crowser 1997	**Dec-96**	**B-35**	**PCE**	**85**		**5**		**17**
Hart Crowser 1993a	**Sep-92**	**B-9**	**PCE**	**78**		**5**		**16**
TV-F&S 2000a	**Jul-99**	**B-61**	**PCE**	**78**		**5**		**16**
TV-F&S 2000a	**Oct-99**	**B-19**	**PCE**	**64**		**5**		**13**
TV-F&S 2000a	**Feb-99**	**B-28**	**PCE**	**63**		**5**		**13**
Hart Crowser 1992b	**May-92**	**B-72**	**PCE**	**63**		**5**		**13**
Hart Crowser 1992b	**May-92**	**B-19**	**PCE**	**62**		**5**		**12**
TV-F&S 2000a	**Jul-99**	**B-64**	**PCE**	**61**		**5**		**12**
Hart Crowser 1993a	**Aug-93**	**B-34**	**PCE**	**59**		**5**		**12**
Hart Crowser 1993a	**Aug-93**	**B-36**	**PCE**	**56**		**5**		**11**
Hart Crowser 1997	**Oct-95**	**B-33A**	**PCE**	**53**		**5**		**11**
TV-F&S 2000a	**Oct-99**	**B-64**	**PCE**	**50**		**5**		**10**
Hart Crowser 1992b	May-92	B-28	PCE	47		5		9.4
Hart Crowser 1993a	Sep-92	B-26	PCE	44		5		8.8
Hart Crowser 1993a	Aug-93	B-35	PCE	41		5		8.2
TV-F&S 2000a	Jul-99	B-63	PCE	40		5		8.0
TV-F&S 2000a	Jul-99	B-59	PCE	39		5		7.8
Hart Crowser 1990b	1990	B-11	PCE	37		5		7.4
TV-F&S 2000a	Oct-98	B-36	PCE	35		5		7.0
TV-F&S 2001a	Jul-00	AGI-3	PCE	34	J	5		6.8
Hart Crowser 1993a	Aug-93	B-26	PCE	33		5		6.6
Hart Crowser 1993a	Sep-92	B-33A	PCE	32		5		6.4

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Oct-95	B-20	PCE	32		5		6.4
Hart Crowser 1997	Oct-95	B-34	PCE	32		5		6.4
Hart Crowser 1993a	Sep-92	B-20	PCE	31		5		6.2
TV-F&S 2000a	Oct-98	B-36 (DUP)	PCE	30		5		6.0
Hart Crowser 1992b	May-92	B-26	PCE	26		5		5.2
Hart Crowser 1990b	1990	B-7	PCE	23		5		4.6
Hart Crowser 1997	Oct-95	B-26	PCE	23		5		4.6
TV-F&S 2001a	Jul-00	NW-6	PCE	19	J	5		3.8
TV-F&S 2000a	Oct-99	B-23	PCE	17		5		3.4
Hart Crowser 1990b	1990	B-8	PCE	15		5		3.0
Hart Crowser 1997	Dec-96	B-34	PCE	15		5		3.0
TV-F&S 2000a	Jul-99	B-65	PCE	15		5		3.0
TV-F&S 2000a	Oct-99	B-28	PCE	15		5		3.0
TV-F&S 2000a	Oct-98	B-34	PCE	13		5		2.6
TV-F&S 2000a	Oct-99	B-34	PCE	11		5		2.2
TV-F&S 2001a	Jul-00	NW-12	PCE	10		5		2.0
TV-F&S 2001a	Jul-00	B-28	PCE	10	J	5		2.0
Hart Crowser 1990b	1990	B-13	PCE	9	J	5		1.8
TV-F&S 2000a	Jul-99	B-63 (DUP)	PCE	8.7		5		1.7
Hart Crowser 1990b	1990	B-10	PCE	7.8	J	5		1.6
TV-F&S 2000a	Dec-98	B-23	PCE	7.2		5		1.4
Hart Crowser 1997	Oct-95	B-36	PCE	7		5		1.4
Hart Crowser 1997	Dec-96	B-26	PCE	7		5		1.4
TV-F&S 2001a	Jul-00	NW-3	PCE	7	J	5		1.4
TV-F&S 2000a	Nov-98	B-26	PCE	6.1		5		1.2
Hart Crowser 1992b	May-92	B-23	PCE	6		5		1.2
Hart Crowser 1990b	1990	B-11	PCE	5.7	J	5		1.1
Hart Crowser 1990b	1990	B-10A	PCE	5.1	J	5		1.0
Hart Crowser 1997	Dec-96	B-9	PCE	5		5		1.0
Hart Crowser 1992b	May-92	B-17	PCE	5		5		1.0
Hart Crowser 1992b	May-92	B-23 (DUP)	PCE	5		5		1.0
TV-F&S 2000a	Nov-98	B-9	PCE	4.6		5		0.9
TV-F&S 2000a	Oct-99	B-26	PCE	4.2		5		0.8
Hart Crowser 1992b	May-92	B-25	PCE	4		5		0.8

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-27	PCE	4		5		0.8
TV-F&S 2000a	Jul-99	TW-7	PCE	3	J	5		0.6
TV-F&S 2001a	Jul-00	NW-10	PCE	3		5		0.6
TV-F&S 2001a	Jul-00	NW-9	PCE	3		5		0.6
TV-F&S 2000a	Nov-98	B-18	PCE	2.8		5		0.6
TV-F&S 2000a	Oct-99	B-9	PCE	2.4		5		0.5
Hart Crowser 1993a	Sep-92	B-34	PCE	2		5		0.4
Hart Crowser 1993a	Aug-93	B-33A	PCE	2		5		0.4
Hart Crowser 1997	Oct-95	B-35	PCE	2		5		0.4
TV-F&S 2001a	Jul-00	NW-1	PCE	2	J	5		0.4
TV-F&S 2001a	Jul-00	NW-2	PCE	2	J	5		0.4
TV-F&S 2001a	Jul-00	NW-4	PCE	2	J	5		0.4
TV-F&S 2001a	Jul-00	NW-5	PCE	2	J	5		0.4
TV-F&S 2001a	Jul-00	NW-8	PCE	2		5		0.4
Hart Crowser 1993a	Sep-92	B-24	PCE	1		5		0.2
Hart Crowser 1993a	Sep-92	B-27	PCE	1		5		0.2
Hart Crowser 1997	Dec-96	B-33A	PCE	1	J	5		0.2
TV-F&S 2001a	Jul-00	NW-11	PCE	1		5		0.2
TV-F&S 2001a	Jul-00	NW-7	PCE	1		5		0.2
Hart Crowser 1992b	May-92	B-24	PCE	1		5		0.2
Hart Crowser 1992b	May-92	B-6	PCE	1		5		0.2
Hart Crowser 1990b	1990	B-14	PCE	0.5		5		0.1
Hart Crowser 1990b	1990	B-9	PCE	0.200		5		0.0
Hart Crowser 1990b	1990	B-1	PCE	0.130		5		0.0
Hart Crowser 1990b	1990	B-5	PCE	0.120		5		0.0
Hart Crowser 1990a	May-89	B-1	PCE	0.048		5		0.0
Hart Crowser 1990b	1990	B-9	PCE	0.019		5		0.0
Hart Crowser 1992b	**May-92**	**B-31**	**Pentachlorophenol**	**11,000**		**0.73**	**10**	**15,068**
TV-F&S 2000a	**Oct-99**	**B-38**	**Pentachlorophenol**	**5,500**		**0.73**	**10**	**7,534**
Hart Crowser 1993a	**Aug-93**	**B-31**	**Pentachlorophenol**	**4,800**		**0.73**	**10**	**6,575**
Hart Crowser 1997	**Oct-95**	**B-31**	**Pentachlorophenol**	**4,000**		**0.73**	**10**	**5,479**
Hart Crowser 1993a	**Sep-92**	**B-31**	**Pentachlorophenol**	**3,600**		**0.73**	**10**	**4,932**
Hart Crowser 1997	**Dec-96**	**B-39**	**Pentachlorophenol**	**3,100**	**J**	**0.73**	**10**	**4,247**
Ecology 1993c	**Jul-93**	**B-50**	**Pentachlorophenol**	**2,500**		**0.73**	**10**	**3,425**

Table E-2
Chemicals Detected in Groundwater
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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-31	Pentachlorophenol	2,300		0.73	10	3,151
Ecology 1993c	Jul-93	B-27	Pentachlorophenol	2,100		0.73	10	2,877
Hart Crowser 1992b	May-92	B-30	Pentachlorophenol	2,000		0.73	10	2,740
Ecology 1993b	Jun-93	278091	Pentachlorophenol	1,900		0.73	10	2,603
TV-F&S 2000a	Nov-99	B-11	Pentachlorophenol	1,900		0.73	10	2,603
Hart Crowser 1992b	May-92	B-30	Pentachlorophenol	1,600		0.73	10	2,192
Hart Crowser 1992b	May-92	B-11	Pentachlorophenol	1,500		0.73	10	2,055
Hart Crowser 1997	Oct-95	B-31	Pentachlorophenol	1,300	J	0.73	10	1,781
Ecology 1993b	Jun-93	278092	Pentachlorophenol	1,200		0.73	10	1,644
Hart Crowser 1997	Dec-96	B-31	Pentachlorophenol	1,200		0.73	10	1,644
Hart Crowser 1997	Dec-96	B-31	Pentachlorophenol	1,100		0.73	10	1,507
Hart Crowser 1997	Oct-95	B-39	Pentachlorophenol	670		0.73	10	918
TV-F&S 2000a	Oct-99	B-47 (DUP)	Pentachlorophenol	640		0.73	10	877
TV-F&S 2000a	Oct-98	B-44	Pentachlorophenol	570		0.73	10	781
TV-F&S 2000a	Oct-99	B-49	Pentachlorophenol	520		0.73	10	712
TV-F&S 2000a	Oct-99	B-47	Pentachlorophenol	490		0.73	10	671
TV-F&S 2000a	Nov-98	B-49	Pentachlorophenol	480	J	0.73	10	658
TV-F&S 2000a	Nov-98	B-39	Pentachlorophenol	440		0.73	10	603
TV-F&S 2000a	Nov-99	B-12	Pentachlorophenol	430		0.73	10	589
TV-F&S 2000a	Oct-99	B-39	Pentachlorophenol	380	J	0.73	10	521
TV-F&S 2000a	Oct-99	B-42	Pentachlorophenol	370		0.73	10	507
TV-F&S 2000a	Nov-98	B-46	Pentachlorophenol	360		0.73	10	493
TV-F&S 2000a	Oct-99	B-44	Pentachlorophenol	360		0.73	10	493
Ecology 1993b	Jun-93	278094	Pentachlorophenol	290		0.73	10	397
TV-F&S 2000a	Nov-98	B-42	Pentachlorophenol	260	J	0.73	10	356
TV-F&S 2000a	Oct-99	B-46	Pentachlorophenol	200		0.73	10	274
Hart Crowser 1993a	Aug-93	B-20	Pentachlorophenol	160	J	0.73	10	219
TV-F&S 2000a	Oct-98	B-20	Pentachlorophenol	140		0.73	10	192
TV-F&S 2000a	Nov-98	B-52	Pentachlorophenol	120		0.73	10	164
TV-F&S 2000a	Nov-98	B-52 (DUP)	Pentachlorophenol	120		0.73	10	164
Ecology 1993c	Jul-93	B-48	Pentachlorophenol	96		0.73	10	132
Hart Crowser 1992b	May-92	B-20	Pentachlorophenol	73		0.73	10	100
Hart Crowser 1992b	May-92	B-8	Pentachlorophenol	72	J	0.73	10	99
ATI 1991b	Sep-91	B-16	Pentachlorophenol	62		0.73	10	85

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	**Jun-93**	**278093**	**Pentachlorophenol**	**56**		**0.73**	**10**	**77**
Hart Crowser 1997	**Dec-96**	**B-20**	**Pentachlorophenol**	**56**		**0.73**	**10**	**77**
Hart Crowser 1992b	**May-92**	**B-20**	**Pentachlorophenol**	**47**		**0.73**	**10**	**64**
Hart Crowser 1993a	**Sep-92**	**B-20**	**Pentachlorophenol**	**37**		**0.73**	**10**	**51**
TV-F&S 2000a	**Oct-99**	**B-52**	**Pentachlorophenol**	**37**		**0.73**	**10**	**51**
Hart Crowser 1997	**Oct-95**	**B-10A**	**Pentachlorophenol**	**36**		**0.73**	**10**	**49**
Hart Crowser 1997	**Oct-95**	**B-20**	**Pentachlorophenol**	**33**		**0.73**	**10**	**45**
TV-F&S 2000a	**Oct-99**	**B-45 (DUP)**	**Pentachlorophenol**	**29**		**0.73**	**10**	**40**
TV-F&S 2000a	**Oct-99**	**B-15**	**Pentachlorophenol**	**26**		**0.73**	**10**	**36**
Hart Crowser 1992b	**May-92**	**B-16**	**Pentachlorophenol**	**26**		**0.73**	**10**	**36**
TV-F&S 2000a	**Oct-99**	**B-45**	**Pentachlorophenol**	**24**		**0.73**	**10**	**33**
TV-F&S 2000a	**Oct-99**	**B-45**	**Pentachlorophenol**	**22**		**0.73**	**10**	**30**
Hart Crowser 1992b	**May-92**	**B-8**	**Pentachlorophenol**	**21**		**0.73**	**10**	**29**
TV-F&S 2000a	**Oct-99**	**B-18**	**Pentachlorophenol**	**13**		**0.73**	**10**	**18**
TV-F&S 2000a	**Jul-99**	**B-58**	**Pentachlorophenol**	**12**		**0.73**	**10**	**16**
TV-F&S 2000a	**Oct-99**	**B-58 (DUP)**	**Pentachlorophenol**	**10**		**0.73**	**10**	**14**
TV-F&S 2000a	**Oct-99**	**B-60**	**Pentachlorophenol**	**9.6**		**0.73**	**10**	**13**
Hart Crowser 1992b	**May-92**	**B-29**	**Pentachlorophenol**	**9.6**		**0.73**	**10**	**13**
TV-F&S 2000a	**Oct-99**	**B-58**	**Pentachlorophenol**	**9.5**		**0.73**	**10**	**13**
Hart Crowser 1997	**Dec-96**	**B-8**	**Pentachlorophenol**	**8**	**J**	**0.73**	**10**	**11**
TV-F&S 2000a	Oct-99	B-60	Pentachlorophenol	7		0.73	10	9.6
TV-F&S 2000a	Oct-99	B-35	Pentachlorophenol	6.5		0.73	10	8.9
TV-F&S 2000a	Oct-99	B-16	Pentachlorophenol	6.3		0.73	10	8.6
Hart Crowser 1997	Dec-96	B-10A	Pentachlorophenol	5.9		0.73	10	8.1
TV-F&S 2000a	Oct-99	B-58	Pentachlorophenol	5.8		0.73	10	7.9
Hart Crowser 1997	Oct-95	B-24	Pentachlorophenol	2	J	0.73	10	2.7
Hart Crowser 1992b	May-92	B-18	Pentachlorophenol	2		0.73	10	2.7
Hart Crowser 1992b	May-92	B-11	Pentachlorophenol	1.4		0.73	10	1.9
Hart Crowser 1992b	May-92	B-10A	Pentachlorophenol	1.3		0.73	10	1.8
Hart Crowser 1997	Dec-96	B-24	Pentachlorophenol	1	J	0.73	10	1.4
Hart Crowser 1993a	Sep-92	B-25	Pentachlorophenol	0.91		0.73	10	1.2
Hart Crowser 1992b	May-92	B-27	Pentachlorophenol	0.91		0.73	10	1.2
Hart Crowser 1992b	May-92	B-72	Pentachlorophenol	0.68		0.73	10	0.9
TV-F&S 2000a	Oct-99	B-10A	Pentachlorophenol	0.6		0.73	10	0.8

Table E-2

Chemicals Detected in Groundwater

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Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-19	Pentachlorophenol	0.42		0.73	10	0.6
Hart Crowser 1992b	May-92	B-17	Pentachlorophenol	0.4		0.73	10	0.5
TV-F&S 2000a	Oct-99	B-36	Pentachlorophenol	0.37	J	0.73	10	0.5
Hart Crowser 1992b	May-92	B-25	Pentachlorophenol	0.35		0.73	10	0.5
Hart Crowser 1993a	Aug-93	B-25	Pentachlorophenol	0.34		0.73	10	0.5
Hart Crowser 1993a	Aug-93	B-21	Pentachlorophenol	0.18		0.73	10	0.2
Hart Crowser 1992b	May-92	B-1	Pentachlorophenol	0.18		0.73	10	0.2
Hart Crowser 1992b	May-92	B-21	Pentachlorophenol	0.18		0.73	10	0.2
Hart Crowser 1992b	May-92	B-9	Pentachlorophenol	0.17		0.73	10	0.2
Hart Crowser 1992b	May-92	B-24	Pentachlorophenol	0.15		0.73	10	0.2
Hart Crowser 1997	Oct-95	B-25	Pentachlorophenol	0.14		0.73	10	0.2
TV-F&S 2000a	Oct-99	B-8	Pentachlorophenol	0.14	J	0.73	10	0.2
TV-F&S 2000a	Oct-99	B-62	Pentachlorophenol	0.13	J	0.73	10	0.2
Hart Crowser 1997	Oct-95	B-21	Pentachlorophenol	0.11		0.73	10	0.2
Hart Crowser 1992b	May-92	B-26	Pentachlorophenol	0.11		0.73	10	0.2
Hart Crowser 1993a	Sep-92	B-21	Pentachlorophenol	0.089		0.73	10	0.1
Hart Crowser 1992b	May-92	B-23	Pentachlorophenol	0.082		0.73	10	0.1
TV-F&S 2000a	Oct-99	B-35	Pentachlorophenol	0.07	J	0.73	10	0.1
Hart Crowser 1992b	May-92	B-22	Pentachlorophenol	0.064		0.73	10	0.1
Hart Crowser 1997	Oct-95	B-24	Pentachlorophenol	0.05		0.73	10	0.1
TV-F&S 2000a	Oct-99	B-19	Pentachlorophenol	0.01	J	0.73	10	0.0
Ecology 1993c	Jul-93	B-49	Phenanthrene	39	J		23	1.7
Ecology 1993b	Jun-93	278092	Phenanthrene	24			23	1.0
Ecology 1993c	Jul-93	B-50	Phenanthrene	7	J		23	0.3
TV-F&S 2000a	Nov-98	B-46	Phenanthrene	4.5			23	0.2
TV-F&S 2000a	Nov-98	B-12	Phenanthrene	2.8			23	0.1
TV-F&S 2000a	Nov-98	B-52 (DUP)	Phenanthrene	2.6			23	0.1
TV-F&S 2000a	Nov-98	B-52	Phenanthrene	2.4			23	0.1
TV-F&S 2000a	Nov-98	B-49	Phenanthrene	2.3			23	0.1
TV-F&S 2000a	Oct-98	B-44	Phenanthrene	1.3			23	0.1
TV-F&S 2000a	Nov-99	B-12	Phenanthrene	1.3			23	0.1
TV-F&S 2000a	Oct-99	B-52	Phenanthrene	1.2			23	0.1
Ecology 1993c	Jul-93	B-27	Phenol	140		4,800	220	0.6
Ecology 1993b	Jun-93	278092	Phenol	93		4,800	220	0.4

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Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Ecology 1993b	Jun-93	278091	Phenol	54		4,800	220	0.2
Ecology 1993c	Jul-93	B-50	Phenol	32	J	4,800	220	0.1
Ecology 1993b	Jun-93	278094	Phenol	20		4,800	220	0.1
Ecology 1993c	Jul-93	B-48	Phenol	4	J	4,800	220	0.0
Ecology 1993c	Jul-93	B-48 (DUP)	Phenol	3	J	4,800	220	0.0
TV-F&S 2000a	Oct-99	B-38	Phenol	2.5		4,800	220	0.0
TV-F&S 2000a	**Oct-99**	**B-58**	**Phosphorus (total)**	**2,600**		**0.16**		**16,250**
TV-F&S 2000a	**Nov-99**	**B-31**	**Phosphorus (total)**	**1,600**		**0.16**		**10,000**
TV-F&S 2000a	**Oct-99**	**B-25**	**Phosphorus (total)**	**1,500**		**0.16**		**9,375**
TV-F&S 2000a	**Nov-99**	**B-11**	**Phosphorus (total)**	**1,400**		**0.16**		**8,750**
TV-F&S 2000a	**Oct-99**	**B-17**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-27**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-47**	**Phosphorus (total)**	**1,200**		**0.16**		**7,500**
TV-F&S 2000a	**Oct-99**	**B-26**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-42**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-49**	**Phosphorus (total)**	**1,100**		**0.16**		**6,875**
TV-F&S 2000a	**Oct-99**	**B-35**	**Phosphorus (total)**	**680**		**0.16**		**4,250**
TV-F&S 2000a	**Oct-99**	**B-46**	**Phosphorus (total)**	**640**		**0.16**		**4,000**
TV-F&S 2000a	**Nov-99**	**B-12**	**Phosphorus (total)**	**510**		**0.16**		**3,188**
TV-F&S 2000a	**Oct-99**	**B-65**	**Phosphorus (total)**	**440**		**0.16**		**2,750**
TV-F&S 2000a	**Oct-99**	**B-33A**	**Phosphorus (total)**	**400**		**0.16**		**2,500**
TV-F&S 2000a	**Oct-99**	**B-6**	**Phosphorus (total)**	**380**		**0.16**		**2,375**
TV-F&S 2000a	**Oct-99**	**B-36**	**Phosphorus (total)**	**370**		**0.16**		**2,313**
TV-F&S 2000a	**Oct-99**	**B-61**	**Phosphorus (total)**	**340**		**0.16**		**2,125**
TV-F&S 2000a	**Oct-99**	**B-23**	**Phosphorus (total)**	**310**		**0.16**		**1,938**
TV-F&S 2000a	**Oct-99**	**B-44**	**Phosphorus (total)**	**310**		**0.16**		**1,938**
TV-F&S 2000a	**Oct-99**	**B-59**	**Phosphorus (total)**	**300**		**0.16**		**1,875**
TV-F&S 2000a	**Oct-99**	**B-45**	**Phosphorus (total)**	**250**		**0.16**		**1,563**
TV-F&S 2000a	**Oct-99**	**B-21**	**Phosphorus (total)**	**230**		**0.16**		**1,438**
TV-F&S 2000a	**Oct-99**	**B-64**	**Phosphorus (total)**	**200**		**0.16**		**1,250**
TV-F&S 2000a	**Oct-99**	**B-15**	**Phosphorus (total)**	**200**		**0.16**		**1,250**
TV-F&S 2000a	**Oct-99**	**B-24**	**Phosphorus (total)**	**170**		**0.16**		**1,063**
TV-F&S 2000a	**Oct-99**	**B-55**	**Phosphorus (total)**	**170**		**0.16**		**1,063**
TV-F&S 2000a	**Oct-99**	**B-13**	**Phosphorus (total)**	**150**		**0.16**		**938**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Oct-99**	**B-28**	**Phosphorus (total)**	**150**		**0.16**		**938**
TV-F&S 2000a	**Oct-99**	**B-53**	**Phosphorus (total)**	**150**		**0.16**		**938**
TV-F&S 2000a	**Oct-99**	**B-22**	**Phosphorus (total)**	**140**		**0.16**		**875**
TV-F&S 2000a	**Oct-99**	**B-54**	**Phosphorus (total)**	**140**		**0.16**		**875**
TV-F&S 2000a	**Oct-99**	**B-8**	**Phosphorus (total)**	**120**		**0.16**		**750**
TV-F&S 2000a	**Oct-99**	**B-60**	**Phosphorus (total)**	**110**		**0.16**		**688**
TV-F&S 2000a	**Oct-99**	**B-16**	**Phosphorus (total)**	**100**		**0.16**		**625**
TV-F&S 2000a	**Oct-99**	**B-34**	**Phosphorus (total)**	**100**		**0.16**		**625**
TV-F&S 2000a	**Oct-99**	**B-62**	**Phosphorus (total)**	**89**		**0.16**		**556**
TV-F&S 2000a	**Oct-99**	**B-20A**	**Phosphorus (total)**	**85**		**0.16**		**531**
TV-F&S 2000a	Oct-99	B-63	Phosphorus (total)	0.28		0.16		1.8
Ecology 1993b	Jun-93	278092	Pyrene	8	J	480	20	0.4
Ecology 1993c	Jul-93	B-49	Pyrene	5	J	480	20	0.3
TV-F&S 2000a	Oct-99	B-38	Pyrene	0.59		480	20	0.0
TV-F&S 2000a	Nov-99	B-12	Pyrene	0.55		480	20	0.0
TV-F&S 2000a	Oct-99	B-49	sec-Butyl benzene	2,300				
TV-F&S 2000a	Oct-99	B-38	sec-Butyl benzene	31				
TV-F&S 2000a	Jul-99	B-58	sec-Butyl benzene	7.8				
TV-F&S 2000a	Nov-98	B-52	sec-Butyl benzene	5.3				
TV-F&S 2000a	Oct-98	B-8	sec-Butyl benzene	4.7				
Ecology 1993c	**Jul-93**	**B-27**	**Styrene**	**2,500**	**J**	**1.5**		**1,667**
TV-F&S 2000a	**Nov-98**	**B-49**	**Styrene**	**1,800**		**1.5**		**1,200**
Ecology 1993b	**Jun-93**	**278092**	**Styrene**	**1,300**		**1.5**		**867**
TV-F&S 2000a	**Oct-99**	**B-47**	**Styrene**	**1,100**		**1.5**		**733**
Hart Crowser 1992b	**May-92**	**B-30**	**Styrene**	**650**		**1.5**		**433**
Hart Crowser 1993a	**Sep-92**	**B-31**	**Styrene**	**610**		**1.5**		**407**
Hart Crowser 1993a	**Aug-93**	**B-30**	**Styrene**	**510**		**1.5**		**340**
Hart Crowser 1993a	**Sep-92**	**B-30**	**Styrene**	**460**		**1.5**		**307**
TV-F&S 2000a	**Nov-98**	**B-42**	**Styrene**	**460**		**1.5**		**307**
Hart Crowser 1997	**Dec-96**	**B-31**	**Styrene**	**400**		**1.5**		**267**
Ecology 1993b	**Jun-93**	**278091**	**Styrene**	**330**	**J**	**1.5**		**220**
Hart Crowser 1993a	**Aug-93**	**B-31**	**Styrene**	**310**		**1.5**		**207**
Hart Crowser 1997	**Dec-96**	**B-44**	**Styrene**	**310**		**1.5**		**207**
Hart Crowser 1997	**Oct-95**	**B-31**	**Styrene**	**230**		**1.5**		**153**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	**Dec-96**	**B-39**	**Styrene**	**230**		**1.5**		**153**
Hart Crowser 1997	**Oct-95**	**B-44**	**Styrene**	**130**		**1.5**		**87**
Hart Crowser 1997	**Dec-96**	**B-10A**	**Styrene**	**32**	**J**	**1.5**		**21**
Hart Crowser 1997	**Dec-96**	**B-35**	**Styrene**	**15**		**1.5**		**10**
TV-F&S 2000a	Oct-99	B-34	Sulfate	1,600,000				
TV-F&S 2000a	Oct-99	B-42	Sulfate	550,000				
TV-F&S 2000a	Oct-99	B-47	Sulfate	520,000				
TV-F&S 2000a	Oct-99	B-44	Sulfate	400,000				
TV-F&S 2000a	Nov-99	B-12	Sulfate	350,000				
TV-F&S 2000a	Oct-99	B-46	Sulfate	300,000				
TV-F&S 2000a	Oct-99	B-49	Sulfate	300,000				
TV-F&S 2000a	Oct-99	B-53	Sulfate	270,000				
TV-F&S 2000a	Nov-99	B-31	Sulfate	250,000				
TV-F&S 2000a	Oct-99	B-54	Sulfate	170,000				
TV-F&S 2000a	Oct-99	B-28	Sulfate	150,000				
TV-F&S 2000a	Oct-99	B-16	Sulfate	140,000				
TV-F&S 2000a	Oct-99	B-26	Sulfate	130,000				
TV-F&S 2000a	Oct-99	B-15	Sulfate	110,000				
TV-F&S 2000a	Oct-99	B-13	Sulfate	97,000				
TV-F&S 2000a	Oct-99	B-55	Sulfate	94,000				
TV-F&S 2000a	Oct-99	B-23	Sulfate	91,000				
TV-F&S 2000a	Oct-99	B-33A	Sulfate	86,000				
TV-F&S 2000a	Oct-99	B-59	Sulfate	81,000				
TV-F&S 2000a	Oct-99	B-58	Sulfate	75,000				
TV-F&S 2000a	Nov-99	B-11	Sulfate	56,000				
TV-F&S 2000a	Oct-99	B-8	Sulfate	52,000				
TV-F&S 2000a	Oct-99	B-60	Sulfate	46,000				
TV-F&S 2000a	Oct-99	B-45	Sulfate	34,000				
TV-F&S 2000a	Oct-99	B-22	Sulfate	30,000				
TV-F&S 2000a	Oct-99	B-62	Sulfate	27,000				
TV-F&S 2000a	Oct-99	B-24	Sulfate	22,000				
TV-F&S 2000a	Oct-99	B-36	Sulfate	19,000				
TV-F&S 2000a	Oct-99	B-20A	Sulfate	19,000				
TV-F&S 2000a	Oct-99	B-64	Sulfate	15,000				

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-61	Sulfate	15,000				
TV-F&S 2000a	Oct-99	B-6	Sulfate	13,000				
TV-F&S 2000a	Oct-99	B-65	Sulfate	9,500				
TV-F&S 2000a	Oct-99	B-21	Sulfate	6,900				
TV-F&S 2000a	Oct-99	B-35	Sulfate	5,200				
TV-F&S 2000a	Oct-99	B-17	Sulfate	1,900				
TV-F&S 2000a	Oct-99	B-27	Sulfate	300				
TV-F&S 2000a	Oct-99	B-25	Sulfate	150	J			
TV-F&S 2000a	Oct-99	B-63	Sulfate	44				
Hart Crowser 1993a	**Jun-93**	**B-43**	**TCE**	**94,000**		**0.11**		**854,545**
Ecology 1993b	**Jun-93**	**278091**	**TCE**	**72,000**		**0.11**		**654,545**
Hart Crowser 1993a	**Sep-92**	**B-31**	**TCE**	**60,000**		**0.11**		**545,455**
Hart Crowser 1997	**Oct-95**	**B-31**	**TCE**	**57,000**	**J**	**0.11**		**518,182**
Hart Crowser 1993a	**Jul-93**	**B-49**	**TCE**	**54,000**		**0.11**		**490,909**
Hart Crowser 1993a	**Aug-93**	**B-31**	**TCE**	**52,000**		**0.11**		**472,727**
Hart Crowser 1992b	**May-92**	**B-31**	**TCE**	**51,000**		**0.11**		**463,636**
Hart Crowser 1993a	**Jun-93**	**B-44**	**TCE**	**50,000**		**0.11**		**454,545**
Hart Crowser 1993a	**Jul-93**	**B-47 (DUP)**	**TCE**	**50,000**		**0.11**		**454,545**
Hart Crowser 1993a	**Sep-92**	**B-30**	**TCE**	**47,000**		**0.11**		**427,273**
Hart Crowser 1993a	**Jul-93**	**B-47**	**TCE**	**47,000**		**0.11**		**427,273**
Ecology 1993c	**Jul-93**	**B-49**	**TCE**	**46,000**		**0.11**		**418,182**
Ecology 1993c	**Jul-93**	**B-27**	**TCE**	**41,000**		**0.11**		**372,727**
Hart Crowser 1993a	**Aug-93**	**B-51**	**TCE**	**40,000**		**0.11**		**363,636**
Hart Crowser 1992b	**May-92**	**B-11**	**TCE**	**40,000**		**0.11**		**363,636**
Hart Crowser 1993a	**Aug-93**	**B-30**	**TCE**	**38,000**		**0.11**		**345,455**
Ecology 1993b	**Jun-93**	**278092**	**TCE**	**35,000**		**0.11**		**318,182**
Hart Crowser 1992b	**May-92**	**B-30**	**TCE**	**34,000**		**0.11**		**309,091**
Ecology 1993c	**Jul-93**	**B-48**	**TCE**	**31,000**		**0.11**		**281,818**
Hart Crowser 1993a	**Jul-93**	**B-48**	**TCE**	**30,000**		**0.11**		**272,727**
Ecology 1993c	**Jul-93**	**B-48 (DUP)**	**TCE**	**30,000**		**0.11**		**272,727**
Hart Crowser 1993a	**Jun-93**	**B-46**	**TCE**	**23,000**		**0.11**		**209,091**
TV-F&S 2000a	**Nov-98**	**B-49**	**TCE**	**22,000**		**0.11**		**200,000**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**TCE**	**22,000**		**0.11**		**200,000**
Hart Crowser 1992b	**May-92**	**B-15**	**TCE**	**22,000**		**0.11**		**200,000**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Sep-92	B-15	TCE	21,000		0.11		190,909
TV-F&S 2000a	Oct-99	B-47	TCE	21,000		0.11		190,909
TV-F&S 2000a	Oct-98	B-44	TCE	20,000		0.11		181,818
TV-F&S 2000a	Oct-99	B-49	TCE	19,000		0.11		172,727
TV-F&S 2000a	Oct-99	B-46	TCE	18,000		0.11		163,636
Ecology 1993b	Jun-93	278094 (DUP)	TCE	17,000		0.11		154,545
Hart Crowser 1997	Dec-96	B-44	TCE	17,000		0.11		154,545
Hart Crowser 1993a	Aug-93	B-15	TCE	16,000		0.11		145,455
Hart Crowser 1997	Oct-95	B-44	TCE	15,000		0.11		136,364
Hart Crowser 1997	Dec-96	B-39	TCE	15,000		0.11		136,364
Ecology 1993b	Jun-93	278094	TCE	14,000		0.11		127,273
Hart Crowser 1997	Dec-96	B-31	TCE	13,000		0.11		118,182
TV-F&S 2000a	Nov-98	B-42	TCE	13,000		0.11		118,182
TV-F&S 2000a	Nov-98	B-45	TCE	13,000		0.11		118,182
Hart Crowser 1993a	Jul-93	B-50	TCE	12,000		0.11		109,091
Hart Crowser 1997	Oct-95	B-45	TCE	12,000	J	0.11		109,091
Hart Crowser 1997	Dec-96	B-45	TCE	12,000		0.11		109,091
TV-F&S 2000a	Nov-98	B-45 BAL	TCE	12,000		0.11		109,091
TV-F&S 2000a	Nov-98	B-46 BAL	TCE	12,000		0.11		109,091
Hart Crowser 1993a	Sep-92	B-8	TCE	11,000		0.11		100,000
TV-F&S 2000a	Jul-99	B-58	TCE	11,000		0.11		100,000
Hart Crowser 1993a	Jun-93	B-45	TCE	10,000		0.11		90,909
Ecology 1993c	Jul-93	B-50	TCE	10,000		0.11		90,909
TV-F&S 2000a	Nov-98	B-12	TCE	10,000		0.11		90,909
TV-F&S 2000a	Nov-98	B-39	TCE	10,000		0.11		90,909
TV-F&S 2000a	Oct-99	B-45	TCE	10,000		0.11		90,909
TV-F&S 2000a	Oct-99	B-45 (DUP)	TCE	9,600		0.11		87,273
Hart Crowser 1993a	Jun-93	B-45 (DUP)	TCE	9,300		0.11		84,545
Hart Crowser 1993a	Aug-93	B-52 (DUP)	TCE	9,300		0.11		84,545
TV-F&S 2000a	Nov-98	B-46	TCE	9,100		0.11		82,727
TV-F&S 2000a	Oct-99	B-42	TCE	9,000		0.11		81,818
Ecology 1993b	Jun-93	278093	TCE	8,900		0.11		80,909
Hart Crowser 1993a	Aug-93	B-52	TCE	8,800		0.11		80,000
Hart Crowser 1993a	Aug-93	B-8	TCE	7,800		0.11		70,909

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-44	TCE	7,800		0.11		70,909
TV-F&S 2000a	Oct-99	B-39	TCE	7,500	J	0.11		68,182
TV-F&S 2000a	Oct-98	B-8	TCE	7,300		0.11		66,364
Hart Crowser 1997	Dec-96	B-8	TCE	6,300		0.11		57,273
TV-F&S 2000a	Oct-99	B-58	TCE	6,200		0.11		56,364
TV-F&S 2000a	Oct-99	B-58 (DUP)	TCE	5,600		0.11		50,909
TV-F&S 2000a	Oct-99	B-15	TCE	5,600		0.11		50,909
TV-F&S 2000a	Nov-98	B-52	TCE	5,300		0.11		48,182
Hart Crowser 1992b	May-92	B-8	TCE	5,000		0.11		45,455
TV-F&S 2000a	Nov-98	B-52 (DUP)	TCE	4,100		0.11		37,273
TV-F&S 2000a	Jul-99	B-61	TCE	3,700		0.11		33,636
TV-F&S 2000a	Nov-99	B-12	TCE	3,300		0.11		30,000
TV-F&S 2000a	Oct-99	B-8	TCE	3,100		0.11		28,182
Hart Crowser 1997	Oct-95	B-10A	TCE	3,000		0.11		27,273
Hart Crowser 1997	Oct-95	B-8	TCE	2,800		0.11		25,455
TV-F&S 2000a	Nov-99	B-11	TCE	2,800		0.11		25,455
ATI 1991b	Sep-91	B-16	TCE	2,400		0.11		21,818
Hart Crowser 1993a	Aug-93	B-20	TCE	2,200		0.11		20,000
TV-F&S 2000a	Oct-99	B-61	TCE	1,700		0.11		15,455
Hart Crowser 1997	Dec-96	B-10A	TCE	1,400		0.11		12,727
Hart Crowser 1997	Dec-96	B-20	TCE	1,300		0.11		11,818
TV-F&S 2000a	Nov-99	B-31	TCE	1,200		0.11		10,909
Hart Crowser 1993a	Aug-93	B-10A	TCE	1,100		0.11		10,000
TV-F&S 2000a	Oct-99	B-60	TCE	1,100		0.11		10,000
TV-F&S 2000a	Oct-99	B-62	TCE	1,000		0.11		9,091
TV-F&S 2000a	Oct-99	B-10A	TCE	950		0.11		8,636
TV-F&S 2000a	Jul-99	B-63 (DUP)	TCE	940		0.11		8,545
TV-F&S 2000a	Jul-99	B-63	TCE	920		0.11		8,364
TV-F&S 2000a	Oct-99	B-52	TCE	830		0.11		7,545
TV-F&S 2000a	Jul-99	TW-5	TCE	790		0.11		7,182
TV-F&S 2000a	Oct-99	B-63	TCE	760		0.11		6,909
Hart Crowser 1992b	May-92	B-22	TCE	690		0.11		6,273
Hart Crowser 1992b	May-92	B-10A	TCE	590		0.11		5,364
Hart Crowser 1993a	Aug-93	B-13	TCE	500		0.11		4,545

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-13	TCE	450		0.11		4,091
Hart Crowser 1993a	Sep-92	B-13	TCE	440		0.11		4,000
TV-F&S 2000a	Oct-99	B-54	TCE	420		0.11		3,818
Hart Crowser 1993a	Sep-92	B-10A	TCE	370		0.11		3,364
TV-F&S 2000a	Oct-98	B-20	TCE	340		0.11		3,091
TV-F&S 2000a	Jul-99	B-13	TCE	320		0.11		2,909
TV-F&S 2000a	Jul-99	B-60	TCE	300		0.11		2,727
TV-F&S 2000a	Oct-99	B-16	TCE	300		0.11		2,727
TV-F&S 2000a	Nov-98	B-10A	TCE	260		0.11		2,364
Hart Crowser 1992b	May-92	B-20	TCE	260		0.11		2,364
Hart Crowser 1993a	Sep-92	B-36	TCE	250		0.11		2,273
TV-F&S 2000a	Feb-99	B-22	TCE	250		0.11		2,273
Hart Crowser 1997	Oct-95	B-9	TCE	240		0.11		2,182
TV-F&S 2000a	Oct-99	B-20A	TCE	240		0.11		2,182
Hart Crowser 1993a	Sep-92	B-20	TCE	230		0.11		2,091
TV-F&S 2000a	Jul-99	TW-2	TCE	230		0.11		2,091
TV-F&S 2000a	Dec-98	B-22	TCE	226		0.11		2,055
TV-F&S 2000a	Apr-99	B-13	TCE	220		0.11		2,000
Hart Crowser 1992b	May-92	B-14	TCE	220		0.11		2,000
TV-F&S 2000a	Dec-98	B-13	TCE	214		0.11		1,945
Hart Crowser 1992b	May-92	B-16	TCE	210		0.11		1,909
TV-F&S 2000a	Oct-99	B-13	TCE	200		0.11		1,818
TV-F&S 2000a	Nov-98	B-13	TCE	194		0.11		1,764
Hart Crowser 1993a	Sep-92	B-33A	TCE	180		0.11		1,636
TV-F&S 2000a	Feb-99	B-13	TCE	180		0.11		1,636
TV-F&S 2000a	Jul-99	B-62 (DUP)	TCE	180		0.11		1,636
TV-F&S 2000a	Jul-99	B-62	TCE	180		0.11		1,636
TV-F&S 2000a	Apr-99	B-54	TCE	170		0.11		1,545
TV-F&S 2000a	Oct-98	B-19	TCE	160		0.11		1,455
TV-F&S 2000a	Oct-99	B-22	TCE	160		0.11		1,455
TV-F&S 2000a	Jul-99	TW-3 (DUP)	TCE	150		0.11		1,364
TV-F&S 2000a	Jul-99	TW-6	TCE	150		0.11		1,364
TV-F&S 2000a	Oct-99	B-36	TCE	150		0.11		1,364
TV-F&S 2000a	Jul-99	TW-3	TCE	140		0.11		1,273

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Jan-99	TB-1	TCE	130		0.11		1,182
TV-F&S 2000a	Oct-99	B-18	TCE	120		0.11		1,091
TV-F&S 2001a	Jul-00	B-13	TCE	120	J	0.11		1,091
Hart Crowser 1992b	May-92	B-18	TCE	120		0.11		1,091
Hart Crowser 1997	Dec-96	B-36	TCE	110		0.11		1,000
Hart Crowser 1993a	Aug-93	B-34	TCE	100		0.11		909
Hart Crowser 1993a	Aug-93	B-35	TCE	100		0.11		909
TV-F&S 2000a	Feb-99	B-54	TCE	93		0.11		845
TV-F&S 2000a	Jul-99	TW-1	TCE	93		0.11		845
Hart Crowser 1997	Dec-96	B-33A	TCE	90	J	0.11		818
TV-F&S 2000a	Jan-99	TB-2	TCE	74		0.11		673
Hart Crowser 1993a	Sep-92	B-35	TCE	72		0.11		655
Hart Crowser 1990b	1990	B-8	TCE	65		0.11		591
Hart Crowser 1992b	May-92	B-1	TCE	64		0.11		582
Hart Crowser 1997	Oct-95	B-33A	TCE	62		0.11		564
TV-F&S 2000a	Oct-99	B-19	TCE	62		0.11		564
Hart Crowser 1997	Oct-95	B-20	TCE	58		0.11		527
TV-F&S 2000a	Jul-99	B-65	TCE	57		0.11		518
Hart Crowser 1992b	May-92	B-9	TCE	54		0.11		491
TV-F&S 2000a	Jan-99	TB-3	TCE	52		0.11		473
Hart Crowser 1992b	May-92	B-19	TCE	51		0.11		464
Hart Crowser 1992b	May-92	B-72	TCE	50		0.11		455
Hart Crowser 1997	Dec-96	B-35	TCE	49		0.11		445
TV-F&S 2000a	Apr-99	B-56	TCE	49		0.11		445
Hart Crowser 1993a	Aug-93	B-26	TCE	46		0.11		418
TV-F&S 2000a	Oct-99	B-53	TCE	42		0.11		382
TV-F&S 2000a	Nov-98	B-18	TCE	41		0.11		373
TV-F&S 2000a	Apr-99	B-53	TCE	37		0.11		336
Hart Crowser 1993a	Sep-92	B-9	TCE	36		0.11		327
TV-F&S 2000a	Jan-99	TB-4	TCE	36		0.11		327
TV-F&S 2000a	Feb-99	B-53	TCE	36.0		0.11		327
TV-F&S 2000a	Feb-99	B-55	TCE	35		0.11		318
Hart Crowser 1990b	1990	B-11	TCE	34		0.11		309
Hart Crowser 1992b	May-92	B-21	TCE	33		0.11		300

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Sep-92	B-26	TCE	32		0.11		291
Hart Crowser 1993a	Aug-93	B-36	TCE	32		0.11		291
TV-F&S 2000a	Apr-99	B-55	TCE	32		0.11		291
TV-F&S 2000a	Feb-99	B-56	TCE	30		0.11		273
Hart Crowser 1990b	1990	B-12	TCE	28		0.11		255
Hart Crowser 1997	Oct-95	B-26	TCE	27		0.11		245
TV-F&S 2000a	Oct-99	B-57	TCE	23		0.11		209
TV-F&S 2001a	Jul-00	B-55	TCE	20	J	0.11		182
TV-F&S 2000a	Oct-98	B-35	TCE	19		0.11		173
TV-F&S 2000a	Apr-99	B-57	TCE	19		0.11		173
TV-F&S 2000a	Oct-99	B-64	TCE	19		0.11		173
TV-F&S 2000a	Oct-98	B-36	TCE	18		0.11		164
Hart Crowser 1992b	May-92	B-26	TCE	18		0.11		164
Hart Crowser 1993a	Aug-93	B-9	TCE	16		0.11		145
TV-F&S 2000a	Oct-98	B-36 (DUP)	TCE	16		0.11		145
TV-F&S 2000a	Oct-99	B-56	TCE	16		0.11		145
TV-F&S 2000a	Oct-99	B-55	TCE	16		0.11		145
TV-F&S 2000a	Nov-98	B-26	TCE	15		0.11		136
TV-F&S 2000a	Oct-99	B-9	TCE	15		0.11		136
TV-F&S 2001a	Jul-00	B-57	TCE	15	J	0.11		136
Hart Crowser 1997	Dec-96	B-26	TCE	14		0.11		127
TV-F&S 2000a	Jul-99	B-64	TCE	14		0.11		127
Hart Crowser 1990b	1990	B-7	TCE	13		0.11		118
Hart Crowser 1997	Dec-96	B-9	TCE	13		0.11		118
TV-F&S 2000a	Oct-99	B-23	TCE	13		0.11		118
TV-F&S 2000a	Oct-99	B-14	TCE	13		0.11		118
TV-F&S 2000a	Nov-98	B-9	TCE	12		0.11		109
TV-F&S 2001a	Jul-00	B-53	TCE	12	J	0.11		109
TV-F&S 2001a	Jul-00	B-56	TCE	12	J	0.11		109
Hart Crowser 1992b	May-92	B-5	TCE	11		0.11		100
Hart Crowser 1992b	May-92	B-5 (DUP)	TCE	11		0.11		100
Hart Crowser 1997	Dec-96	B-34	TCE	10		0.11		91
TV-F&S 2000a	Feb-99	B-57	TCE	10		0.11		91
TV-F&S 2000a	Oct-99	B-26	TCE	9.8		0.11		89

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Jul-99	B-59	TCE	8.4		0.11		76
TV-F&S 2000a	Dec-98	B-23	TCE	7.96		0.11		72
Hart Crowser 1993a	Sep-92	B-25	TCE	7		0.11		64
TV-F&S 2001a	Jul-00	AGI-2	TCE	7		0.11		64
TV-F&S 2000a	Oct-98	B-34	TCE	6.8		0.11		62
Hart Crowser 1990b	1990	B-8	TCE	5.7		0.11		52
TV-F&S 2000a	Oct-99	B-34	TCE	5.7		0.11		52
TV-F&S 2000a	Oct-99	B-38	TCE	5.2		0.11		47
Hart Crowser 1993a	Sep-92	B-24	TCE	5		0.11		45
Hart Crowser 1997	Oct-95	B-35	TCE	5		0.11		45
Hart Crowser 1992b	May-92	B-23	TCE	5		0.11		45
Hart Crowser 1992b	May-92	B-23 (DUP)	TCE	5		0.11		45
Hart Crowser 1990b	1990	B-11	TCE	3.2		0.11		29
Hart Crowser 1997	Oct-95	B-36	TCE	3		0.11		27
Hart Crowser 1992b	May-92	B-27	TCE	3		0.11		27
Hart Crowser 1992b	May-92	B-28	TCE	3		0.11		27
TV-F&S 2000a	Oct-99	B-28	TCE	2.6		0.11		24
Hart Crowser 1992b	May-92	B-25	TCE	2		0.11		18
Hart Crowser 1990b	1990	B-10	TCE	1.3		0.11		12
Hart Crowser 1993a	Aug-93	B-33A	TCE	1		0.11		9.1
TV-F&S 2000a	Feb-99	B-28	TCE	1.0		0.11		9.1
TV-F&S 2001a	Jul-00	NW-6	TCE	1		0.11		9.1
TV-F&S 2001a	Jul-00	NW-12	TCE	1		0.11		9.1
TV-F&S 2001a	Jul-00	B-28	TCE	1	J	0.11		9.1
Hart Crowser 1990b	1990	B-10A	TCE	0.88		0.11		8.0
Hart Crowser 1990a	May-89	B-1	TCE	0.140		0.11		1.3
Hart Crowser 1990b	1990	B-14	TCE	0.13		0.11		1.2
Hart Crowser 1990b	1990	B-1	TCE	0.120		0.11		1.1
Hart Crowser 1990b	1990	B-9	TCE	0.072		0.11		0.7
Hart Crowser 1990b	1990	B-5	TCE	0.045		0.11		0.4
Hart Crowser 1990b	1990	B-9	TCE	0.025		0.11		0.2
Hart Crowser 1990b	1990	B-5	TCE	0.003		0.11		0.0
Hart Crowser 1992b	May-92	B-31	Tetrachlorophenols (total)	600				
Hart Crowser 1997	Dec-96	B-39	Tetrachlorophenols (total)	180	J			

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-31	Tetrachlorophenols (total)	47				
Hart Crowser 1997	Dec-96	B-10A	Tetrachlorophenols (total)	4.5				
Hart Crowser 1997	Dec-96	B-20	Tetrachlorophenols (total)	4.4				
Hart Crowser 1992b	May-92	B-10A	Tetrachlorophenols (total)	0.74				
Ecology 1993c	**Jul-93**	**B-27**	**Toluene**	**76,000**		**640**		**119**
Ecology 1993b	**Jun-93**	**278092**	**Toluene**	**48,000**		**640**		**75**
Ecology 1993b	**Jun-93**	**278091**	**Toluene**	**38,000**		**640**		**59**
Hart Crowser 1992b	**May-92**	**B-30**	**Toluene**	**36,000**		**640**		**56**
Hart Crowser 1992b	**May-92**	**B-31**	**Toluene**	**33,000**		**640**		**52**
TV-F&S 2000a	**Nov-98**	**B-49**	**Toluene**	**27,000**		**640**		**42**
Ecology 1993c	**Jul-93**	**B-49**	**Toluene**	**26,000**		**640**		**41**
TV-F&S 2000a	**Oct-99**	**B-47**	**Toluene**	**23,000**		**640**		**36**
TV-F&S 2000a	**Oct-99**	**B-47 (DUP)**	**Toluene**	**23,000**		**640**		**36**
TV-F&S 2000a	**Oct-99**	**B-49**	**Toluene**	**13,000**		**640**		**20**
Hart Crowser 1997	**Dec-96**	**B-31**	**Toluene**	**12,000**		**640**		**19**
Hart Crowser 1997	**Dec-96**	**B-44**	**Toluene**	**11,000**		**640**		**17**
Hart Crowser 1997	**Dec-96**	**B-39**	**Toluene**	**9,100**		**640**		**14**
TV-F&S 2000a	**Oct-98**	**B-20**	**Toluene**	**7,200**		**640**		**11**
Hart Crowser 1992b	**May-92**	**B-15**	**Toluene**	**6,700**		**640**		**10**
TV-F&S 2000a	**Oct-98**	**B-44**	**Toluene**	**6,500**		**640**		**10**
TV-F&S 2000a	Nov-98	B-42	Toluene	6,100		640		9.5
Hart Crowser 1992b	May-92	B-11	Toluene	5,800		640		9.1
TV-F&S 2000a	Oct-99	B-42	Toluene	4,700		640		7.3
Hart Crowser 1997	Dec-96	B-35	Toluene	3,900		640		6.1
TV-F&S 2000a	Oct-98	B-21	Toluene	3,900		640		6.1
Ecology 1993c	Jul-93	B-50	Toluene	3,700	J	640		5.8
TV-F&S 2000a	Nov-98	B-12	Toluene	3,700		640		5.8
Ecology 1993c	Jul-93	B-48	Toluene	3,100	J	640		4.8
Ecology 1993c	Jul-93	B-48 (DUP)	Toluene	3,100	J	640		4.8
Hart Crowser 1992b	May-92	B-21	Toluene	2,800		640		4.4
Ecology 1993b	Jun-93	278094 (DUP)	Toluene	2,700	J	640		4.2
TV-F&S 2000a	Oct-98	B-35	Toluene	2,400		640		3.8
TV-F&S 2000a	Oct-99	B-44	Toluene	2,400		640		3.8
Ecology 1993b	Jun-93	278094	Toluene	2,300		640		3.6

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-20	Toluene	2,100		640		3.3
TV-F&S 2000a	Oct-99	B-35	Toluene	1,700		640		2.7
Hart Crowser 1992b	May-92	B-10A	Toluene	1,700		640		2.7
TV-F&S 2000a	Nov-98	B-39	Toluene	1,500		640		2.3
Hart Crowser 1997	Dec-96	B-21	Toluene	1,300		640		2.0
Ecology 1993b	Jun-93	278093	Toluene	1,200		640		1.9
TV-F&S 2000a	Nov-99	B-12	Toluene	1,000		640		1.6
Hart Crowser 1992b	May-92	B-16	Toluene	960		640		1.5
TV-F&S 2000a	Oct-99	B-21	Toluene	690		640		1.1
TV-F&S 2000a	Nov-98	B-45 BAL	Toluene	670		640		1.0
Hart Crowser 1992b	May-92	B-29	Toluene	630		640		0.98
Hart Crowser 1997	Dec-96	B-10A	Toluene	550		640		0.9
TV-F&S 2000a	Nov-98	B-46 BAL	Toluene	540		640		0.8
Hart Crowser 1992b	May-92	B-20	Toluene	470		640		0.7
Hart Crowser 1997	Dec-96	B-45	Toluene	440		640		0.7
TV-F&S 2000a	Nov-98	B-46	Toluene	330		640		0.5
TV-F&S 2000a	Nov-98	B-45	Toluene	320		640		0.5
TV-F&S 2000a	Nov-98	B-52	Toluene	310		640		0.5
TV-F&S 2000a	Jul-99	B-63 (DUP)	Toluene	260		640		0.4
TV-F&S 2000a	Jul-99	B-63	Toluene	250		640		0.4
TV-F&S 2000a	Oct-99	B-45	Toluene	250		640		0.4
TV-F&S 2000a	Oct-99	B-45 (DUP)	Toluene	250		640		0.4
TV-F&S 2000a	Nov-99	B-31	Toluene	210		640		0.3
TV-F&S 2000a	Nov-99	B-11	Toluene	200		640		0.3
TV-F&S 2000a	Nov-98	B-52 (DUP)	Toluene	190		640		0.3
Hart Crowser 1992b	May-92	B-18	Toluene	150		640		0.2
TV-F&S 2000a	Oct-99	B-52	Toluene	110		640		0.2
TV-F&S 2000a	Oct-99	B-10A	Toluene	110		640		0.2
TV-F&S 2000a	Jul-99	B-65	Toluene	98		640		0.2
ATI 1991b	Sep-91	B-16	Toluene	90		640		0.1
Hart Crowser 1992b	May-92	B-8	Toluene	74		640		0.1
Hart Crowser 1997	Dec-96	B-33A	Toluene	43	J	640		0.1
Hart Crowser 1990b	1990	B-8	Toluene	38		640		0.1
Hart Crowser 1997	Dec-96	B-8	Toluene	26		640		0.0

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-6	Toluene	24		640		0.0
Hart Crowser 1990b	1990	B-7	Toluene	21		640		0.0
Hart Crowser 1992b	May-92	B-27	Toluene	19		640		0.0
Hart Crowser 1992b	May-92	B-9	Toluene	14		640		0.0
ATI 1991b	Sep-91	B-17	Toluene	13		640		0.0
Hart Crowser 1992b	May-92	B-17	Toluene	12		640		0.0
TV-F&S 2000a	Oct-98	B-36 (DUP)	Toluene	11		640		0.0
TV-F&S 2000a	Oct-99	B-38	Toluene	11		640		0.0
TV-F&S 2000a	Oct-98	B-36	Toluene	10		640		0.0
Hart Crowser 1992b	May-92	B-25	Toluene	10		640		0.0
Hart Crowser 1992b	May-92	B-72	Toluene	10		640		0.0
Hart Crowser 1992b	May-92	B-19	Toluene	9		640		0.0
Hart Crowser 1992b	May-92	B-24	Toluene	8		640		0.0
TV-F&S 2000a	Nov-98	B-18	Toluene	5.3		640		0.0
Hart Crowser 1992b	May-92	B-23	Toluene	5		640		0.0
Hart Crowser 1990b	1990	B-11	Toluene	4.6		640		0.0
Hart Crowser 1992b	May-92	B-23 (DUP)	Toluene	4		640		0.0
TV-F&S 2000a	Oct-98	B-34	Toluene	3.5		640		0.0
Hart Crowser 1990b	1990	B-11	Toluene	2.6		640		0.0
TV-F&S 2000a	Oct-98	B-19	Toluene	1.9		640		0.0
Hart Crowser 1990b	1990	B-10A	Toluene	1.8		640		0.0
TV-F&S 2000a	Jul-99	TW-2	Toluene	1.4		640		0.0
TV-F&S 2000a	Oct-98	B-8	Toluene	1.3		640		0.0
Hart Crowser 1992b	May-92	B-5	Toluene	1		640		0.0
Hart Crowser 1992b	May-92	B-5 (DUP)	Toluene	1		640		0.0
Hart Crowser 1990b	1990	B-8	Toluene	0.300		640		0.0
Hart Crowser 1990b	1990	B-12	Toluene	0.220		640		0.0
Hart Crowser 1990b	1990	B-10	Toluene	0.140		640		0.0
Hart Crowser 1990b	1990	B-1	Toluene	0.013		640		0.0
Hart Crowser 1990b	1990	B-7	Total Hydrocarbons (Light)	270		30		9.0
Hart Crowser 1990b	1990	B-12	Total Hydrocarbons (Light)	230		30		7.7
Hart Crowser 1990b	1990	B-12	Total Hydrocarbons (Light)	75		30		2.5
Hart Crowser 1990b	1990	B-11	Total Hydrocarbons (Light)	17		30		0.6
TV-F&S 2000a	Oct-99	B-58	trans-1,2-DCE	680		160		4.3

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Nov-98	B-46 BAL	trans-1,2-DCE	590		160		3.7
TV-F&S 2000a	Oct-98	B-21	trans-1,2-DCE	530		160		3.3
TV-F&S 2000a	Nov-98	B-46	trans-1,2-DCE	490		160		3.1
TV-F&S 2000a	Oct-98	B-20	trans-1,2-DCE	470		160		2.9
TV-F&S 2000a	Oct-98	B-44	trans-1,2-DCE	440		160		2.8
TV-F&S 2000a	Nov-98	B-12	trans-1,2-DCE	420		160		2.6
TV-F&S 2000a	Oct-99	B-65	trans-1,2-DCE	360	J	160		2.3
TV-F&S 2000a	Jul-99	B-65	trans-1,2-DCE	340		160		2.1
TV-F&S 2000a	Oct-99	B-58 (DUP)	trans-1,2-DCE	320		160		2.0
TV-F&S 2000a	Oct-98	B-33A	trans-1,2-DCE	300		160		1.9
TV-F&S 2000a	Jul-99	B-58	trans-1,2-DCE	290		160		1.8
TV-F&S 2000a	Nov-98	B-45	trans-1,2-DCE	270		160		1.7
TV-F&S 2000a	Nov-98	B-49	trans-1,2-DCE	270		160		1.7
TV-F&S 2000a	Nov-98	B-45 BAL	trans-1,2-DCE	220		160		1.4
TV-F&S 2000a	Jul-99	B-61	trans-1,2-DCE	180		160		1.1
TV-F&S 2000a	Oct-99	B-45 (DUP)	trans-1,2-DCE	170		160		1.1
TV-F&S 2000a	Oct-99	B-52	trans-1,2-DCE	140		160		0.9
TV-F&S 2000a	Oct-99	B-45	trans-1,2-DCE	140		160		0.9
TV-F&S 2000a	Nov-99	B-11	trans-1,2-DCE	140		160		0.9
TV-F&S 2000a	Nov-98	B-42	trans-1,2-DCE	130		160		0.8
TV-F&S 2000a	Nov-98	B-52	trans-1,2-DCE	120		160		0.8
TV-F&S 2000a	Oct-99	B-18	trans-1,2-DCE	120		160		0.8
TV-F&S 2000a	Oct-99	B-33A	trans-1,2-DCE	100		160		0.6
TV-F&S 2000a	Jul-99	B-63	trans-1,2-DCE	37		160		0.2
TV-F&S 2000a	Jul-99	B-63 (DUP)	trans-1,2-DCE	35		160		0.2
TV-F&S 2000a	Nov-98	B-18	trans-1,2-DCE	12		160		0.1
TV-F&S 2000a	Jul-99	TW-2	trans-1,2-DCE	12		160		0.1
TV-F&S 2000a	Jul-99	TW-3 (DUP)	trans-1,2-DCE	11		160		0.1
TV-F&S 2000a	Jul-99	TW-3	trans-1,2-DCE	8.9		160		0.1
TV-F&S 2000a	Oct-99	B-16	trans-1,2-DCE	8.4		160		0.1
TV-F&S 2000a	Oct-98	B-8	trans-1,2-DCE	5.8		160		0.0
TV-F&S 2000a	Jul-99	TW-5	trans-1,2-DCE	5.6		160		0.0
TV-F&S 2000a	Dec-98	B-22	trans-1,2-DCE	3.35		160		0.0
TV-F&S 2000a	Oct-99	B-36	trans-1,2-DCE	3.2		160		0.0

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-99	B-13	trans-1,2-DCE	1.7	J	160		0.0
TV-F&S 2000a	Jul-99	TW-1	trans-1,2-DCE	1.5		160		0.0
TV-F&S 2000a	Nov-98	B-26	trans-1,2-DCE	1		160		0.0
Hart Crowser 1990b	1990	B-8	trans-1,2-DCE	0.003		160		0.0
Hart Crowser 1990b	1990	B-8	Trichloroethane	3.3				
Hart Crowser 1990b	1990	B-5	Trichloroethane	0.027				
Hart Crowser 1990b	1990	B-6	Trichlorofluoromethane	0.003		2,400		0.0
TV-F&S 2000a	**Oct-99**	**B-33A (DUP)**	**Vinyl Chloride**	**25,000**		**0.029**		**862,069**
Hart Crowser 1992b	**May-92**	**B-21**	**Vinyl Chloride**	**25,000**		**0.029**		**862,069**
TV-F&S 2000a	**Oct-99**	**B-33A**	**Vinyl Chloride**	**23,000**		**0.029**		**793,103**
Hart Crowser 1993a	**Sep-92**	**B-35**	**Vinyl Chloride**	**19,000**		**0.029**		**655,172**
Hart Crowser 1997	**Oct-95**	**B-21**	**Vinyl Chloride**	**19,000**		**0.029**		**655,172**
Hart Crowser 1997	**Dec-96**	**B-21**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2000a	**Oct-98**	**B-20**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2000a	**Oct-99**	**B-21**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
Hart Crowser 1992b	**May-92**	**B-21**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2000a	**Oct-99**	**B-65**	**Vinyl Chloride**	**15,000**	**J**	**0.029**		**517,241**
Hart Crowser 1993a	**Sep-92**	**B-20**	**Vinyl Chloride**	**14,000**		**0.029**		**482,759**
Hart Crowser 1993a	**Aug-93**	**B-21**	**Vinyl Chloride**	**14,000**		**0.029**		**482,759**
Hart Crowser 1993a	**Sep-92**	**B-21**	**Vinyl Chloride**	**13,000**		**0.029**		**448,276**
TV-F&S 2000a	**Oct-98**	**B-21**	**Vinyl Chloride**	**11,000**		**0.029**		**379,310**
TV-F&S 2000a	**Jul-99**	**B-65**	**Vinyl Chloride**	**11,000**		**0.029**		**379,310**
Hart Crowser 1997	**Dec-96**	**B-35**	**Vinyl Chloride**	**8,100**		**0.029**		**279,310**
Hart Crowser 1997	**Dec-96**	**B-33A**	**Vinyl Chloride**	**7,700**		**0.029**		**265,517**
Hart Crowser 1993a	**Sep-92**	**B-36**	**Vinyl Chloride**	**7,300**		**0.029**		**251,724**
TV-F&S 2000a	**Oct-98**	**B-33A**	**Vinyl Chloride**	**7,300**		**0.029**		**251,724**
Hart Crowser 1992b	**May-92**	**B-29**	**Vinyl Chloride**	**7,100**		**0.029**		**244,828**
Hart Crowser 1997	**Oct-95**	**B-20**	**Vinyl Chloride**	**6,800**	**J**	**0.029**		**234,483**
TV-F&S 2000a	**Oct-99**	**B-18**	**Vinyl Chloride**	**6,100**		**0.029**		**210,345**
TV-F&S 2000a	**Oct-99**	**B-63**	**Vinyl Chloride**	**5,800**		**0.029**		**200,000**
TV-F&S 2000a	**Nov-98**	**B-12**	**Vinyl Chloride**	**5,500**		**0.029**		**189,655**
Hart Crowser 1992b	**May-92**	**B-29**	**Vinyl Chloride**	**5,200**		**0.029**		**179,310**
Hart Crowser 1997	**Dec-96**	**B-20**	**Vinyl Chloride**	**3,700**		**0.029**		**127,586**
Hart Crowser 1997	**Oct-95**	**B-33A**	**Vinyl Chloride**	**3,400**		**0.029**		**117,241**

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	Oct-98	B-35	Vinyl Chloride	3,300		0.029		113,793
TV-F&S 2000a	Oct-99	B-52	Vinyl Chloride	3,100		0.029		106,897
TV-F&S 2000a	Oct-99	B-58	Vinyl Chloride	3,100		0.029		106,897
TV-F&S 2000a	Oct-98	B-44	Vinyl Chloride	3,000		0.029		103,448
TV-F&S 2000a	Oct-99	B-58 (DUP)	Vinyl Chloride	2,900		0.029		100,000
TV-F&S 2000a	Nov-98	B-52	Vinyl Chloride	2,800		0.029		96,552
Hart Crowser 1993a	Sep-92	B-33A	Vinyl Chloride	2,700		0.029		93,103
TV-F&S 2000a	Oct-99	B-61	Vinyl Chloride	2,700		0.029		93,103
TV-F&S 2000a	Nov-98	B-46 BAL	Vinyl Chloride	2,600		0.029		89,655
TV-F&S 2000a	Jul-99	B-63	Vinyl Chloride	2,500		0.029		86,207
TV-F&S 2000a	Jul-99	B-63 (DUP)	Vinyl Chloride	2,400		0.029		82,759
TV-F&S 2000a	Nov-98	B-52 (DUP)	Vinyl Chloride	2,300		0.029		79,310
TV-F&S 2000a	Oct-99	B-35	Vinyl Chloride	2,300		0.029		79,310
Hart Crowser 1993a	Jul-93	B-50	Vinyl Chloride	2,100		0.029		72,414
TV-F&S 2000a	Oct-99	B-39	Vinyl Chloride	1,900	J	0.029		65,517
TV-F&S 2000a	Nov-99	B-11	Vinyl Chloride	1,900		0.029		65,517
Hart Crowser 1993a	Aug-93	B-10A	Vinyl Chloride	1,600		0.029		55,172
TV-F&S 2000a	Nov-98	B-46	Vinyl Chloride	1,600		0.029		55,172
Ecology 1993b	Jun-93	278092	Vinyl Chloride	1,500		0.029		51,724
TV-F&S 2000a	Nov-98	B-39	Vinyl Chloride	1,400		0.029		48,276
TV-F&S 2000a	Oct-99	B-46	Vinyl Chloride	1,400		0.029		48,276
Hart Crowser 1993a	Sep-92	B-10A	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1993a	Jul-93	B-47	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1997	Oct-95	B-44	Vinyl Chloride	1,300		0.029		44,828
Hart Crowser 1993a	Jul-93	B-47 (DUP)	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1997	Dec-96	B-44	Vinyl Chloride	1,200		0.029		41,379
TV-F&S 2000a	Nov-98	B-49	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1992b	May-92	B-18	Vinyl Chloride	1,200		0.029		41,379
Hart Crowser 1993a	Jul-93	B-48	Vinyl Chloride	1,100		0.029		37,931
Hart Crowser 1992b	May-92	B-20	Vinyl Chloride	1,100		0.029		37,931
Hart Crowser 1993a	Aug-93	B-52 (DUP)	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Oct-99	B-62	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Oct-99	B-10A	Vinyl Chloride	1,000		0.029		34,483
TV-F&S 2000a	Jul-99	B-61	Vinyl Chloride	970		0.029		33,448

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1993a	Aug-93	B-52	Vinyl Chloride	960		0.029		33,103
Hart Crowser 1992b	May-92	B-16	Vinyl Chloride	920		0.029		31,724
ATI 1991b	Sep-91	B-16	Vinyl Chloride	880		0.029		30,345
Hart Crowser 1997	Dec-96	B-39	Vinyl Chloride	810		0.029		27,931
Hart Crowser 1993a	Aug-93	B-35	Vinyl Chloride	790		0.029		27,241
Hart Crowser 1993a	Aug-93	B-51	Vinyl Chloride	780		0.029		26,897
Hart Crowser 1992b	May-92	B-20	Vinyl Chloride	760		0.029		26,207
TV-F&S 2000a	Nov-99	B-12	Vinyl Chloride	750		0.029		25,862
Hart Crowser 1992b	May-92	B-18	Vinyl Chloride	700		0.029		24,138
TV-F&S 2000a	Nov-98	B-42	Vinyl Chloride	690		0.029		23,793
Hart Crowser 1992b	May-92	B-16	Vinyl Chloride	690		0.029		23,793
Hart Crowser 1997	Dec-96	B-10A	Vinyl Chloride	630		0.029		21,724
Hart Crowser 1992b	May-92	B-10A (DUP)	Vinyl Chloride	620	J	0.029		21,379
Hart Crowser 1993a	Aug-93	B-36	Vinyl Chloride	590		0.029		20,345
Hart Crowser 1992b	May-92	B-10A	Vinyl Chloride	540		0.029		18,621
Hart Crowser 1992b	May-92	B-10A	Vinyl Chloride	510	J	0.029		17,586
TV-F&S 2000a	Oct-99	B-44	Vinyl Chloride	490		0.029		16,897
Hart Crowser 1993a	Sep-92	B-15	Vinyl Chloride	450		0.029		15,517
TV-F&S 2000a	Nov-98	B-10A	Vinyl Chloride	440		0.029		15,172
TV-F&S 2000a	Nov-98	B-18	Vinyl Chloride	430		0.029		14,828
Ecology 1993b	Jun-93	278091	Vinyl Chloride	400	J	0.029		13,793
Hart Crowser 1993a	Aug-93	B-20	Vinyl Chloride	340		0.029		11,724
TV-F&S 2000a	Nov-98	B-45 BAL	Vinyl Chloride	340		0.029		11,724
TV-F&S 2000a	Oct-99	B-16	Vinyl Chloride	340		0.029		11,724
Hart Crowser 1992b	May-92	B-1	Vinyl Chloride	340		0.029		11,724
Hart Crowser 1993a	Aug-93	B-34	Vinyl Chloride	320		0.029		11,034
Hart Crowser 1993a	Sep-92	B-31	Vinyl Chloride	300		0.029		10,345
TV-F&S 2000a	Nov-98	B-45	Vinyl Chloride	290		0.029		10,000
Hart Crowser 1992b	May-92	B-15	Vinyl Chloride	280		0.029		9,655
TV-F&S 2000a	Oct-99	B-45	Vinyl Chloride	270		0.029		9,310
Hart Crowser 1993a	Sep-92	B-30	Vinyl Chloride	260		0.029		8,966
Hart Crowser 1993a	Aug-93	B-30	Vinyl Chloride	260		0.029		8,966
TV-F&S 2000a	Oct-99	B-45 (DUP)	Vinyl Chloride	230		0.029		7,931
Hart Crowser 1992b	May-92	B-30	Vinyl Chloride	230		0.029		7,931

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1997	Dec-96	B-45	Vinyl Chloride	220		0.029		7,586
TV-F&S 2000a	Jul-99	B-58	Vinyl Chloride	220		0.029		7,586
TV-F&S 2000a	Oct-99	B-36	Vinyl Chloride	210		0.029		7,241
Hart Crowser 1993a	Sep-92	B-34	Vinyl Chloride	200		0.029		6,897
TV-F&S 2000a	Jul-99	TW-2	Vinyl Chloride	200		0.029		6,897
Hart Crowser 1992b	May-92	B-30	Vinyl Chloride	200		0.029		6,897
Hart Crowser 1993a	Aug-93	B-31	Vinyl Chloride	190		0.029		6,552
Hart Crowser 1997	Dec-96	B-36	Vinyl Chloride	180		0.029		6,207
TV-F&S 2000a	Oct-99	B-59	Vinyl Chloride	180		0.029		6,207
Hart Crowser 1992b	May-92	B-31	Vinyl Chloride	150		0.029		5,172
Hart Crowser 1993a	Sep-92	B-8	Vinyl Chloride	130		0.029		4,483
Hart Crowser 1997	Oct-95	B-31	Vinyl Chloride	130		0.029		4,483
Hart Crowser 1997	Oct-95	B-10A	Vinyl Chloride	110		0.029		3,793
Hart Crowser 1997	Oct-95	B-45	Vinyl Chloride	96		0.029		3,310
TV-F&S 2000a	Jul-99	B-59	Vinyl Chloride	77		0.029		2,655
Hart Crowser 1993a	Aug-93	B-15	Vinyl Chloride	73		0.029		2,517
Hart Crowser 1992b	May-92	B-8	Vinyl Chloride	70		0.029		2,414
Hart Crowser 1992b	May-92	B-11	Vinyl Chloride	69		0.029		2,379
Hart Crowser 1992b	May-92	B-22	Vinyl Chloride	68		0.029		2,345
Hart Crowser 1992b	May-92	B-22	Vinyl Chloride	62		0.029		2,138
Ecology 1993b	Jun-93	278093	Vinyl Chloride	48		0.029		1,655
TV-F&S 2000a	Feb-99	B-22	Vinyl Chloride	44.0		0.029		1,517
TV-F&S 2000a	Oct-98	B-36	Vinyl Chloride	37		0.029		1,276
TV-F&S 2000a	Oct-98	B-36 (DUP)	Vinyl Chloride	37		0.029		1,276
TV-F&S 2000a	Jul-99	B-62 (DUP)	Vinyl Chloride	36		0.029		1,241
TV-F&S 2000a	Jul-99	B-62	Vinyl Chloride	35		0.029		1,207
TV-F&S 2000a	Jul-99	TW-1	Vinyl Chloride	31		0.029		1,069
Hart Crowser 1997	Oct-95	B-35	Vinyl Chloride	29		0.029		1,000
TV-F&S 2000a	Jul-99	TW-5	Vinyl Chloride	18		0.029		621
TV-F&S 2000a	Dec-98	B-22	Vinyl Chloride	17.4		0.029		600
ATI 1991b	Sep-91	B-17	Vinyl Chloride	16		0.029		552
Hart Crowser 1997	Dec-96	B-9	Vinyl Chloride	16		0.029		552
TV-F&S 2000a	Oct-99	B-9	Vinyl Chloride	14		0.029		483
TV-F&S 2000a	Jul-99	TW-3	Vinyl Chloride	12		0.029		414

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2000a	**Nov-98**	**B-9**	**Vinyl Chloride**	**11**		**0.029**		**379**
TV-F&S 2000a	**Jul-99**	**TW-3 (DUP)**	**Vinyl Chloride**	**9.9**		**0.029**		**341**
Hart Crowser 1993a	**Sep-92**	**B-9**	**Vinyl Chloride**	**9**		**0.029**		**310**
Hart Crowser 1993a	**Aug-93**	**B-9**	**Vinyl Chloride**	**9**		**0.029**		**310**
Hart Crowser 1993a	**Aug-93**	**B-33A**	**Vinyl Chloride**	**8**		**0.029**		**276**
Hart Crowser 1993a	**Sep-92**	**B-27**	**Vinyl Chloride**	**6**		**0.029**		**207**
Hart Crowser 1997	**Oct-95**	**B-27**	**Vinyl Chloride**	**6**		**0.029**		**207**
Hart Crowser 1992b	**May-92**	**B-9**	**Vinyl Chloride**	**5.8**		**0.029**		**200**
Hart Crowser 1992b	**May-92**	**B-19**	**Vinyl Chloride**	**5.3**	**J**	**0.029**		**183**
Hart Crowser 1993a	**Aug-93**	**B-26**	**Vinyl Chloride**	**5**		**0.029**		**172**
TV-F&S 2000a	**Oct-98**	**B-19**	**Vinyl Chloride**	**5**		**0.029**		**172**
TV-F&S 2000a	**Oct-99**	**B-27**	**Vinyl Chloride**	**4.3**		**0.029**		**148**
Hart Crowser 1992b	**May-92**	**B-27**	**Vinyl Chloride**	**4**		**0.029**		**138**
Hart Crowser 1992b	**May-92**	**B-72**	**Vinyl Chloride**	**4**		**0.029**		**138**
TV-F&S 2000a	**Oct-98**	**B-34**	**Vinyl Chloride**	**3.7**		**0.029**		**128**
TV-F&S 2000a	**Jul-99**	**TW-6**	**Vinyl Chloride**	**3.4**		**0.029**		**117**
TV-F&S 2000a	**Oct-99**	**B-17**	**Vinyl Chloride**	**3.3**		**0.029**		**114**
TV-F&S 2000a	**Oct-99**	**B-55**	**Vinyl Chloride**	**3.2**		**0.029**		**110**
Hart Crowser 1992b	**May-92**	**B-72**	**Vinyl Chloride**	**3.1**		**0.029**		**107**
Hart Crowser 1997	**Dec-96**	**B-27**	**Vinyl Chloride**	**3**		**0.029**		**103**
TV-F&S 2000a	**Nov-98**	**B-27**	**Vinyl Chloride**	**3**		**0.029**		**103**
Hart Crowser 1992b	**May-92**	**B-6**	**Vinyl Chloride**	**3**		**0.029**		**103**
TV-F&S 2000a	**Oct-99**	**B-19**	**Vinyl Chloride**	**2.8**		**0.029**		**97**
Hart Crowser 1992b	**May-92**	**B-6**	**Vinyl Chloride**	**2.8**		**0.029**		**97**
Hart Crowser 1992b	**May-92**	**B-23**	**Vinyl Chloride**	**2.4**		**0.029**		**83**
TV-F&S 2000a	**Oct-99**	**B-6**	**Vinyl Chloride**	**2.3**		**0.029**		**79**
TV-F&S 2000a	**Oct-99**	**B-34**	**Vinyl Chloride**	**2.2**		**0.029**		**76**
Hart Crowser 1992b	**May-92**	**B-17**	**Vinyl Chloride**	**2.2**		**0.029**		**76**
Hart Crowser 1997	**Oct-95**	**B-36**	**Vinyl Chloride**	**2**		**0.029**		**69**
Hart Crowser 1997	**Dec-96**	**B-34**	**Vinyl Chloride**	**2**		**0.029**		**69**
Hart Crowser 1992b	**May-92**	**B-23 (DUP)**	**Vinyl Chloride**	**2**		**0.029**		**69**
TV-F&S 2000a	**Oct-98**	**B-8**	**Vinyl Chloride**	**1.5**		**0.029**		**52**
Hart Crowser 1992b	**May-92**	**B-24**	**Vinyl Chloride**	**0.5**		**0.029**		**17**
Hart Crowser 1992b	May-92	B-26	Vinyl Chloride	0.2		0.029		6.9

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1990b	1990	B-10A	Vinyl Chloride	0.170		0.029		5.9
Hart Crowser 1990b	1990	B-9	Vinyl Chloride	0.051		0.029		1.8
Hart Crowser 1990b	1990	B-6	Vinyl Chloride	0.020		0.029		0.7
Hart Crowser 1990b	1990	B-8	Vinyl Chloride	0.010		0.029		0.3
TV-F&S 2000a	Nov-98	B-49	Xylenes (m&p)	4,900		1,000		4.9
TV-F&S 2000a	Oct-99	B-47 (DUP)	Xylenes (m&p)	3,800		1,000		3.8
TV-F&S 2000a	Oct-99	B-47	Xylenes (m&p)	3,600		1,000		3.6
TV-F&S 2000a	Nov-98	B-42	Xylenes (m&p)	2,100		1,000		2.1
TV-F&S 2000a	Oct-99	B-49	Xylenes (m&p)	2,000		1,000		2.0
TV-F&S 2000a	Oct-98	B-44	Xylenes (m&p)	1,300		1,000		1.3
TV-F&S 2000a	Oct-98	B-20	Xylenes (m&p)	1,100		1,000		1.1
TV-F&S 2000a	Nov-98	B-12	Xylenes (m&p)	1,100		1,000		1.1
TV-F&S 2000a	Oct-98	B-21	Xylenes (m&p)	870		1,000		0.9
TV-F&S 2000a	Oct-99	B-10A	Xylenes (m&p)	850		1,000		0.9
TV-F&S 2000a	Oct-99	B-44	Xylenes (m&p)	660		1,000		0.7
TV-F&S 2000a	Nov-98	B-46 BAL	Xylenes (m&p)	480		1,000		0.5
TV-F&S 2000a	Oct-98	B-35	Xylenes (m&p)	420		1,000		0.4
TV-F&S 2000a	Nov-98	B-52	Xylenes (m&p)	310		1,000		0.3
TV-F&S 2000a	Nov-98	B-46	Xylenes (m&p)	290		1,000		0.3
TV-F&S 2000a	Nov-98	B-52 (DUP)	Xylenes (m&p)	220		1,000		0.2
TV-F&S 2000a	Oct-99	B-35	Xylenes (m&p)	210		1,000		0.2
TV-F&S 2000a	Oct-99	B-52	Xylenes (m&p)	100		1,000		0.1
TV-F&S 2000a	Oct-99	B-38	Xylenes (m&p)	98		1,000		0.1
TV-F&S 2000a	Jul-99	B-63 (DUP)	Xylenes (m&p)	27		1,000		0.0
TV-F&S 2000a	Oct-98	B-36	Xylenes (m&p)	2.6		1,000		0.0
TV-F&S 2000a	Oct-98	B-36 (DUP)	Xylenes (m&p)	2.3		1,000		0.0
Ecology 1993b	Jun-93	278091	Xylenes (total)	6,900		1,000		6.9
Hart Crowser 1992b	May-92	B-15	Xylenes (total)	5,300		1,000		5.3
Hart Crowser 1992b	May-92	B-10A	Xylenes (total)	5,100		1,000		5.1
Hart Crowser 1997	Dec-96	B-10A	Xylenes (total)	4,600		1,000		4.6
Ecology 1993c	Jul-93	B-49	Xylenes (total)	4,300	J	1,000		4.3
Hart Crowser 1992b	May-92	B-30	Xylenes (total)	4,200		1,000		4.2
Hart Crowser 1997	Dec-96	B-31	Xylenes (total)	4,100		1,000		4.1
Hart Crowser 1997	Dec-96	B-44	Xylenes (total)	2,400		1,000		2.4

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-16	Xylenes (total)	1,800		1,000		1.8
Hart Crowser 1997	Dec-96	B-39	Xylenes (total)	1,700		1,000		1.7
Ecology 1993b	Jun-93	278094 (DUP)	Xylenes (total)	1,300	J	1,000		1.3
Hart Crowser 1992b	May-92	B-21	Xylenes (total)	1,200		1,000		1.2
Hart Crowser 1992b	May-92	B-31	Xylenes (total)	1,100		1,000		1.1
Ecology 1993b	Jun-93	278094	Xylenes (total)	1,000	J	1,000		1.0
Hart Crowser 1997	Dec-96	B-21	Xylenes (total)	740		1,000		0.7
Hart Crowser 1997	Dec-96	B-20	Xylenes (total)	490		1,000		0.5
Hart Crowser 1992b	May-92	B-29	Xylenes (total)	310		1,000		0.3
ATI 1991b	Sep-91	B-16	Xylenes (total)	220		1,000		0.2
Hart Crowser 1997	Dec-96	B-35	Xylenes (total)	210		1,000		0.2
Hart Crowser 1992b	May-92	B-20	Xylenes (total)	170		1,000		0.2
Hart Crowser 1992b	May-92	B-6	Xylenes (total)	100		1,000		0.1
Hart Crowser 1997	Dec-96	B-45	Xylenes (total)	67		1,000		0.1
Hart Crowser 1992b	May-92	B-27	Xylenes (total)	64		1,000		0.1
Hart Crowser 1992b	May-92	B-9	Xylenes (total)	45		1,000		0.0
Hart Crowser 1992b	May-92	B-17	Xylenes (total)	41		1,000		0.0
Hart Crowser 1992b	May-92	B-25	Xylenes (total)	40		1,000		0.0
Hart Crowser 1992b	May-92	B-72	Xylenes (total)	29		1,000		0.0
Hart Crowser 1992b	May-92	B-19	Xylenes (total)	27		1,000		0.0
Ecology 1993b	Jun-93	278093	Xylenes (total)	26		1,000		0.0
Hart Crowser 1992b	May-92	B-23	Xylenes (total)	21		1,000		0.0
Hart Crowser 1992b	May-92	B-24	Xylenes (total)	20		1,000		0.0
Hart Crowser 1990b	1990	B-7	Xylenes (total)	14		1,000		0.0
Hart Crowser 1992b	May-92	B-23 (DUP)	Xylenes (total)	14		1,000		0.0
Hart Crowser 1997	Dec-96	B-8	Xylenes (total)	13		1,000		0.0
TV-F&S 2000a	Jul-99	B-63	Xylenes (total)	11		1,000		0.0
Hart Crowser 1997	Dec-96	B-33A	Xylenes (total)	10	J	1,000		0.0
TV-F&S 2000a	Jul-99	B-58	Xylenes (total)	9		1,000		0.0
Hart Crowser 1990b	1990	B-10A	Xylenes (total)	5.6		1,000		0.0
Hart Crowser 1990b	1990	B-8	Xylenes (total)	4.3		1,000		0.0
ATI 1991b	Sep-91	B-17	Xylenes (total)	4		1,000		0.0
Hart Crowser 1992b	May-92	B-5	Xylenes (total)	4		1,000		0.0
Hart Crowser 1992b	May-92	B-5 (DUP)	Xylenes (total)	4		1,000		0.0

Table E-2
Chemicals Detected in Groundwater
Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1990b	1990	B-12	Xylenes (total)	1		1,000		0.0
Hart Crowser 1992b	May-92	B-22	Xylenes (total)	1		1,000		0.0
Hart Crowser 1990b	1990	B-10	Xylenes (total)	0.540		1,000		0.0
Hart Crowser 1990b	1990	B-11	Xylenes (total)	0.280		1,000		0.0
Hart Crowser 1990b	1990	B-8	Xylenes (total)	0.17		1,000		0.0
Hart Crowser 1990b	1990	B-11	Xylenes (total)	0.140		1,000		0.0
Hart Crowser 1990b	1990	B-1	Xylenes (total)	0.015		1,000		0.0
Hart Crowser 1990a	May-89	B-1	Xylenes (total)	0.010		1,000		0.0
Hart Crowser 1992b	May-92	B-15	Zinc (dissolved)	150		4,800	76	2.0
Hart Crowser 1992b	May-92	B-19	Zinc (dissolved)	54		4,800	76	0.7
Hart Crowser 1992b	May-92	B-25	Zinc (dissolved)	52		4,800	76	0.7
Hart Crowser 1992b	May-92	B-24	Zinc (dissolved)	48		4,800	76	0.6
Hart Crowser 1992b	May-92	B-11	Zinc (dissolved)	40		4,800	76	0.5
Hart Crowser 1992b	May-92	B-18	Zinc (dissolved)	38		4,800	76	0.5
Hart Crowser 1992b	May-92	B-14	Zinc (dissolved)	36		4,800	76	0.5
Hart Crowser 1992b	May-92	B-26	Zinc (dissolved)	36		4,800	76	0.5
Hart Crowser 1992b	May-92	B-6	Zinc (dissolved)	27		4,800	76	0.4
Hart Crowser 1992b	May-92	B-72	Zinc (dissolved)	27		4,800	76	0.4
Hart Crowser 1992b	May-92	B-16	Zinc (dissolved)	24		4,800	76	0.3
Hart Crowser 1992b	May-92	B-29	Zinc (dissolved)	24		4,800	76	0.3
Hart Crowser 1992b	May-92	B-27	Zinc (dissolved)	22		4,800	76	0.3
Hart Crowser 1992b	May-92	B-22	Zinc (dissolved)	21		4,800	76	0.3
Hart Crowser 1992b	May-92	B-28	Zinc (dissolved)	20		4,800	76	0.3
Hart Crowser 1992b	May-92	B-20	Zinc (dissolved)	17		4,800	76	0.2
Hart Crowser 1992b	May-92	B-30	Zinc (dissolved)	16		4,800	76	0.2
Hart Crowser 1992b	May-92	B-9	Zinc (dissolved)	16		4,800	76	0.2
Hart Crowser 1992b	May-92	B-13	Zinc (dissolved)	14		4,800	76	0.2
Hart Crowser 1992b	May-92	B-23	Zinc (dissolved)	13		4,800	76	0.2
Hart Crowser 1992b	May-92	B-21	Zinc (dissolved)	12		4,800	76	0.2
Hart Crowser 1992b	May-92	B-17	Zinc (dissolved)	11		4,800	76	0.1
Hart Crowser 1992b	May-92	B-5	Zinc (dissolved)	11		4,800	76	0.1
Hart Crowser 1992b	May-92	B-31	Zinc (dissolved)	10		4,800	76	0.1
Hart Crowser 1992b	**May-92**	**B-15**	**Zinc (total)**	**1,300**		**4,800**	**76**	**17**
Hart Crowser 1992b	May-92	B-31	Zinc (total)	320		4,800	76	4.2

Table E-2

Chemicals Detected in Groundwater

Fox Avenue Building (Former Great Western Chemical)

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Hart Crowser 1992b	May-92	B-24	Zinc (total)	280		4,800	76	3.7
Hart Crowser 1992b	May-92	B-16	Zinc (total)	260		4,800	76	3.4
Hart Crowser 1992b	May-92	B-22	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-23	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-72	Zinc (total)	250		4,800	76	3.3
Hart Crowser 1992b	May-92	B-14	Zinc (total)	210		4,800	76	2.8
Hart Crowser 1992b	May-92	B-11	Zinc (total)	190		4,800	76	2.5
Hart Crowser 1992b	May-92	B-26	Zinc (total)	180		4,800	76	2.4
Hart Crowser 1992b	May-92	B-19	Zinc (total)	140		4,800	76	1.8
Hart Crowser 1992b	May-92	B-18	Zinc (total)	120		4,800	76	1.6
Hart Crowser 1992b	May-92	B-9	Zinc (total)	120		4,800	76	1.6
Hart Crowser 1992b	May-92	B-29	Zinc (total)	96		4,800	76	1.3
Hart Crowser 1992b	May-92	B-27	Zinc (total)	79		4,800	76	1.0
Hart Crowser 1992b	May-92	B-1	Zinc (total)	69		4,800	76	0.9
Hart Crowser 1992b	May-92	B-5	Zinc (total)	58		4,800	76	0.8
Hart Crowser 1992b	May-92	B-30	Zinc (total)	50		4,800	76	0.7
Hart Crowser 1992b	May-92	B-25	Zinc (total)	49		4,800	76	0.6
Hart Crowser 1992b	May-92	B-8	Zinc (total)	45		4,800	76	0.6
Hart Crowser 1992b	May-92	B-5 (DUP)	Zinc (total)	32		4,800	76	0.4
Hart Crowser 1992b	May-92	B-17	Zinc (total)	31		4,800	76	0.4
Hart Crowser 1992b	May-92	B-20	Zinc (total)	26		4,800	76	0.3
Hart Crowser 1992b	May-92	B-6	Zinc (total)	21		4,800	76	0.3
Hart Crowser 1992b	May-92	B-21	Zinc (total)	19		4,800	76	0.3
Hart Crowser 1992b	May-92	B-13	Zinc (total)	17		4,800	76	0.2
Hart Crowser 1992b	May-92	B-28	Zinc (total)	17		4,800	76	0.2
Hart Crowser 1992b	May-92	B-23 (DUP)	Zinc (total)	15		4,800	76	0.2

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table E-3
Chemicals Detected in Seep Samples
Fox Avenue Building (Former Great Western Chemical)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
TV-F&S 2000b	Apr-98	S-2	1,1-DCA	88						
TV-F&S 2000b	Apr-98	S-2 (DUP)	1,1-DCA	87						
TV-F&S 2000b	Dec-98	S-13	1,1-DCA	62						
TV-F&S 2000b	Nov-98	S-13	1,1-DCA	53						
TV-F&S 2000b	Dec-98	S-14	1,1-DCA	18						
TV-F&S 2000b	May-98	S-2 (DUP)	1,1-DCA	6.2						
TV-F&S 2000b	May-98	S-2	1,1-DCA	5.3						
TV-F&S 2000b	Nov-98	S-1	1,1-DCA	4.1						
TV-F&S 2000b	Apr-98	S-1	1,1-DCA	3.4						
TV-F&S 2000b	Dec-98	S-1	1,1-DCA	2.3						
Hart Crowser 1994a	Apr-94	Seep-1	1,1-DCA	2						
Hart Crowser 1994a	Apr-94	Seep-4	1,1-DCA	2						
Hart Crowser 1994a	Apr-94	Seep-8	1,1-DCA	2						
TV-F&S 2000b	May-98	S-1	1,1-DCA	1.9						
TV-F&S 2000b	Apr-98	S-4	1,1-DCA	1.5						
Hart Crowser 1994a	Apr-94	Seep-2	1,1-DCA	1						
Hart Crowser 1994b	Jul-94	Seep-1	1,1-DCA	1						
Hart Crowser 1994b	Jul-94	Seep-8	1,1-DCA	1						
Hart Crowser 1997	Dec-96	Seep-2	1,1-DCA	1						
TV-F&S 2000b	Dec-98	S-13	1,1-DCE	27						
TV-F&S 2000b	Apr-98	S-2 (DUP)	1,1-DCE	20						
TV-F&S 2000b	Apr-98	S-2	1,1-DCE	19						
TV-F&S 2000b	Nov-98	S-13	1,1-DCE	18						
TV-F&S 2000b	May-98	S-2 (DUP)	1,1-DCE	2						
TV-F&S 2000b	May-98	S-2	1,1-DCE	1.8						
Hart Crowser 1994a	Apr-94	Seep-4	1,1-DCE	1						
TV-F&S 2000b	Apr-98	S-1	1,1-DCE	1						
TV-F&S 2000b	Dec-98	S-1	1,2,4-Trimethylbenzene	4.1						
TV-F&S 2000b	Dec-98	S-14	1,2-DCA	27						
TV-F&S 2000b	Apr-98	S-2	1,2-DCA	9.5						
TV-F&S 2000b	Apr-98	S-2 (DUP)	1,2-DCA	8.9						
TV-F&S 2000b	Nov-98	S-13	1,2-DCA	8.5						
Hart Crowser 1997	Dec-96	Seep-2-Alt	1,2-DCA	8						
Hart Crowser 1997	Dec-96	Seep-8	1,2-DCA	8						
Hart Crowser 1994b	Jul-94	Seep-9	1,2-DCA	2						
TV-F&S 2000b	May-98	S-2	1,2-DCA	1.5						
Hart Crowser 1997	Oct-95	Seep-2	1,2-DCA	1						
Hart Crowser 1997	Dec-96	Seep-2	1,2-DCE (total)	310						

Table E-3
Chemicals Detected in Seep Samples
Fox Avenue Building (Former Great Western Chemical)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
Hart Crowser 1994a	Apr-94	Seep-2	1,2-DCE (total)	110						
Hart Crowser 1994a	Apr-94	Seep-8	1,2-DCE (total)	110						
Hart Crowser 1994b	Jul-94	Seep-8	1,2-DCE (total)	110						
Hart Crowser 1994b	Jul-94	Seep-2-3	1,2-DCE (total)	73						
Hart Crowser 1994b	Jul-94	Seep-2-2	1,2-DCE (total)	70						
Hart Crowser 1994b	Jul-94	Seep-2-1	1,2-DCE (total)	46						
Hart Crowser 1994b	Jul-94	Seep-2-4	1,2-DCE (total)	39						
Hart Crowser 1997	Dec-96	Seep-1	1,2-DCE (total)	27						
Hart Crowser 1994a	Apr-94	Seep-4	1,2-DCE (total)	19						
Hart Crowser 1994b	Jul-94	Seep-2-5	1,2-DCE (total)	10						
Hart Crowser 1997	Dec-96	Seep-4	1,2-DCE (total)	8						
Hart Crowser 1994a	Apr-94	Seep-1	1,2-DCE (total)	7						
Hart Crowser 1994b	Jul-94	Seep-1	1,2-DCE (total)	3						
Hart Crowser 1994b	Jul-94	Seep-2-6	1,2-DCE (total)	2						
TV-F&S 2000b	Nov-98	S-13	1,2-Dichlorobenzene	1.3					5.2	
TV-F&S 2000b	Nov-99	S-13	1,2-Dichlorobenzene	1					5.2	
TV-F&S 2000b	Dec-98	S-14	1,2-Dichloropropane	16						
TV-F&S 2000b	Nov-98	S-13	1,2-Dichloropropane	2.7						
TV-F&S 2000b	Nov-99	S-13	Acenaphthene	1.3					9.3	
TV-F&S 2000b	May-98	S-6	Acetone	6.4						
TV-F&S 2000b	May-98	S-2 (DUP)	Acetone	5.6						
TV-F&S 2000b	Apr-98	S-1	Acetone	1						
TV-F&S 2000b	Apr-98	S-2	Benzene	40						
TV-F&S 2000b	Apr-98	S-2 (DUP)	Benzene	39						
TV-F&S 2000b	Dec-98	S-13	Benzene	36						
TV-F&S 2000b	Nov-98	S-13	Benzene	28						
TV-F&S 2000b	Oct-99	S-13	Benzene	28						
TV-F&S 2000b	May-98	S-2 (DUP)	Benzene	3.7						
TV-F&S 2000b	May-98	S-2	Benzene	3.1						
TV-F&S 2000b	Apr-98	S-2	Chlorobenzene	8.9						
TV-F&S 2000b	Apr-98	S-2 (DUP)	Chlorobenzene	8.7						
TV-F&S 2000b	Nov-98	S-13	Chlorobenzene	4.1						
TV-F&S 2000b	Dec-98	S-13	cis-1,2-DCE	5,400						
TV-F&S 2000b	Nov-98	S-13	cis-1,2-DCE	3,300						
TV-F&S 2000b	Oct-99	S-13	cis-1,2-DCE	3,200						
TV-F&S 2000b	Dec-98	S-14	cis-1,2-DCE	2,000						
TV-F&S 2000b	Dec-98	S-2	cis-1,2-DCE	190						

Table E-3
Chemicals Detected in Seep Samples
Fox Avenue Building (Former Great Western Chemical)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
TV-F&S 2000b	Oct-99	S-2	cis-1,2-DCE	100						
TV-F&S 2000b	Nov-98	S-2	cis-1,2-DCE	65						
TV-F&S 2000b	Nov-98	S-2 (DUP)	cis-1,2-DCE	59						
TV-F&S 2000b	Nov-98	S-1	cis-1,2-DCE	41						
TV-F&S 2000b	Dec-98	S-1	cis-1,2-DCE	29						
TV-F&S 2000b	Oct-99	S-1	cis-1,2-DCE	6						
TV-F&S 2000b	Oct-99	S-1 (DUP)	cis-1,2-DCE	5.2						
Hart Crowser 1994a	Apr-94	Seep-8	PCE	810						
Hart Crowser 1994a	Apr-94	Seep-2	PCE	760						
Hart Crowser 1994b	Jul-94	Seep-8	PCE	640						
Hart Crowser 1997	Oct-95	Seep-2	PCE	610						
Hart Crowser 1994b	Jul-94	Seep-2-3	PCE	600						
Hart Crowser 1997	Oct-95	Seep-8	PCE	600						
TV-F&S 2000b	Dec-98	S-2	PCE	520						
Hart Crowser 1994b	Jul-94	Seep-2-2	PCE	450						
TV-F&S 2000b	Nov-98	S-2 (DUP)	PCE	320						
Hart Crowser 1994b	Jul-94	Seep-2-1	PCE	300						
TV-F&S 2000b	Nov-98	S-2	PCE	250						
TV-F&S 2000b	Oct-99	S-2	PCE	190						
Hart Crowser 1994b	Jul-94	Seep-2-4	PCE	150						
Hart Crowser 1997	Dec-96	Seep-8	PCE	81						
Hart Crowser 1997	Dec-96	Seep-2-Alt	PCE	79						
Hart Crowser 1994b	Jul-94	Seep-2-5	PCE	40						
TV-F&S 2000b	Apr-98	S-1	PCE	22						
TV-F&S 2000b	May-98	S-2 (DUP)	PCE	17						
TV-F&S 2000b	May-98	S-1	PCE	16						
TV-F&S 2000b	May-98	S-2	PCE	16						
Hart Crowser 1997	Dec-96	Seep-1	PCE	13						
Hart Crowser 1994b	Jul-94	Seep-2-6	PCE	11						
TV-F&S 2000b	Dec-98	S-1	PCE	7.5						
TV-F&S 2000b	Nov-98	S-1	PCE	7.3						
TV-F&S 2000b	Apr-98	S-6	PCE	5.8						
Hart Crowser 1994b	Jul-94	Seep-2-7	PCE	5						
Hart Crowser 1997	Oct-95	Seep-1	PCE	4						
TV-F&S 2000b	Nov-98	S-13	PCE	3.8						
TV-F&S 2000b	Oct-99	S-1	PCE	3.7						
TV-F&S 2000b	Oct-99	S-1 (DUP)	PCE	3.7						

Table E-3
Chemicals Detected in Seep Samples
Fox Avenue Building (Former Great Western Chemical)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
Hart Crowser 1994a	Apr-94	Seep-1	PCE	3						
TV-F&S 2000b	May-98	S-4	PCE	2.6						
Hart Crowser 1994b	Jul-94	Seep-1	PCE	2						
TV-F&S 2000b	Nov-98	S-6	PCE	1.3						
TV-F&S 2000b	Dec-98	S-2	TCE	440						
Hart Crowser 1994a	Apr-94	Seep-8	TCE	400						
Hart Crowser 1994a	Apr-94	Seep-2	TCE	370						
Hart Crowser 1997	Oct-95	Seep-2	TCE	360						
Hart Crowser 1997	Oct-95	Seep-8	TCE	360						
Hart Crowser 1994b	Jul-94	Seep-8	TCE	330						
TV-F&S 2000b	Oct-99	S-2	TCE	270						
Hart Crowser 1994b	Jul-94	Seep-2-3	TCE	230						
Hart Crowser 1994b	Jul-94	Seep-2-2	TCE	210						
TV-F&S 2000b	Nov-98	S-2	TCE	180						
TV-F&S 2000b	Nov-98	S-2 (DUP)	TCE	160						
Hart Crowser 1994b	Jul-94	Seep-2-1	TCE	130						
Hart Crowser 1994b	Jul-94	Seep-2-4	TCE	68						
Hart Crowser 1997	Dec-96	Seep-8	TCE	59						
Hart Crowser 1997	Dec-96	Seep-2-Alt	TCE	58						
Hart Crowser 1994b	Jul-94	Seep-2-5	TCE	17						
TV-F&S 2000b	Dec-98	S-13	TCE	11						
TV-F&S 2000b	Apr-98	S-1	TCE	9.9						
TV-F&S 2000b	May-98	S-2	TCE	8.4						
TV-F&S 2000b	May-98	S-2 (DUP)	TCE	7.7						
Hart Crowser 1997	Dec-96	Seep-1	TCE	7						
TV-F&S 2000b	Nov-98	S-13	TCE	6.2						
TV-F&S 2000b	May-98	S-1	TCE	4.6						
Hart Crowser 1997	Oct-95	Seep-1	TCE	4						
TV-F&S 2000b	Nov-98	S-1	TCE	4						
TV-F&S 2000b	Dec-98	S-1	TCE	3.4						
TV-F&S 2000b	Apr-98	S-2 (DUP)	TCE	2.5						
TV-F&S 2000b	Oct-99	S-1 (DUP)	TCE	2.4						
TV-F&S 2000b	Apr-98	S-2	TCE	2.4						
Hart Crowser 1994a	Apr-94	Seep-1	TCE	2						
Hart Crowser 1994b	Jul-94	Seep-2-6	TCE	2						
Hart Crowser 1994b	Jul-94	Seep-2-7	TCE	2						
TV-F&S 2000b	Oct-99	S-1	TCE	1.8						

Table E-3
Chemicals Detected in Seep Samples
Fox Avenue Building (Former Great Western Chemical)

Source	Date Sampled	Sample Location	Chemical	Conc'n (ug/L)		Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level (Based on CSL)[a]	Exceedance Factor
Hart Crowser 1994a	Apr-94	Seep-4	TCE	1						
TV-F&S 2000b	Apr-98	S-2	Toluene	3.4						
TV-F&S 2000b	Apr-98	S-2 (DUP)	Toluene	3.4						
Hart Crowser 1997	Dec-96	Seep-4	Toluene	2						
TV-F&S 2000b	May-98	S-2	Toluene	1.4						
TV-F&S 2000b	Dec-98	S-14	trans-1,2-DCE	110						
TV-F&S 2000b	Dec-98	S-13	trans-1,2-DCE	72						
TV-F&S 2000b	Nov-98	S-13	trans-1,2-DCE	46						
TV-F&S 2000b	Apr-98	S-2	trans-1,2-DCE	28						
TV-F&S 2000b	Apr-98	S-2 (DUP)	trans-1,2-DCE	28						
TV-F&S 2000b	Oct-99	S-13	trans-1,2-DCE	27						
TV-F&S 2000b	Oct-99	S-2	trans-1,2-DCE	12						
TV-F&S 2000b	Dec-98	S-2	trans-1,2-DCE	12						
TV-F&S 2000b	May-98	S-2 (DUP)	trans-1,2-DCE	10						
TV-F&S 2000b	May-98	S-2	trans-1,2-DCE	6.4						
TV-F&S 2000b	Nov-98	S-2	trans-1,2-DCE	3.6						
TV-F&S 2000b	Nov-98	S-2 (DUP)	trans-1,2-DCE	3.4						
TV-F&S 2000b	Oct-99	S-13	Vinyl chloride	3,500						
TV-F&S 2000b	Apr-98	S-2	Vinyl chloride	2,100						
TV-F&S 2000b	Apr-98	S-2 (DUP)	Vinyl chloride	1,900						
TV-F&S 2000b	Dec-98	S-13	Vinyl chloride	1,600						
TV-F&S 2000b	Nov-98	S-13	Vinyl chloride	760						
TV-F&S 2000b	Dec-98	S-14	Vinyl chloride	670						
TV-F&S 2000b	May-98	S-2 (DUP)	Vinyl chloride	140						
TV-F&S 2000b	May-98	S-2	Vinyl chloride	110						
TV-F&S 2000b	Apr-98	S-1	Vinyl chloride	6						
Hart Crowser 1994b	Jul-94	Seep-2-4	Vinyl chloride	3						
Hart Crowser 1997	Dec-96	Seep-2-Alt	Vinyl chloride	3	J					
Hart Crowser 1997	Dec-96	Seep-8	Vinyl chloride	3	J					
TV-F&S 2000b	Dec-98	S-1	Vinyl chloride	1.5						
Hart Crowser 1994a	Apr-94	Seep-4	Vinyl chloride	1						
Hart Crowser 1997	Dec-96	Seep-4	Xylenes (total)	1						

Exceedance factors are the ratio of the detected concentration to the screening level; exceedance factors are shown only if they are greater than or equal to 1.

WQS - Water Quality Standards
CSL - Sediment Management Standards Cleanup Screening Level
a - Groundwater to sediment screening level, based on sediment CSLs. From SAIC 2006.

Table E-4
Surface Sediment Sampling Results
Fox Avenue Building (Former Great Western Chemical)

Sampling Event	Sample Location	Chemical	Specific Mass (μg)
TV-F&S 2000b	2'N of S-13	1,1,2-TCA	0.92
TV-F&S 2000b	2'S of S-13	1,1,2-TCA	0.45
TV-F&S 2000b	10.5'S of S-13	1,1,2-TCA	0.27
TV-F&S 2000b	Seep (S-11)	1,1,2-TCA	0.26
TV-F&S 2000b	20.5'S of S-13	1,1,2-TCA	0.22
TV-F&S 2000b	15.5'S of S-13	1,1,2-TCA	0.17
TV-F&S 2000b	5.5'S of S-13	1,1,2-TCA	0.15
TV-F&S 2000b	2'S of S-13	1,1-DCA	12.48
TV-F&S 2000b	6'S of S-1	1,1-DCA	10.11
TV-F&S 2000b	20.5'S of S-13	1,1-DCA	8.36
TV-F&S 2000b	10.5'S of S-13	1,1-DCA	7.59
TV-F&S 2000b	5.5'S of S-13	1,1-DCA	6.76
TV-F&S 2000b	15.5'S of S-13	1,1-DCA	6.47
TV-F&S 2000b	11'S of S-1	1,1-DCA	5.61
TV-F&S 2000b	16.5'S of S-1	1,1-DCA	2.78
TV-F&S 2000b	2'N of S-13	1,1-DCA	1.98
TV-F&S 2000b	22'S of S-1	1,1-DCA	1.91
TV-F&S 2000b	G1	1,1-DCA	0.58
TV-F&S 2000b	2'S of S-13	1,1-DCE	4.15
TV-F&S 2000b	5.5'S of S-13	1,1-DCE	2.08
TV-F&S 2000b	2'N of S-13	1,1-DCE	1.50
TV-F&S 2000b	15.5'S of S-13	1,1-DCE	1.24
TV-F&S 2000b	10.5'S of S-13	1,1-DCE	1.24
TV-F&S 2000b	20.5'S of S-13	1,1-DCE	0.94
TV-F&S 2000b	6'S of S-1	1,1-DCE	0.41
TV-F&S 2000b	G1	1,1-DCE	0.33
TV-F&S 2000b	2'S of S-13	1,2-DCA	1.01
TV-F&S 2000b	5.5'S of S-13	1,2-DCA	0.46
TV-F&S 2000b	2'N of S-13	1,2-DCA	0.43
TV-F&S 2000b	10.5'S of S-13	1,2-DCA	0.38
TV-F&S 2000b	15.5'S of S-13	1,2-DCA	0.28
TV-F&S 2000b	20.5'S of S-13	1,2-DCA	0.24
TV-F&S 2000b	6'S of S-1	1,2-DCA	0.08
TV-F&S 2000b	2'N of S-13	1,2-DCE (total)	349.05
TV-F&S 2000b	5.5'S of S-13	1,2-DCE (total)	333.87
TV-F&S 2000b	2'S of S-13	1,2-DCE (total)	312.11
TV-F&S 2000b	10.5'S of S-13	1,2-DCE (total)	232.51
TV-F&S 2000b	15.5'S of S-13	1,2-DCE (total)	145.58
TV-F&S 2000b	20.5'S of S-13	1,2-DCE (total)	125.82
TV-F&S 2000b	6'S of S-1	1,2-DCE (total)	43.58
TV-F&S 2000b	G1	1,2-DCE (total)	27.67
TV-F&S 2000b	11'S of S-1	1,2-DCE (total)	1.12
TV-F&S 2000b	Seep (S-11)	1,2-DCE (total)	0.20
TV-F&S 2000b	E1	1,2-DCE (total)	0.12
TV-F&S 2000b	16.5'S of S-1	1,2-DCE (total)	0.10
TV-F&S 2000b	22'S of S-1	1,2-DCE (total)	0.05
TV-F&S 2000b	6'S of S-1	1,2-Dichlorobenzene	0.85

Table E-4
Surface Sediment Sampling Results
Fox Avenue Building (Former Great Western Chemical)

Sampling Event	Sample Location	Chemical	Specific Mass (µg)
TV-F&S 2000b	2'N of S-13	1,2-Dichlorobenzene	0.62
TV-F&S 2000b	2'S of S-13	1,2-Dichlorobenzene	0.51
TV-F&S 2000b	11'S of S-1	1,2-Dichlorobenzene	0.42
TV-F&S 2000b	20.5'S of S-13	1,2-Dichlorobenzene	0.30
TV-F&S 2000b	G1	1,2-Dichlorobenzene	0.26
TV-F&S 2000b	16.5'S of S-1	1,2-Dichlorobenzene	0.20
TV-F&S 2000b	10.5'S of S-13	1,2-Dichlorobenzene	0.19
TV-F&S 2000b	5.5'S of S-13	1,2-Dichlorobenzene	0.18
TV-F&S 2000b	15.5'S of S-13	1,2-Dichlorobenzene	0.11
TV-F&S 2000b	22'S of S-1	1,2-Dichlorobenzene	0.09
TV-F&S 2000b	6'S of S-1	1,3-Dichlorobenzene	0.03
TV-F&S 2000b	6'S of S-1	1,4-Dichlorobenzene	0.23
TV-F&S 2000b	2'S of S-13	1,4-Dichlorobenzene	0.14
TV-F&S 2000b	20.5'S of S-13	1,4-Dichlorobenzene	0.10
TV-F&S 2000b	G1	1,4-Dichlorobenzene	0.09
TV-F&S 2000b	10.5'S of S-13	1,4-Dichlorobenzene	0.08
TV-F&S 2000b	11'S of S-1	1,4-Dichlorobenzene	0.07
TV-F&S 2000b	5.5'S of S-13	1,4-Dichlorobenzene	0.04
TV-F&S 2000b	15.5'S of S-13	1,4-Dichlorobenzene	0.04
TV-F&S 2000b	2'N of S-13	1,4-Dichlorobenzene	0.03
TV-F&S 2000b	2'S of S-13	Chlorobenzene	2.79
TV-F&S 2000b	20.5'S of S-13	Chlorobenzene	1.02
TV-F&S 2000b	5.5'S of S-13	Chlorobenzene	0.91
TV-F&S 2000b	10.5'S of S-13	Chlorobenzene	0.82
TV-F&S 2000b	15.5'S of S-13	Chlorobenzene	0.60
TV-F&S 2000b	6'S of S-1	Chlorobenzene	0.59
TV-F&S 2000b	11'S of S-1	Chlorobenzene	0.29
TV-F&S 2000b	2'N of S-13	Chlorobenzene	0.19
TV-F&S 2000b	16.5'S of S-1	Chlorobenzene	0.11
TV-F&S 2000b	22'S of S-1	Chlorobenzene	0.06
TV-F&S 2000b	2'N of S-13	cis-1,2-DCE	341.94
TV-F&S 2000b	5.5'S of S-13	cis-1,2-DCE	330.41
TV-F&S 2000b	2'S of S-13	cis-1,2-DCE	305.30
TV-F&S 2000b	10.5'S of S-13	cis-1,2-DCE	229.97
TV-F&S 2000b	15.5'S of S-13	cis-1,2-DCE	143.41
TV-F&S 2000b	20.5'S of S-13	cis-1,2-DCE	123.31
TV-F&S 2000b	6'S of S-1	cis-1,2-DCE	42.75
TV-F&S 2000b	G1	cis-1,2-DCE	27.46
TV-F&S 2000b	11'S of S-1	cis-1,2-DCE	1.06
TV-F&S 2000b	Seep (S-11)	cis-1,2-DCE	0.20
TV-F&S 2000b	E1	cis-1,2-DCE	0.12
TV-F&S 2000b	16.5'S of S-1	cis-1,2-DCE	0.10
TV-F&S 2000b	22'S of S-1	cis-1,2-DCE	0.05
TV-F&S 2000b	2'N of S-13	PCE	0.92
TV-F&S 2000b	2'S of S-13	PCE	0.45
TV-F&S 2000b	10.5'S of S-13	PCE	0.27
TV-F&S 2000b	Seep (S-11)	PCE	0.26

Table E-4
Surface Sediment Sampling Results
Fox Avenue Building (Former Great Western Chemical)

Sampling Event	Sample Location	Chemical	Specific Mass (μg)
TV-F&S 2000b	20.5'S of S-13	PCE	0.22
TV-F&S 2000b	15.5'S of S-13	PCE	0.17
TV-F&S 2000b	5.5'S of S-13	PCE	0.15
TV-F&S 2000b	2'N of S-13	TCE	1.76
TV-F&S 2000b	2'S of S-13	TCE	1.55
TV-F&S 2000b	10.5'S of S-13	TCE	0.61
TV-F&S 2000b	20.5'S of S-13	TCE	0.58
TV-F&S 2000b	5.5'S of S-13	TCE	0.48
TV-F&S 2000b	15.5'S of S-13	TCE	0.46
TV-F&S 2000b	6'S of S-1	TCE	0.11
TV-F&S 2000b	2'N of S-13	trans-1,2-DCE	7.11
TV-F&S 2000b	2'S of S-13	trans-1,2-DCE	6.81
TV-F&S 2000b	5.5'S of S-13	trans-1,2-DCE	3.46
TV-F&S 2000b	10.5'S of S-13	trans-1,2-DCE	2.54
TV-F&S 2000b	20.5'S of S-13	trans-1,2-DCE	2.51
TV-F&S 2000b	15.5'S of S-13	trans-1,2-DCE	2.17
TV-F&S 2000b	6'S of S-1	trans-1,2-DCE	0.83
TV-F&S 2000b	G1	trans-1,2-DCE	0.21
TV-F&S 2000b	11'S of S-1	trans-1,2-DCE	0.06
TV-F&S 2000b	6'S of S-1	Vinyl Chloride	103.94
TV-F&S 2000b	10.5'S of S-13	Vinyl Chloride	62.86
TV-F&S 2000b	5.5'S of S-13	Vinyl Chloride	51.75
TV-F&S 2000b	20.5'S of S-13	Vinyl Chloride	47.58
TV-F&S 2000b	15.5'S of S-13	Vinyl Chloride	44.96
TV-F&S 2000b	G1	Vinyl Chloride	42.05
TV-F&S 2000b	2'N of S-13	Vinyl Chloride	38.57
TV-F&S 2000b	2'S of S-13	Vinyl Chloride	27.90
TV-F&S 2000b	11'S of S-1	Vinyl Chloride	7.71

Table presents detections only.

Appendix E-2

Terra Vac and Floyd & Snider, Inc. 2000a: Supplemental Remedial Investigation and Feasibility Study

SUPPLEMENTAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

Volume I – SRI & FS Report, Tables, Figures

Prepared for GW International

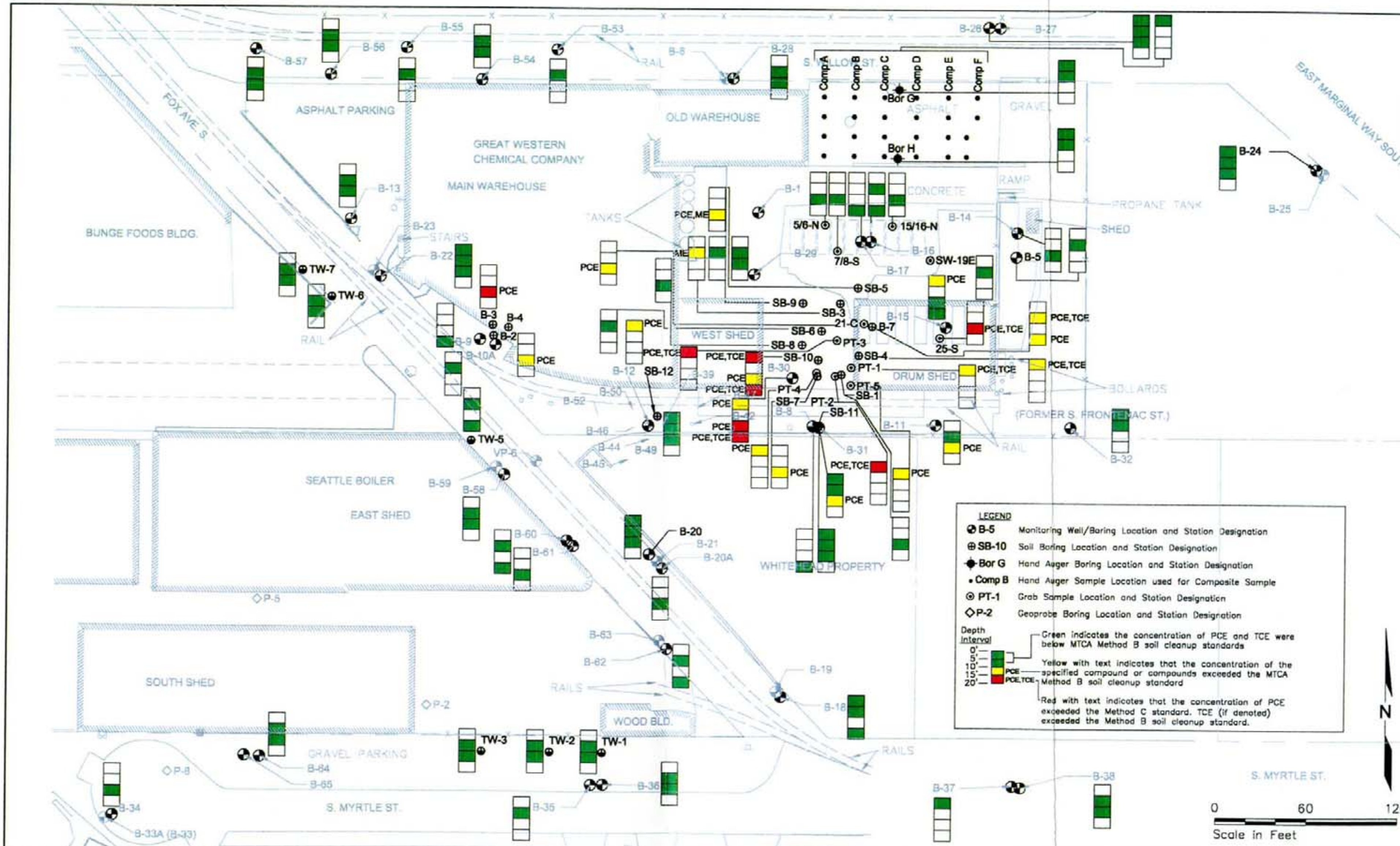
6900 Fox Avenue South
Seattle, Washington

OCTOBER 2000

AGENCY REVIEW DRAFT

TERRA VAC

Floyd & Snider Inc.



Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 4.5
PCE, TCE, and Methylene Chloride Results for Soil

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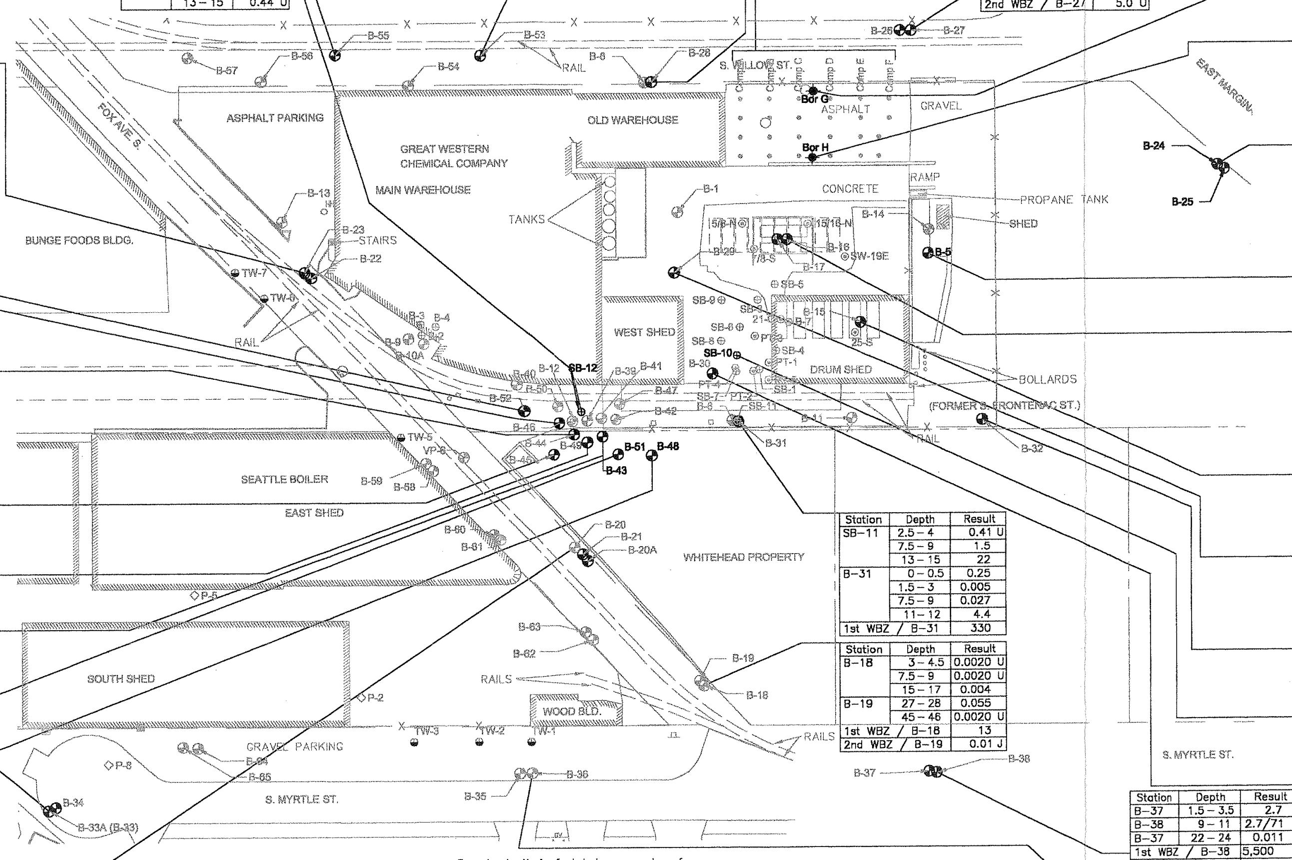

Station	Depth	Result
B-53	13 – 14	0.41 U
1st WBZ / B-53		5.0 U

Station	Depth	Result
B-55	14 – 15	0.42 U
1st WBZ / B-55		5.0 U

Station	Depth	Result
SB-12	2.5 – 4	0.41 U
	7.5 – 9	0.14 J
	13 – 15	0.44 U

Station	Depth	Result
B-28	0 – 0.5	0.003
	3 – 4.5	0.0020 U
	7.5 – 9	0.0020 U
	14 – 15	0.0020 U
1st WBZ / B-28		5.0 U

Station	Depth	Result
COMP A	0 – 1	0.89 J
COMP B	0 – 1	1.7 U
COMP C	0 – 1	0.85 U
COMP D	0 – 1	0.85 U
COMP E	0 – 1	0.85 U
COMP F	0 – 1	0.85 U

Station	Depth	Result
B-26	3 – 4.5	0.0020 U
	6 – 7.5	0.0020 U
	12 – 14	0.0050
B-27	45 – 46	0.003 U
	48 – 49	0.003 U
1st WBZ / B-26		5.0 U
2nd WBZ / B-27		5.0 U

Station	Depth	Result
BOR G	2.5	0.85 U
	5	0.85 U
	7.5	0.85 U

Station	Depth	Result
BOR H	2.5	0.85 U
	5	0.85 U
	7.5	0.0020 U

Station	Depth	Result
B-22	1.5 – 3	0.002
	6 – 7.5	0.0020 U
	11 – 12	0.0020 U
B-23	27 – 28	0.002
	48 – 49	0.003 U
1st WBZ / B-22		5.0 U
2nd WBZ / B-23		0.5 U

Station	Depth	Result
B-24	3 – 4.5	0.0020 U
	7.5 – 9	0.0020 U
	11 – 12	0.0020 U
B-25	28 – 30	0.0025 U
1st WBZ / B-24		5.0 U
2nd WBZ / B-25		5.0 U

Station	Depth	Result
B-52	? –	1.0 U
1st WBZ / B-52		37

Station	Depth	Result
B-5	0 – 0.5	0.0020 U
1st WBZ / B-5		ABDN

Station	Depth	Result
B-46	? –	0.45
1st WBZ / B-46		200

Station	Depth	Result
B-16	9 – 11	0.49
	15 – 17	0.0027
B-17	18 – 19	0.0022
	23 – 24	0.0020 U
	38 – 39	0.0020 U
	46 – 48	0.0020 U
1st WBZ / B-16		6.3
2nd WBZ / B-17		0.5 U

Station	Depth	Result
B-44	? –	0.46 J
1st WBZ / B-44		360

Station	Depth	Result
B-45	28 – 30	0.68
	? –	0.13 J
2nd WBZ / B-45		24

Station	Depth	Result
B-15	2.5 – 4	6.3
	13 – 14	0.38 U
	17 – 18	7.5
1st WBZ / B-15		26

Station	Depth	Result
SB-11	2.5 – 4	0.41 U
	7.5 – 9	1.5
	13 – 15	22
B-31	0 – 0.5	0.25
	1.5 – 3	0.005
	7.5 – 9	0.027
	11 – 12	4.4
1st WBZ / B-31		330

Station	Depth	Result
B-49	? –	2.9
1st WBZ / B-49		520

Station	Depth	Result
B-29	0 – 0.5	0.002
	6 – 7.5	1.0 U
	9 – 11	0.0020 U
	14 – 15	0.003
1st WBZ / B-29		DRY

Station	Depth	Result
B-43	? –	0.89
1st WBZ / B-43		ABDN

Station	Depth	Result
B-18	3 – 4.5	0.0020 U
	7.5 – 9	0.0020 U
	15 – 17	0.004
B-19	27 – 28	0.055
	45 – 46	0.0020 U
1st WBZ / B-18		13
2nd WBZ / B-19		0.01 J

Station	Depth	Result
B-32	0 – 3	0.004 J
	7 – 9	0.003 U
1st WBZ / B-32		DRY

Station	Depth	Result
B-51	? –	0.13 J
1st WBZ / B-51		ABDN

Station	Depth	Result
B-48	? –	0.42
1st WBZ / B-48		ABDN

Station	Depth	Result
SB-10	2.5 – 4	29 J
	13 – 14	10
	17 – 19	22 J

Station	Depth	Result
B-34	13 – 15	0.003 U
B-33	30 – 31	0.003 U
	39 – 40	0.003 U
1st WBZ / B-34		5.0 U
2nd WBZ / B-33A		0.5 U

Station	Depth	Result
B-37	1.5 – 3.5	2.7
B-38	9 – 11	2.7/71
B-37	22 – 24	0.011
1st WBZ / B-38		5,500
2nd WBZ / B-37		5.0 U

Station	Depth	Result
B-30	0 – 0.5	3.4
	4 – 5.5	0.22
	10 – 12	11
	15 – 16	13
1st WBZ / B-30		NC

Station	Depth	Result
B-20	3 – 4.5	0.0020 U
	7.5 – 9	0.0020 U
	12 – 14	0.0020 U
B-21	23 – 24	0.022
	42 – 44	0.006
	48 – 50	0.0020 U
1st WBZ / B-20A		0.5 U
2nd WBZ / B-21		0.5 U

Station	Depth	Result
B-35	8 – 10	0.004
B-36	9 – 11	0.003
B-35	28 – 30	0.075
1st WBZ / B-36		0.37 J
2nd WBZ / B-35		0.07 J

LEGEND

- B-5 Monitoring Well/Boring Location and Station Designation
- SB-10 Soil Boring Location and Station Designation
- Bor G Hand Auger Boring Location and Station Designation
- Comp B Hand Auger Sample Location used for Composite Sample

Sample depth in feet below ground surface
Soil boring/well designation
First/Second water bearing zone

Station	Depth	Result
B-18	3 – 4.5	0.0020 U
	7.5 – 9	0.0020 U
	15 – 17	0.004
B-19	27 – 28	0.055
	45 – 46	0.0020 U
1st WBZ / B-18		Dry/ABDN/NC
2nd WBZ / B-19		0.01 J

Penta concentration in soil (mg/kg)
Dry=Inadequate volume of water to sample
ABDN=Well was abandoned
NC=Not collected
Penta concentration in groundwater (ug/L)

0 80 160
Scale in Feet

N

Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 4.8
Pentachlorophenol Results for Soil

DATE: 08/10/00 1:47pm
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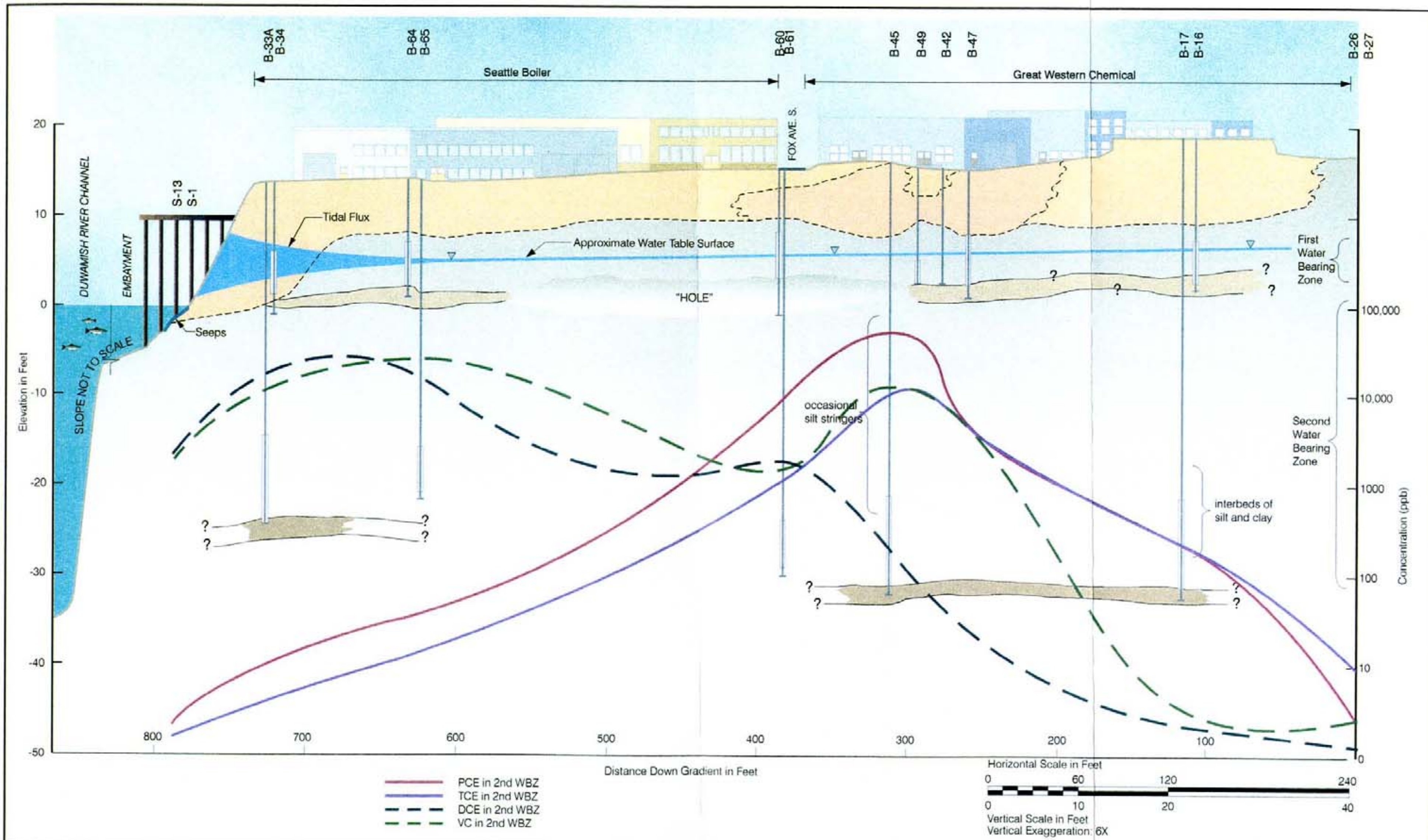


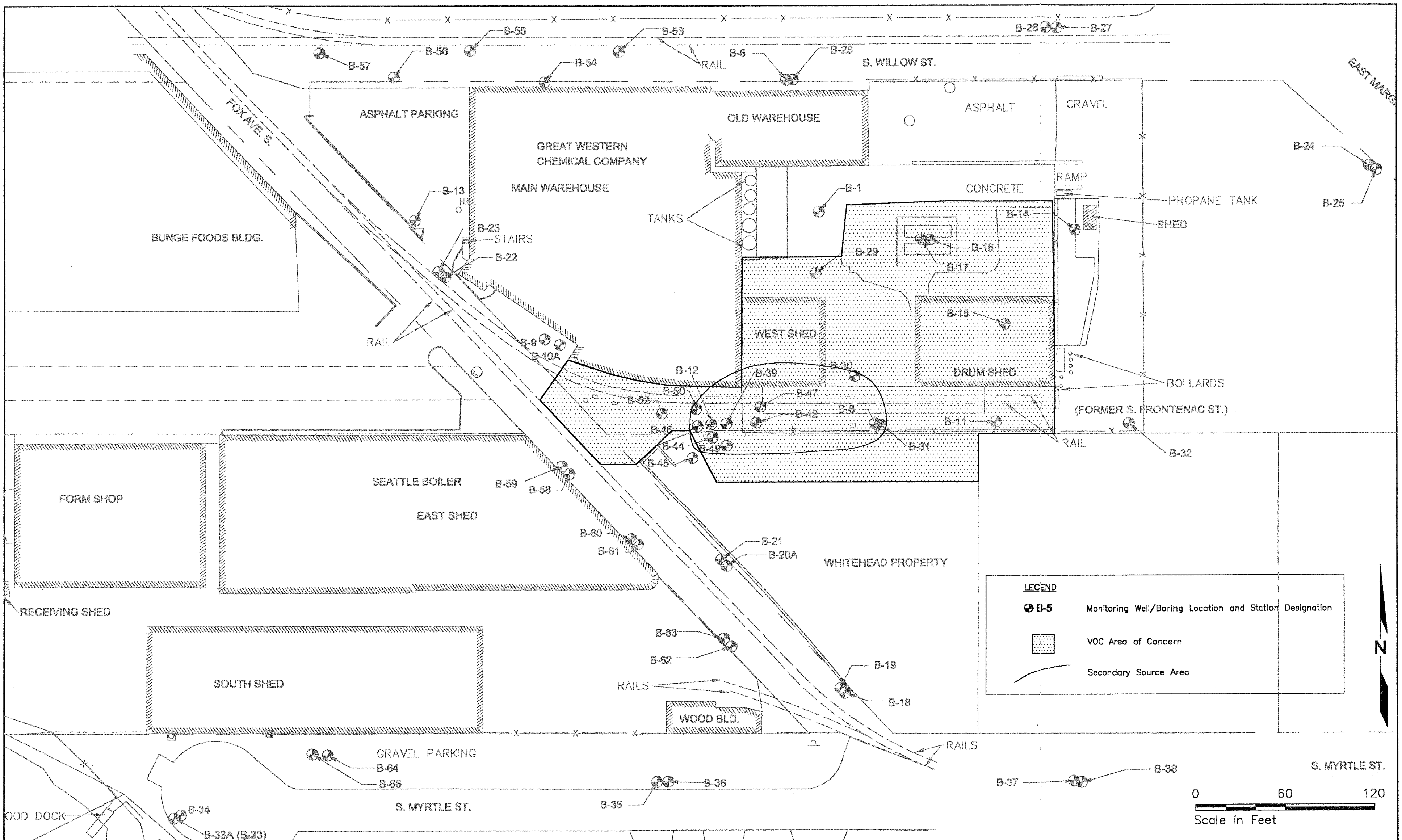
Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 5.13
Schematic Cross Section Showing Chlorinated Ethenes

02/23/00 PCE1TCE1DCE2VC2.cdr



Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 7.1
VOCs Area of Concern in Soil and Groundwater

DATE: 10/23/00 09:28am
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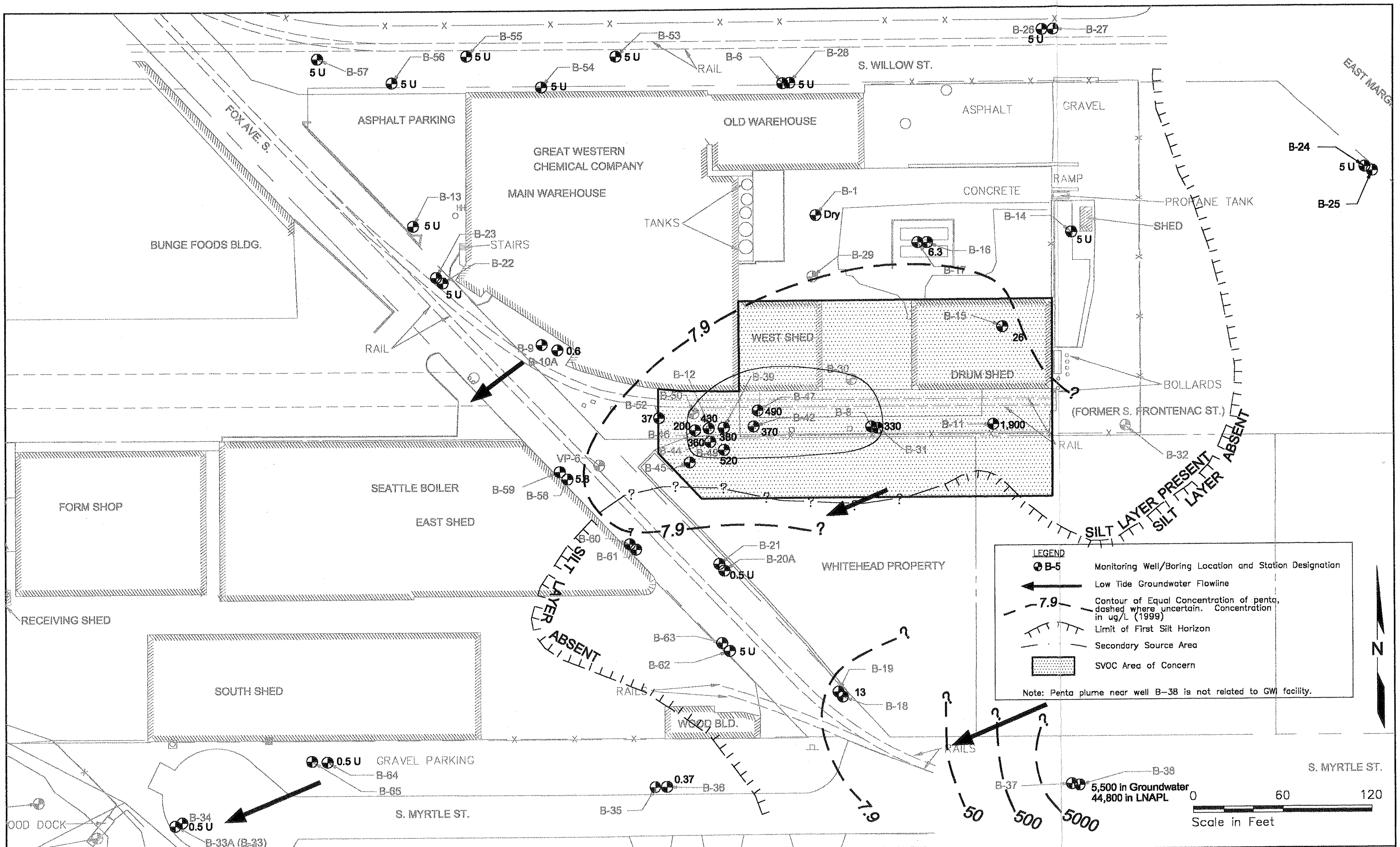

Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 8.1
SVOC Area of Concern in Soil and Groundwater

DATE: 10/17/00 4:21pm
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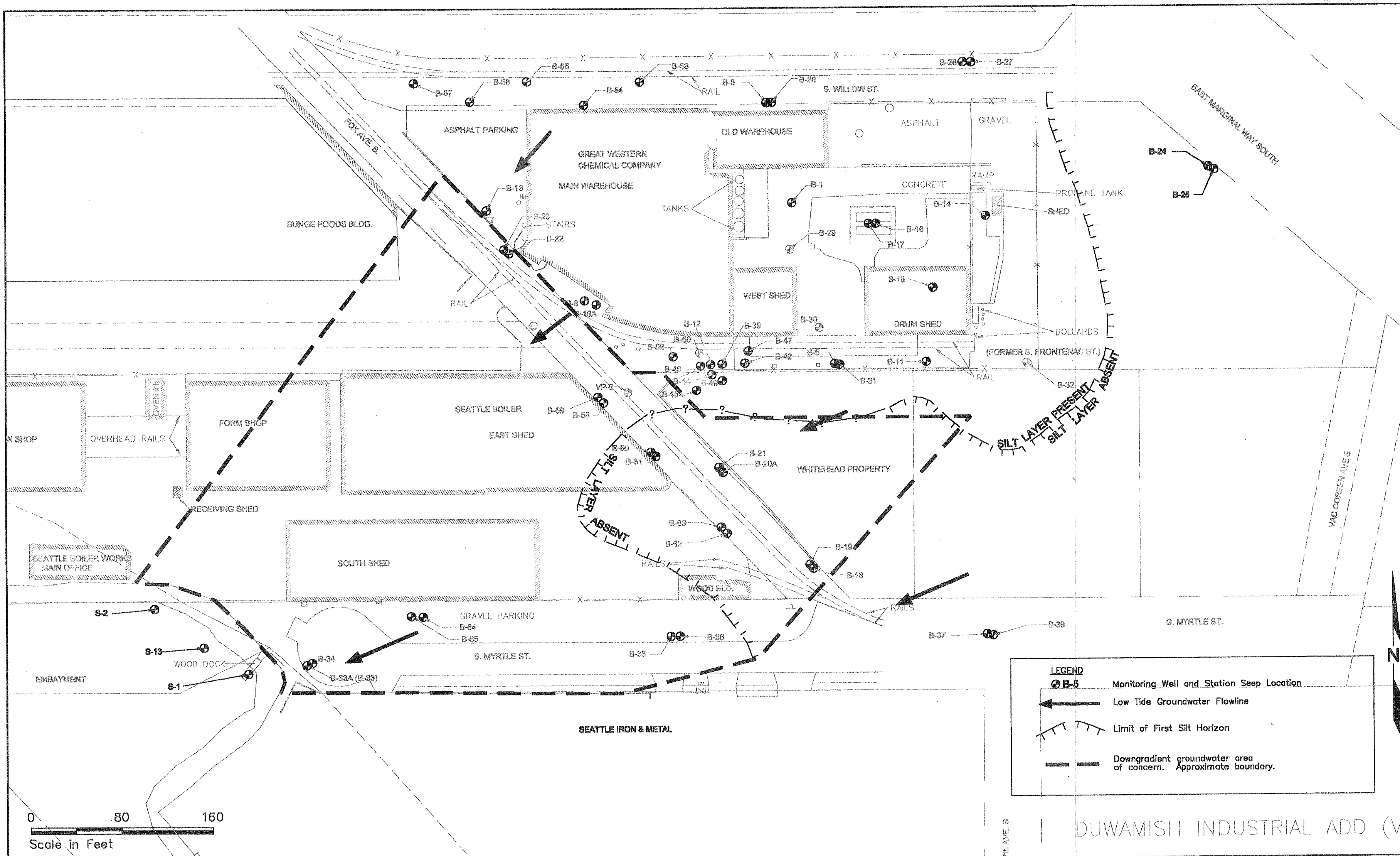


Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 9.1
Extent of Downgradient Area of Concern for COCs in 2nd WBZ

DATE: 10/19/00 1:03pm
DWG NAME: G:\project\Clients\Floyd and Snider\gwcc\final\gwc0026.dwg

Appendix E-3

Terra Vac and Floyd & Snider, Inc. 2000b: S. Myrtle Street Embayment Study

S. Myrtle Street Embayment Study

PREPARED FOR:

GW International

PREPARED BY:

TERRA VAC
23106 100th Ave West
Edmonds, WA 98020-5018

and

FLOYD & SNIDER INC.
83 S. King Street Suite 614
Seattle, WA 98104

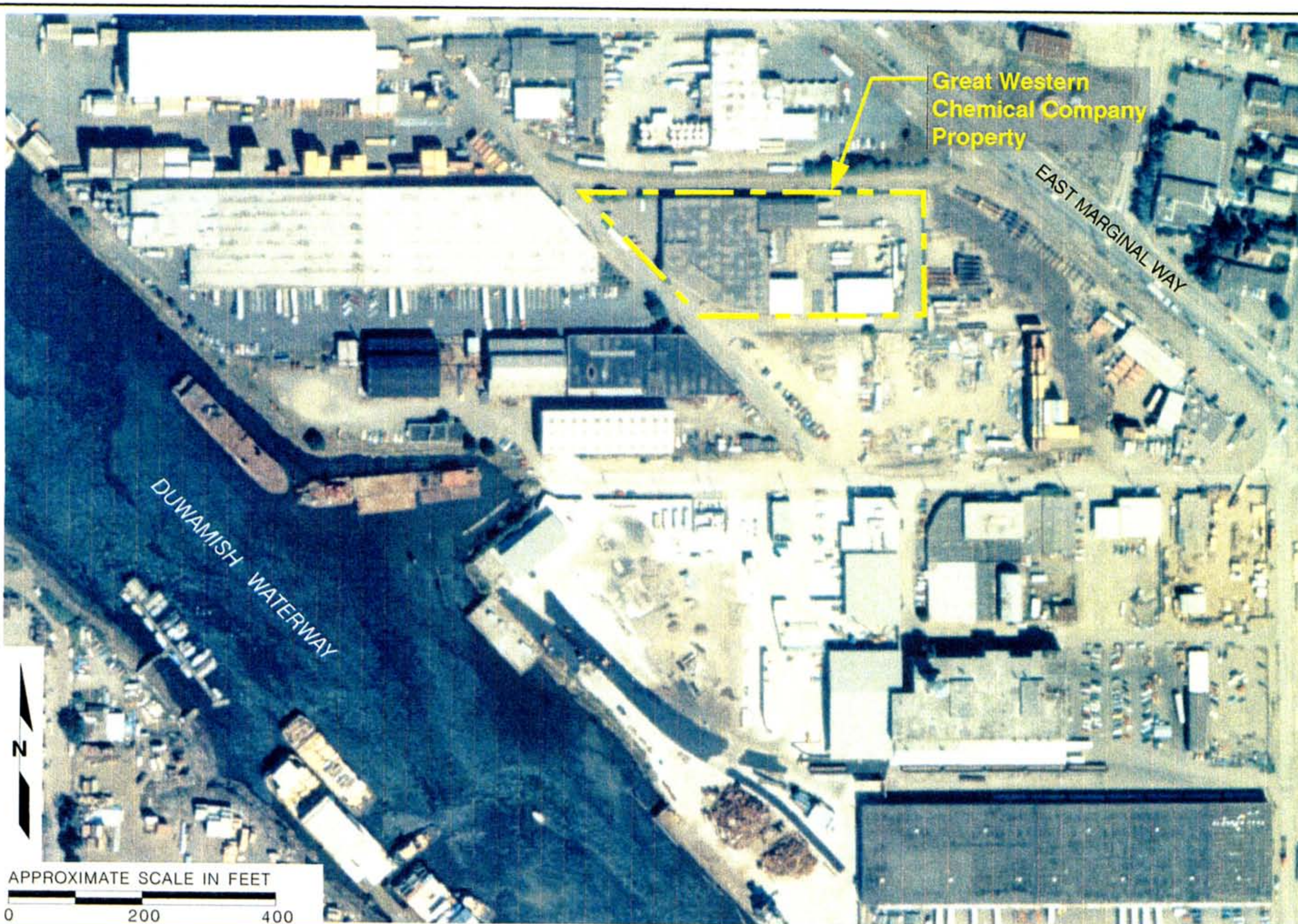
OCTOBER 24, 2000

AGENCY REVIEW DRAFT

S. Myrtle Street Embayment Study

Figures

AGENCY REVIEW DRAFT



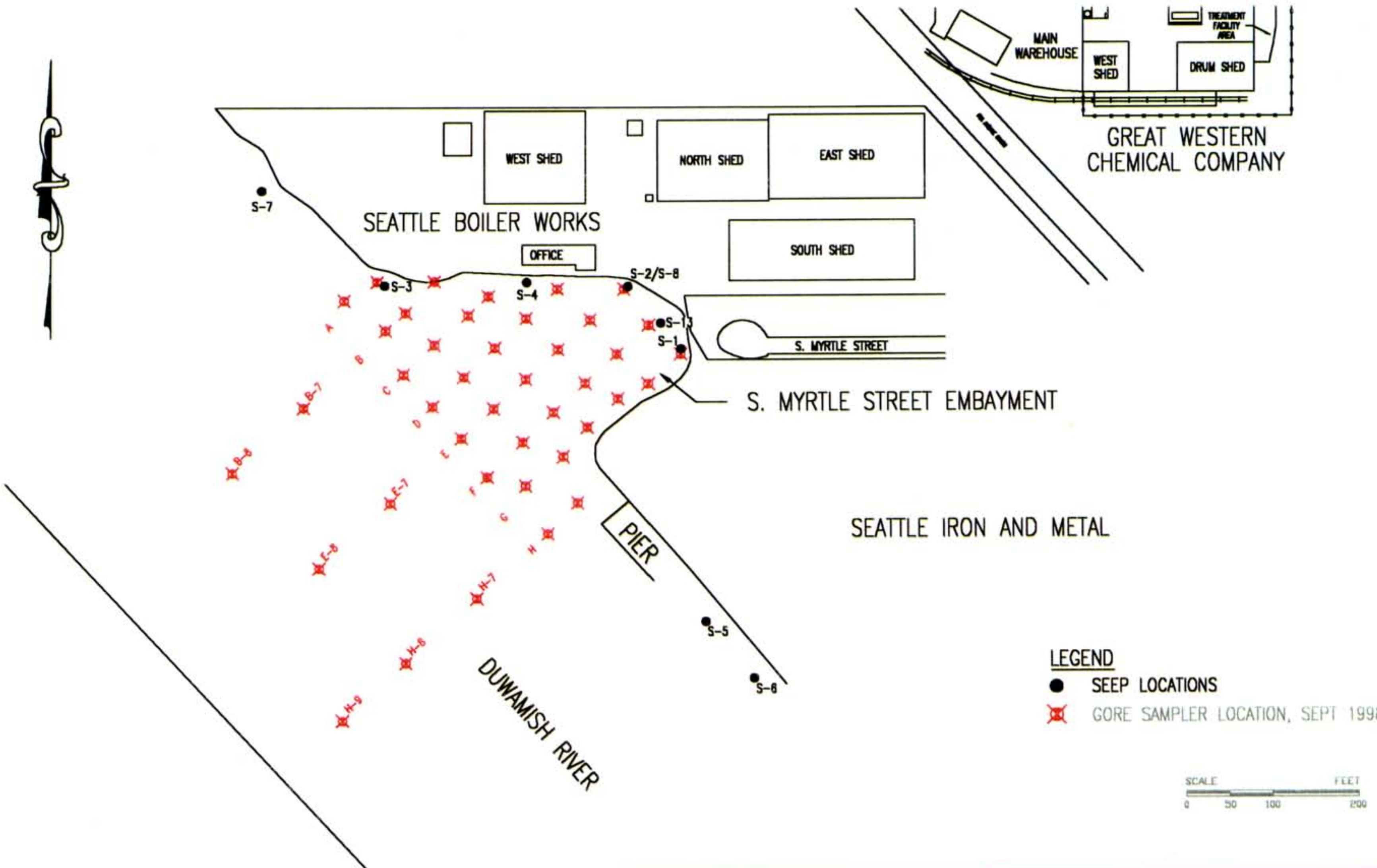
Floyd & Snider Inc.

TERRA VAC

Great Western Chemical Company
Seattle, Washington

Figure 1
Area Map

02/23/00 VicinMapTidal.cdr



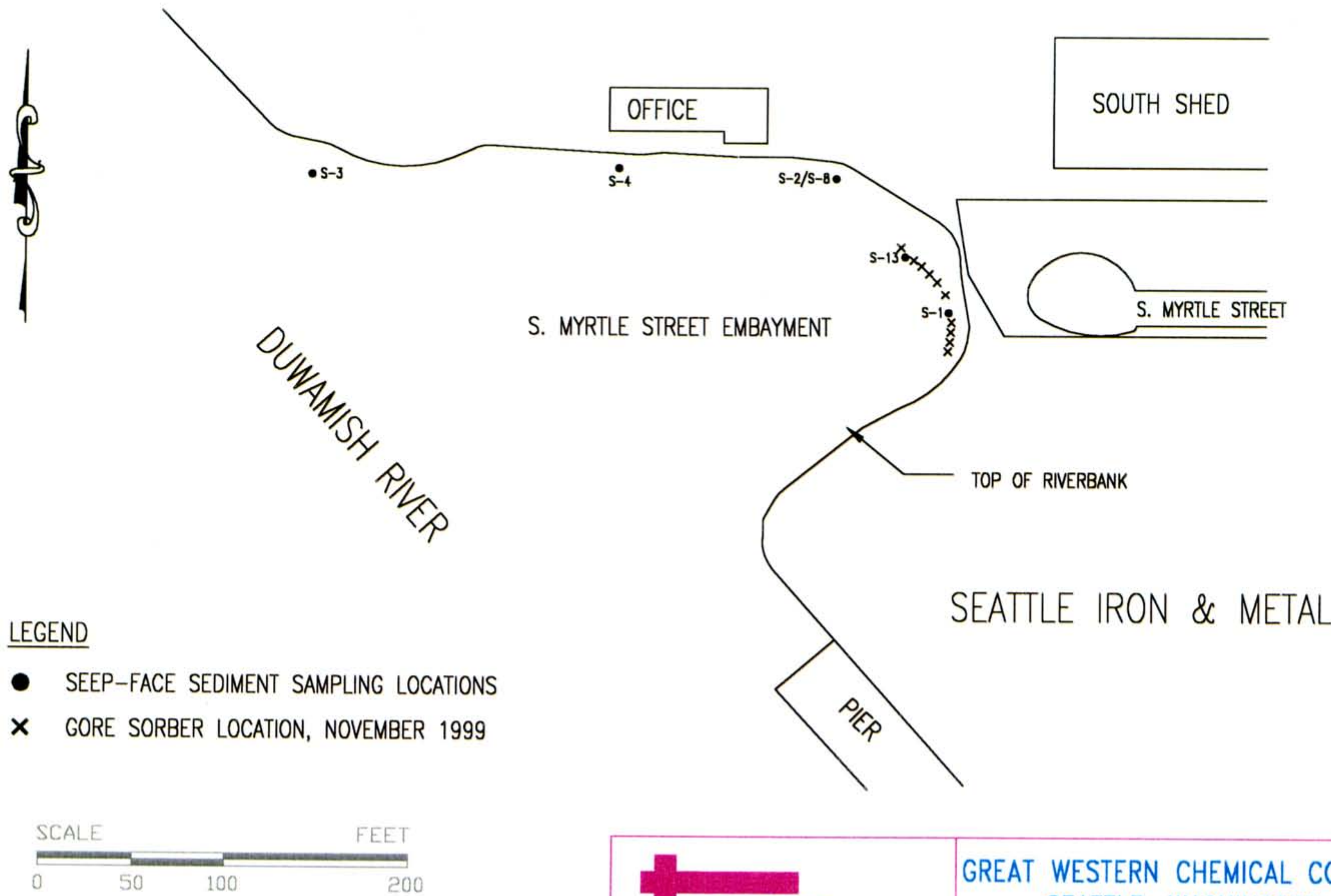
Washington State Plan North, NAD 83, feet

Exact location of land features has not been confirmed.

TERRA VAC

GREAT WESTERN CHEMICAL COMPANY SEATTLE, WASHINGTON			
EMBAYMENT SEDIMENT SCREENING LOCATIONS			
DESIGNED BY: P. CATTERALL	CHECKED BY: T. WARNER	PROJECT #: 32-0039	FIGURE #: 2
DRAWN BY: P. BIANCO	PROJECT MANAGER: T. WARNER	DATE: 12/14/98	SCALE: AS SHOWN

TV/32-0039/12/14/98/SIMSEM2



Washington State Plan North, NAD 83, feet

Exact location of land features has not been confirmed.

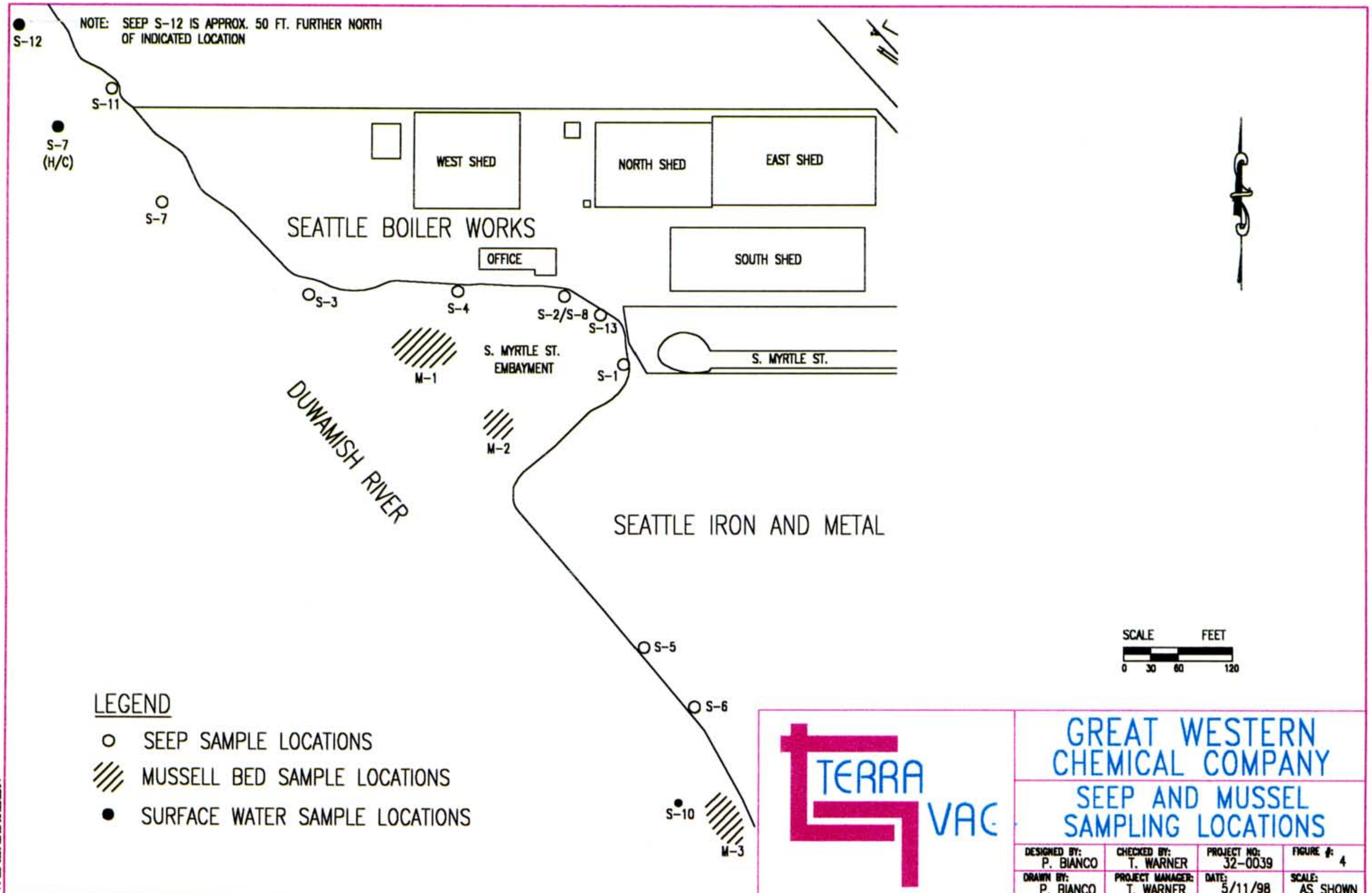
TERRA VAC

GREAT WESTERN CHEMICAL COMPANY
SEATTLE, WASHINGTON

SEEP FACE SEDIMENT
SCREENING LOCATIONS

DESIGNED BY:	CHECKED BY:	PROJECT #	FIGURE #
P. CATTERALL	T. WARNER	32-0039	3
DRAWN BY:	PROJECT MANAGER:	DATE:	SCALE:
P. BIANCO	T. WARNER	12/14/98	AS SHOWN

TV\32-0039\12/14/98\SIMSBW3



TERRA VAC

GREAT WESTERN CHEMICAL COMPANY			
SEEP AND MUSSEL SAMPLING LOCATIONS			
DESIGNED BY: P. BIANCO	CHECKED BY: T. WARNER	PROJECT NO: 32-0039	FIGURE #: 4
DRAWN BY: P. BIANCO	PROJECT MANAGER: T. WARNER	DATE: 5/11/98	SCALE: AS SHOWN

Appendix F
Former Tyee Industries Historical Data

Appendix F

F-1 Table F-1: Chemicals Detected in Soil, Former Tyee Industries
Table F-2: Chemicals Detected in Groundwater, Former Tyee Industries

F-2 Terra Vac and Floyd & Snider, Inc. 2001: Supplemental Investigation Report on the Whitehead Property

Appendix F-1

Table F-1: Chemicals Detected in Soil, Former Tyee Industries

Table F-2: Chemicals Detected in Groundwater, Former Tyee Industries

Table F-1
Chemicals Detected in Soil
Former Tyee Industries

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
TV-F&S 2001b	Aug-00	WH-5	16.5	cis-DCE	6.6		800		0.0
TV-F&S 2001b	Aug-00	WH-1	11.5	cis-DCE	2.7		800		0.0
TV-F&S 2001b	Aug-00	WH-3	12.5	cis-DCE	2.1		800		0.0
TV-F&S 2001b	Aug-00	WH-4	14.0	cis-DCE	1.6		800		0.0
TV-F&S 2001b	Aug-00	WH-2	12.5	cis-DCE	1.2		800		0.0
TV-F&S 2001b	Aug-00	WH-7	15.5	cis-DCE	0.12		800		0.0
TV-F&S 2001b	Aug-00	WH-1	10.5	cis-DCE	0.1		800		0.0
TV-F&S 2001b	Aug-00	WH-8	16.5	cis-DCE	0.07		800		0.0
TV-F&S 2001b	**Aug-00**	**WH-2**	**11.0**	**PCE**	**4.4**		**0.05**		**88**
TV-F&S 2001b	**Aug-00**	**WH-11**	**11.0**	**PCE**	**0.59**		**0.05**		**12**
TV-F&S 2001b	**Aug-00**	**WH-10**	**11.0**	**PCE**	**0.57**		**0.05**		**11**
TV-F&S 2001b	Aug-00	WH-9	11.0	PCE	0.39		0.05		7.8
TV-F&S 2001b	Aug-00	WH-5	15.5	PCE	0.25		0.05		5.0
TV-F&S 2001b	Aug-00	WH-9	12.5	PCE	0.23		0.05		4.6
TV-F&S 2001b	Aug-00	WH-11	12.5	PCE	0.22		0.05		4.4
TV-F&S 2001b	Aug-00	WH-3	11.0	PCE	0.2		0.05		4.0
TV-F&S 2001b	Aug-00	WH-3	12.5	PCE	0.19		0.05		3.8
TV-F&S 2001b	Aug-00	WH-8	11.0	PCE	0.14		0.05		2.8
TV-F&S 2001b	Aug-00	WH-10	16.5	PCE	0.14		0.05		2.8
TV-F&S 2001b	Aug-00	WH-1	10.5	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-2	12.5	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-4	14.0	PCE	0.11		0.05		2.2
TV-F&S 2001b	Aug-00	WH-10	12.5	PCE	0.1		0.05		2.0
TV-F&S 2001b	Aug-00	WH-5	12.5	PCE	0.092		0.05		1.8
TV-F&S 2001b	Aug-00	WH-4	11.0	PCE	0.081		0.05		1.6
TV-F&S 2001b	**Aug-00**	**WH-2**	**12.5**	**Pentachlorophenol**	**3.3**		**8.3**	**0.037**	**89**
TV-F&S 2001b	**Aug-00**	**WH-7**	**16.5**	**Pentachlorophenol**	**1.4**		**8.3**	**0.037**	**38**
TV-F&S 2001b	**Aug-00**	**WH-3**	**12.5**	**Pentachlorophenol**	**0.74**		**8.3**	**0.037**	**20**
TV-F&S 2001b	**Aug-00**	**WH-4**	**14.0**	**TCE**	**0.57**		**0.03**		**19**
TV-F&S 2001b	**Aug-00**	**WH-2**	**11.0**	**TCE**	**0.45**		**0.03**		**15**
TV-F&S 2001b	Aug-00	WH-9	12.5	TCE	0.26		0.03		8.7
TV-F&S 2001b	Aug-00	WH-3	12.5	TCE	0.2		0.03		6.7

Table F-1
Chemicals Detected in Soil
Former Tyee Industries

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
TV-F&S 2001b	Aug-00	WH-5	16.5	Toluene	2.8		7		0.4
TV-F&S 2001b	Aug-00	WH-1	11.5	Toluene	0.62		7		0.1
TV-F&S 2001b	Aug-00	WH-2	12.5	Toluene	0.38		7		0.1
TV-F&S 2001b	Aug-00	WH-3	12.5	Toluene	0.3		7		0.0
TV-F&S 2001b	Aug-00	WH-4	14.0	Toluene	0.25		7		0.0
TV-F&S 2001b	Aug-00	WH-7	15.5	Toluene	0.24		7		0.0
TV-F&S 2001b	Aug-00	WH-7	16.5	Toluene	0.078		7		0.0
TV-F&S 2001b	Aug-00	WH-1	11.5	Vinyl Chloride	3.3		0.67		4.9
TV-F&S 2001b	Aug-00	WH-5	16.5	Vinyl Chloride	1.2		0.67		1.8
TV-F&S 2001b	Aug-00	WH-3	12.5	Vinyl Chloride	0.7		0.67		1.0

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table F-2

Chemicals Detected in Groundwater

Former Tyee Industries

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001b	Aug-00	WH-7	DCE	54,000				
TV-F&S 2001b	Aug-00	WH-6	DCE	25,000				
TV-F&S 2001b	Aug-00	B-31	DCE	4,400				
TV-F&S 2001b	Aug-00	B-11	DCE	4,100				
TV-F&S 2001b	Aug-00	WH-5	DCE	4,100				
TV-F&S 2001b	Aug-00	B-18	DCE	3,500				
TV-F&S 2001b	Aug-00	WH-8	DCE	3,200				
TV-F&S 2001b	Aug-00	WH-2	DCE	2,500				
TV-F&S 2001b	Aug-00	WH-1	DCE	1,600				
TV-F&S 2001b	Aug-00	WH-4	DCE	1,100				
TV-F&S 2001b	Aug-00	WH-10	DCE	400				
TV-F&S 2001b	Aug-00	B-60	DCE	300				
TV-F&S 2001b	Aug-00	WH-11	DCE	210				
TV-F&S 2001b	**Aug-00**	**B-31**	**Gasoline-Range Hydrocarbons**	**66,000**		**800**		**83**
TV-F&S 2001b	**Aug-00**	**WH-7**	**Gasoline-Range Hydrocarbons**	**66,000**		**800**		**83**
TV-F&S 2001b	**Aug-00**	**WH-6**	**Gasoline-Range Hydrocarbons**	**18,000**		**800**		**23**
TV-F&S 2001b	**Aug-00**	**WH-8**	**Gasoline-Range Hydrocarbons**	**10,000**		**800**		**13**
TV-F&S 2001b	Aug-00	WH-4	Gasoline-Range Hydrocarbons	6,500		800		8.1
TV-F&S 2001b	Aug-00	WH-5	Gasoline-Range Hydrocarbons	6,500		800		8.1
TV-F&S 2001b	Aug-00	WH-2	Gasoline-Range Hydrocarbons	4,300		800		5.4
TV-F&S 2001b	Aug-00	B-60	Gasoline-Range Hydrocarbons	4,000		800		5.0
TV-F&S 2001b	Aug-00	WH-10	Gasoline-Range Hydrocarbons	3,400		800		4.3
TV-F&S 2001b	Aug-00	B-11	Gasoline-Range Hydrocarbons	3,100		800		3.9
TV-F&S 2001b	Aug-00	WH-1	Gasoline-Range Hydrocarbons	1,800		800		2.3
TV-F&S 2001b	Aug-00	WH-11	Gasoline-Range Hydrocarbons	1,300		800		1.6
TV-F&S 2001b	Aug-00	B-18	Gasoline-Range Hydrocarbons	560		800		0.7
TV-F&S 2001b	**Aug-00**	**B-31**	**PCE**	**63,000**		**5**		**12,600**
TV-F&S 2001b	**Aug-00**	**B-11**	**PCE**	**21,000**		**5**		**4,200**
TV-F&S 2001b	**Aug-00**	**WH-4**	**PCE**	**13,000**		**5**		**2,600**
TV-F&S 2001b	**Aug-00**	**WH-5**	**PCE**	**9,400**		**5**		**1,880**
TV-F&S 2001b	**Aug-00**	**B-60**	**PCE**	**5,900**		**5**		**1,180**

Table F-2
Chemicals Detected in Groundwater
Former Tyee Industries

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001b	**Aug-00**	**WH-2**	**PCE**	**5,900**		**5**		**1,180**
TV-F&S 2001b	**Aug-00**	**WH-10**	**PCE**	**5,000**		**5**		**1,000**
TV-F&S 2001b	**Aug-00**	**WH-7**	**PCE**	**2,200**		**5**		**440**
TV-F&S 2001b	**Aug-00**	**WH-1**	**PCE**	**1,700**		**5**		**340**
TV-F&S 2001b	**Aug-00**	**WH-6**	**PCE**	**1,600**		**5**		**320**
TV-F&S 2001b	**Aug-00**	**WH-11**	**PCE**	**1,400**		**5**		**280**
TV-F&S 2001b	**Aug-00**	**WH-8**	**PCE**	**110**		**5**		**22**
TV-F&S 2001b	**Aug-00**	**B-18**	**PCE**	**100**		**5**		**20**
TV-F&S 2001b	**Aug-00**	**WH-7**	**Pentachlorophenol**	**1,500**		**0.73**	**10**	**2,055**
TV-F&S 2001b	**Aug-00**	**WH-2**	**Pentachlorophenol**	**170**		**0.73**	**10**	**233**
TV-F&S 2001b	**Aug-00**	**B-31**	**Pentachlorophenol**	**140**		**0.73**	**10**	**192**
TV-F&S 2001b	**Aug-00**	**B-11**	**Pentachlorophenol**	**110**		**0.73**	**10**	**151**
TV-F&S 2001b	**Aug-00**	**WH-6**	**Pentachlorophenol**	**46**		**0.73**	**10**	**63**
TV-F&S 2001b	**Aug-00**	**WH-4**	**Pentachlorophenol**	**39**		**0.73**	**10**	**53**
TV-F&S 2001b	**Aug-00**	**WH-10**	**Pentachlorophenol**	**37**		**0.73**	**10**	**51**
TV-F&S 2001b	**Aug-00**	**WH-11**	**Pentachlorophenol**	**21**		**0.73**	**10**	**29**
TV-F&S 2001b	**Aug-00**	**WH-1**	**Pentachlorophenol**	**16**		**0.73**	**10**	**22**
TV-F&S 2001b	**Aug-00**	**WH-5**	**Pentachlorophenol**	**12**		**0.73**	**10**	**16**
TV-F&S 2001b	Aug-00	B-60	Pentachlorophenol	5.1		0.73	10	7.0
TV-F&S 2001b	Aug-00	B-18	Pentachlorophenol	2.8	J	0.73	10	3.8
TV-F&S 2001b	**Aug-00**	**B-31**	**TCE**	**14,000**		**0.11**		**127,273**
TV-F&S 2001b	**Aug-00**	**B-11**	**TCE**	**8,900**		**0.11**		**80,909**
TV-F&S 2001b	**Aug-00**	**WH-4**	**TCE**	**5,300**		**0.11**		**48,182**
TV-F&S 2001b	**Aug-00**	**WH-2**	**TCE**	**3,200**		**0.11**		**29,091**
TV-F&S 2001b	**Aug-00**	**WH-5**	**TCE**	**2,600**		**0.11**		**23,636**
TV-F&S 2001b	**Aug-00**	**WH-7**	**TCE**	**2,100**		**0.11**		**19,091**
TV-F&S 2001b	**Aug-00**	**WH-10**	**TCE**	**1,600**		**0.11**		**14,545**
TV-F&S 2001b	**Aug-00**	**WH-6**	**TCE**	**1,400**		**0.11**		**12,727**
TV-F&S 2001b	**Aug-00**	**WH-1**	**TCE**	**500**		**0.11**		**4,545**
TV-F&S 2001b	**Aug-00**	**B-60**	**TCE**	**380**		**0.11**		**3,455**
TV-F&S 2001b	**Aug-00**	**WH-11**	**TCE**	**300**		**0.11**		**2,727**

Table F-2
Chemicals Detected in Groundwater
Former Tyee Industries

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
TV-F&S 2001b	**Aug-00**	**WH-7**	**Toluene**	**21,000**		**640**		**33**
TV-F&S 2001b	Aug-00	WH-6	Toluene	4,200		640		6.6
TV-F&S 2001b	Aug-00	B-31	Toluene	3,700		640		5.8
TV-F&S 2001b	Aug-00	WH-8	Toluene	3,100		640		4.8
TV-F&S 2001b	Aug-00	WH-5	Toluene	220		640		0.3
TV-F&S 2001b	Aug-00	B-11	Toluene	37		640		0.1
TV-F&S 2001b	Aug-00	B-18	Toluene	29		640		0.0
TV-F&S 2001b	Aug-00	WH-2	Toluene	11		640		0.0
TV-F&S 2001b	Aug-00	WH-1	Toluene	9.9		640		0.0
TV-F&S 2001b	**Aug-00**	**WH-7**	**Vinyl Chloride**	**18,000**		**0.029**		**620,690**
TV-F&S 2001b	**Aug-00**	**WH-8**	**Vinyl Chloride**	**14,000**		**0.029**		**482,759**
TV-F&S 2001b	**Aug-00**	**WH-6**	**Vinyl Chloride**	**3,600**		**0.029**		**124,138**
TV-F&S 2001b	**Aug-00**	**WH-5**	**Vinyl Chloride**	**3,500**		**0.029**		**120,690**
TV-F&S 2001b	**Aug-00**	**B-18**	**Vinyl Chloride**	**2,600**		**0.029**		**89,655**
TV-F&S 2001b	**Aug-00**	**B-11**	**Vinyl Chloride**	**1,200**		**0.029**		**41,379**
TV-F&S 2001b	**Aug-00**	**WH-4**	**Vinyl Chloride**	**110**		**0.029**		**3,793**

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Appendix F-2

Terra Vac and Floyd & Snider, Inc. 2001: Supplemental Investigation Report on the Whitehead Property

SUPPLEMENTAL INVESTIGATION REPORT ON THE WHITEHEAD PROPERTY

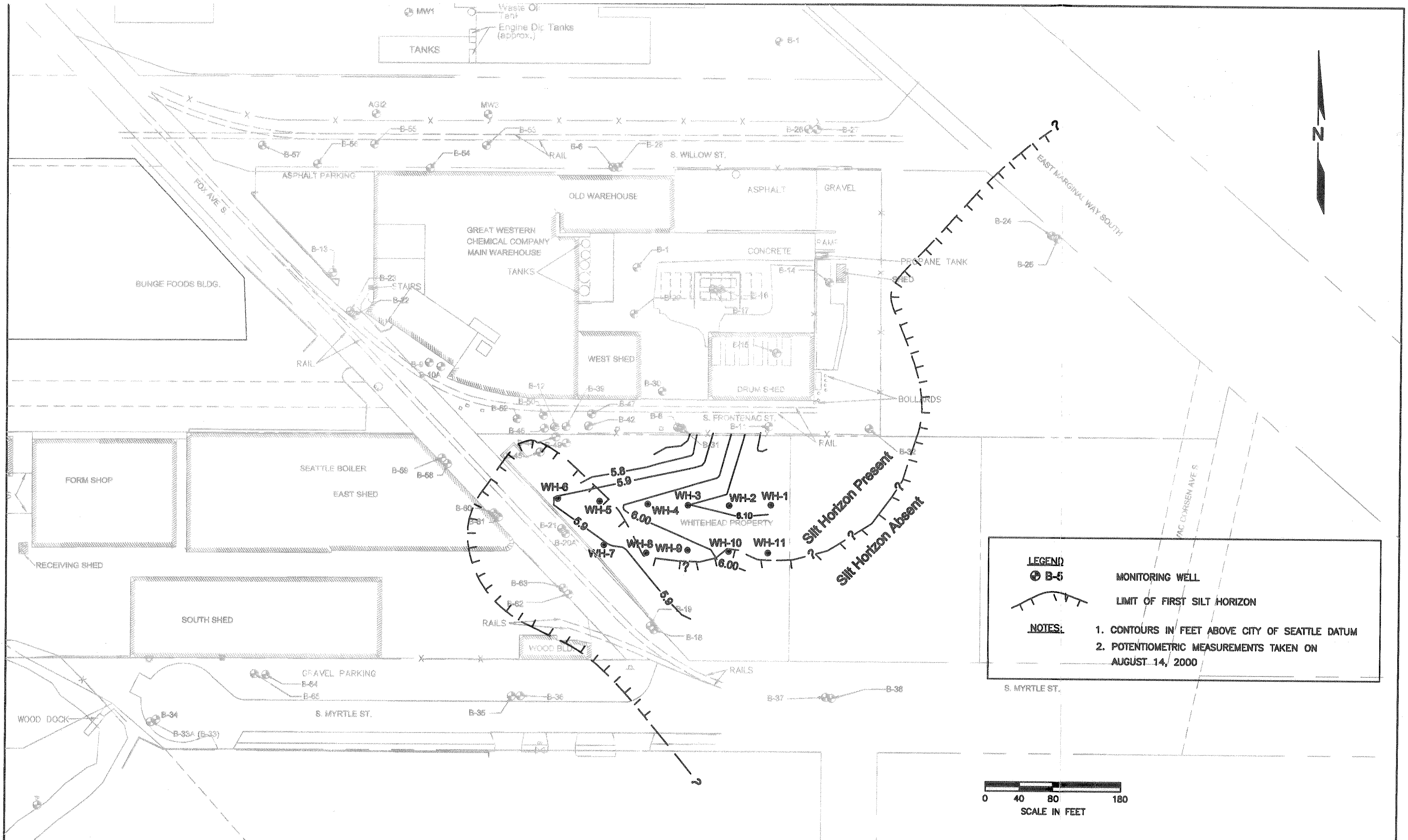
GW INTERNATIONAL

808 S.W. 15th Avenue
Portland, OR 97205

JANUARY 26, 2001

TERRA VAC

Floyd & Snider Inc.



Floyd & Snider Inc. / TERRA VAC	Great Western Chemical Company Seattle, Washington	Figure 4 POTENTIOMETRIC MAP OF FIRST WATER BEARING ZONE SUPPLEMENTAL INVESTIGATION OF WHITEHEAD PROPERTY

TVPROJECT\K02-0038\WHITEHEAD\FIG4

Appendix G
Former Perkins Lot Historical Data

Appendix G

G-1 Table G-1: Chemicals Detected in Soil, Former Perkins Lot

G-2 Site Hazard Assessment, Recommendation for No Further Action, Former Perkins Lot

Appendix G-1

Table G-1: Chemicals Detected in Soil, Former Perkins Lot

Table G-1
Chemicals Detected in Soil
Former Perkins Lot

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Onsite 2006	Apr-06	1	0.5	Barium	71		16,000		0.0
Onsite 2006	Apr-06	3	0.5	Barium	61		16,000		0.0
Onsite 2006	Apr-06	2	0.5	Barium	28		16,000		0.0
Onsite 2006	Apr-06	1	0.5	Cadmium	1		2	34	0.5
Onsite 2006	Apr-06	1	0.5	Chromium	57		19	270	3.0
Onsite 2006	Apr-06	3	0.5	Chromium	37		19	270	1.9
Onsite 2006	Apr-06	2	0.5	Chromium	20		19	270	1.1
Onsite 2006	Apr-06	3	0.5	Diesel-Range Hydrocarbons	63		2,000		0.0
Onsite 2006	Apr-06	1	0.5	Lead	150		250	1,300	0.6
Onsite 2006	Apr-06	3	0.5	Lead	100		250	1,300	0.4
Onsite 2006	Apr-06	2	0.5	Lead	14		250	1,300	0.1
Onsite 2006	Apr-06	1	0.5	Lube-Oil Range Hydrocarbons	1,300		2,000		0.7
Onsite 2006	Apr-06	3	0.5	Lube-Oil Range Hydrocarbons	720		2,000		0.4

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Appendix G-2

Site Hazard Assessment, Recommendation for No Further Action, Former Perkins Lot

Site Hazard Assessment
Recommendation for No Further Action

Perkins Lot
719 S. Myrtle ST
Seattle, King County, WA 98108
Facility Site ID # 43114188
June 21, 2006

Site Description

The Perkins Lot site is a vacant piece of land located within a 2.8 acre parcel that is located in the Duwamish area of the City of Seattle. The area surrounding the Perkins Lot is commercial and industrial properties. There are several large buildings on the parcel which surround the Perkins Lot. These buildings include office, storage, workshop and manufacturing space for four businesses. The parcel is bordered by S. Orchard St. to the south, 7th Ave S. to the west, S. Myrtle St. to the north and 8th Ave S. to the east. Except for a small area, the entire parcel is covered with asphalt and cement. The Perkins Lot has a small area of asphalt with the rest of the site being covered with very hard packed soil, gravel and rock. The area is served by municipal sewer and water systems and there are no groundwater wells within a two-mile radius of the site.

Background

The Perkins Lot has continuously been maintained as a vacant lot and has been in the possession of its current owners since 1961. During the summer of 2005 Sam Perkins, who collects vehicles for an auto wrecking business, asked one of the tenants on the parcel if he could store a few cars on the vacant site for a few days. Within a week Sam Perkins filled the entire site with wrecked vehicles without the property owners permission. The property owner immediately took action to remove Sam Perkins from the site.

Previous Site Investigations

On October 4, 2005 a multi-agency visit lead by the Washington Department of Ecology (Ecology) visited the site to check for any infractions that might be of interest to the different agencies present. At the time of the visit, the site was covered with wrecked vehicles and appeared to have soil staining. This information was then forwarded to Public Health-Seattle & King County (PHSKC) to perform an Initial Investigation on the site. On December 28, 2005 Yolanda Pon of PHSKC conducted an Initial Investigation of the Perkins Lot site.

By that time the site had been mostly cleared of the wrecked vehicles and areas of stained soil were present. PHSKC then forwarded their site information for further review to Ecology's

Initial Investigation section. After reviewing the information Ecology decided that the site needed further investigation. The Perkins Lot was listed on Ecology's Confirmed and Suspected Contaminated Sites List on February 21, 2006 to await further assessment for suspected metals and petroleum product contamination in the soil, groundwater, surface-water and air pathways.

Site Hazard Assessment

On March 7, 2006, Carsten Thomsen from PHSKC visited the site and met with the current owner who provided commentary and history relating to the property. Inspection of the property showed that the site had been cleared of all the vehicles placed there by Sam Perkins. The property had also been scraped and leveled by a company hired by the owner to cover the entire site with asphalt. There were a few, small areas on the property that had some staining by what appeared to be petroleum products. It was decided that further analysis of the Perkins Lot, including soil sampling, would be needed to determine if the site was contaminated.

On April 11, 2006, Carsten Thomsen and Yolanda Pon collected three soil samples from the Perkins Lot site. Sample one was collected next to the building on the west side of the property. Sample two was collected from the south side of the property just inside the entry gate. Sample three was collected on the northeast corner of the site. All of the samples were collected at depths of six to eight inches below ground surface and analyzed for Northwest Total Petroleum Hydrocarbons Diesel Extended (NWTPH-Dx) and Total Metals.

The results of the soil analysis showed that samples taken by PHSKC did contain various levels of contaminants. Samples one and three contained amounts of diesel fuel and lube oil. All three samples contained varying levels of metals (lead). All of the concentrations were below their respective Model Toxics Control Act (MTCA) Method A cleanup levels. Below is a summary of the analytical results for the Perkins Lot soil samples taken by PHSKC.

	NWTPH-Dx	Total Metals (lead)
Sample 1 (ppm)	1300	150
Sample 2 (ppm)	ND	14
Sample 3 (ppm)	720	100
MTCA Method A Cleanup level (ppm)	**2000**	**250 (lead)**

ND= non detect
ppm=parts per million (mg/kg)

Pathway Information

The **Soils** at the site were possibly impacted by small spills of used motor oil. Shallow soil samples were collected for analysis. Oil and lead concentrations were all below the MTCA Method A cleanup level for soil.

The **Surface Water Pathway** is not likely impacted at this site due to the poor drainage of the property. Little surface water leaves the site.

The **Air Pathway** is not likely impacted at this site since the oil and lead concentrations in the soil are below cleanup levels that do not trigger air pathway concerns.

Groundwater at site is not used. There are no wells within a two-mile radius of the property. Oil and lead impacts to shallow soils are below soil cleanup levels and do not trigger concern for the groundwater pathway.

Conclusions/Recommendation

On the basis of this SHA, the PHSKC's Environmental Health Division recommends that this site receive no further action under MTCA, based on WAC 173-340-310(5)(d)(ii): that a hazardous release has occurred at some time in the past at this site, but does not pose a significant threat to human health or the environment.

Reference

1. Washington Ranking Method Toxicological Database.

2. Analytical Results for Perkins Lot, OnSite Environmental Inc., Redmond, WA, April 20, 2006.

3. Site Hazard Assessment, Public Health Seattle and King County, April, 2006.

4. Precipitation Theme, King County GIS, Seattle, Washington, February 2002.

5. Isopluvials of 2-Year, 24 Hour Precipitation, NOAA atlas 2, Vol. IX.

6. Washington State Department of Health, Division of Drinking Water Website.

7. Washington State Water Use Data.

8. Sensitive Areas Themes, King County GIS, Seattle, Washington, February 2002.

9. Census Themes, King County GIS, Seattle, Washington, February 2002.

Appendix H
Former Sternoff Metals Historical Data

Appendix H

H-1 Table H-1: Chemicals Detected in Soil, Former Sternoff Property
Table H-2: Chemicals Detected in Floor Drain and Storm Drain Solids Samples, Former Sternoff Property
Table H-3: Chemicals Detected in Groundwater, Former Sternoff Property

H-2 Terra 1987: Report of Soil and Groundwater Sampling and Testing, Sternoff Metals Site

H-3 SEACOR 1990: Report of Preliminary Results, Soil and Groundwater Investigation, 7201 East Marginal Way South, Seattle, Washington, Sternoff Property

Appendix H-1

Table H-1: Chemicals Detected in Soil, Former Sternoff Property

Table H-2: Chemicals Detected in Floor Drain and Storm Drain Solids Samples, Former Sternoff Property

Table H-3: Chemicals Detected in Groundwater, Former Sternoff Property

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-7	1.5-3.5	4-methyl-2 Pentanone	0.53				
SEACOR 1990	1990	SB-4	2	4-Nitrophenol	73.1				
SEACOR 1990	1990	SB-7	1.5-3.5	Anthracene	22.0		2,400		0.0
SEACOR 1990	1990	SB-4	2	Anthracene	18.8		2,400		0.0
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Aroclor 1254**	**23**		**1.6**	**1.3**	**18**
Terra 1987	Apr-86	TP-2	0.8	Aroclor 1254	12		1.6	1.3	9.2
Terra 1987	**Apr-86**	**TP-5**	**1.0**	**Aroclor 1260**	**75**			**1.3**	**58**
Terra 1987	**Dec-86**	**TH-4**	**1.0**	**Aroclor 1260**	**42**			**1.3**	**32**
Terra 1987	Apr-86	TP-10	1.0	Aroclor 1260	3.3			1.3	2.5
Terra 1987	Dec-86	TH-3	1.0	Aroclor 1260	3.11			1.3	2.4
Terra 1987	Dec-86	TH-2	1.0	Aroclor 1260	0.81			1.3	0.6
SEACOR 1990	1990	MW-4	2	Arsenic	26.7		20	12,000	1.3
SEACOR 1990	1990	SB-5	2	Arsenic	20.7		20	12,000	1.0
SEACOR 1990	1990	MW-3	2.5	Arsenic	13.8		20	12,000	0.7
SEACOR 1990	1990	SB-4	2	Arsenic	10.9		20	12,000	0.5
SEACOR 1990	1990	SB-1	2.5	Arsenic	10.2		20	12,000	0.5
SEACOR 1990	1990	SB-7	9-9.4	Arsenic	7.2		20	12,000	0.4
SEACOR 1990	1990	SB-4	6	Arsenic	6.58		20	12,000	0.3
SEACOR 1990	1990	SB-8	2-3.5	Arsenic	3.90		20	12,000	0.2
SEACOR 1990	1990	SB-6	4.5-6.0	Arsenic	3.5		20	12,000	0.2
Terra 1987	Dec-86	TH-2	1.0	Arsenic	0.02		20	12,000	0.0
Terra 1987	Dec-86	TH-1	2.0	Barium	1.5		16,000		0.0
SEACOR 1990	1990	SB-4	2	Benzene	0.23		0.03		7.7
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(a)anthracene**	**109.5**			**5.4**	**20**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(a)anthracene**	**105.8**			**5.4**	**20**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(a)pyrene**	**23.1**		**0.1**	**4.2**	**231**
SEACOR 1990	**1990**	**SB-4**	**2**	**Benzo(g,h,i)perylene**	**473.1**			**1.6**	**296**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(g,h,i)perylene**	**253.1**			**1.6**	**158**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Benzo(k)fluoranthene**	**158.1**			**9**	**18**
SEACOR 1990	1990	SB-4	2	Benzo(k)fluoranthene	24.0			9	2.7
Terra 1987	**Apr-86**	**TP-3**	**0.8**	**Cadmium**	**310**		**2**	**34**	**155**
SEACOR 1990	**1990**	**SB-5**	**2**	**Cadmium**	**74.9**		**2**	**34**	**37**

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Terra 1987	**Apr-86**	**TP-6**	**1.0**	**Cadmium**	**74**		**2**	**34**	**37**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Cadmium**	**53**		**2**	**34**	**27**
Terra 1987	**Apr-86**	**TP-10**	**1.0**	**Cadmium**	**45**		**2**	**34**	**23**
Terra 1987	**Apr-86**	**TP-8**	**1.3**	**Cadmium**	**42**		**2**	**34**	**21**
Terra 1987	**Apr-86**	**TP-4**	**1.0**	**Cadmium**	**39**		**2**	**34**	**20**
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Cadmium**	**35**		**2**	**34**	**18**
SEACOR 1990	**1990**	**MW-4**	**2**	**Cadmium**	**26.2**		**2**	**34**	**13**
SEACOR 1990	1990	SB-4	2	Cadmium	19.8		2	34	9.9
SEACOR 1990	1990	MW-3	2.5	Cadmium	16.5		2	34	8.3
SEACOR 1990	1990	SB-2	3	Cadmium	13.5		2	34	6.8
SEACOR 1990	1990	SB-7	9-9.4	Cadmium	13.2		2	34	6.6
Terra 1987	Apr-86	TP-2	0.8	Cadmium	8.2		2	34	4.1
SEACOR 1990	1990	MW-3	6	Cadmium	7.3		2	34	3.7
SEACOR 1990	1990	SB-9	2	Cadmium	1.48		2	34	0.7
SEACOR 1990	1990	SB-4	6	Cadmium	1.1		2	34	0.6
SEACOR 1990	1990	SB-6	4.5-6.0	Cadmium	1.01		2	34	0.5
SEACOR 1990	1990	MW-2	3	Cadmium	0.70		2	34	0.4
SEACOR 1990	1990	SB-8	2-3.5	Cadmium	0.69		2	34	0.3
SEACOR 1990	1990	SB-1	6	Cadmium	0.65		2	34	0.3
SEACOR 1990	1990	SB-1	2.5	Cadmium	0.54		2	34	0.3
SEACOR 1990	1990	SB-3	3	Cadmium	0.42		2	34	0.2
Terra 1987	Apr-86	TP-10	3.0	Cadmium	0.38		2	34	0.2
SEACOR 1990	1990	SB-2	6.5	Cadmium	0.27		2	34	0.1
SEACOR 1990	1990	MW-4	5	Cadmium	0.22		2	34	0.1
Terra 1987	Dec-86	TH-1	2.0	Cadmium	0.05		2	34	0.0
SEACOR 1990	1990	MW-4	2	Chromium	154.0		19	270	8.1
SEACOR 1990	1990	SB-5	2	Chromium	121.0		19	270	6.4
SEACOR 1990	1990	SB-4	2	Chromium	87.3		19	270	4.6
SEACOR 1990	1990	SB-7	9-9.4	Chromium	56.8		19	270	3.0
SEACOR 1990	1990	MW-3	2.5	Chromium	56.6		19	270	3.0
SEACOR 1990	1990	SB-2	3	Chromium	53.7		19	270	2.8
SEACOR 1990	1990	MW-3	6	Chromium	36.8		19	270	1.9

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-9	2	Chromium	31.5		19	270	1.7
SEACOR 1990	1990	SB-1	6	Chromium	21.1		19	270	1.1
SEACOR 1990	1990	SB-1	2.5	Chromium	15.7		19	270	0.8
SEACOR 1990	1990	SB-4	6	Chromium	13.9		19	270	0.7
SEACOR 1990	1990	MW-4	5	Chromium	13.7		19	270	0.7
SEACOR 1990	1990	SB-6	4.5-6.0	Chromium	13.5		19	270	0.7
SEACOR 1990	1990	MW-2	3	Chromium	12.1		19	270	0.6
SEACOR 1990	1990	SB-2	6.5	Chromium	11.9		19	270	0.6
SEACOR 1990	1990	SB-8	2-3.5	Chromium	11.9		19	270	0.6
SEACOR 1990	1990	SB-3	3	Chromium	11.2		19	270	0.6
SEACOR 1990	1990	SB-5	6	Chromium	10.0		19	270	0.5
SEACOR 1990	**1990**	**SB-4**	**2**	**Chyrsene**	**104.2**			**9.2**	**11**
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Chyrsene**	**102.9**			**9.2**	**11**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Copper**	**8,300**		**3,000**	**780**	**11**
Terra 1987	Apr-86	TP-10	1.0	Copper	5,800		3,000	780	7.4
Terra 1987	Apr-86	TP-1	2.0	Copper	5,500		3,000	780	7.1
Terra 1987	Apr-86	TP-6	1.0	Copper	5,500		3,000	780	7.1
SEACOR 1990	1990	SB-4	2	Copper	4,787		3,000	780	6.1
SEACOR 1990	1990	SB-5	2	Copper	3,829		3,000	780	4.9
SEACOR 1990	1990	MW-4	2	Copper	2,508		3,000	780	3.2
SEACOR 1990	1990	SB-6	4.5-6.0	Copper	1,837		3,000	780	2.4
Terra 1987	Apr-86	TP-2	0.8	Copper	1,600		3,000	780	2.1
Terra 1987	Apr-86	TP-4	1.0	Copper	1,100		3,000	780	1.4
Terra 1987	Apr-86	TP-8	1.3	Copper	870		3,000	780	1.1
SEACOR 1990	1990	SB-2	3	Copper	722.0		3,000	780	0.9
SEACOR 1990	1990	SB-7	9-9.4	Copper	372.0		3,000	780	0.5
SEACOR 1990	1990	MW-3	2.5	Copper	347.0		3,000	780	0.4
SEACOR 1990	1990	SB-9	2	Copper	308.0		3,000	780	0.4
SEACOR 1990	1990	SB-8	2-3.5	Copper	238.0		3,000	780	0.3
SEACOR 1990	1990	MW-3	6	Copper	99.1		3,000	780	0.1
SEACOR 1990	1990	MW-2	3	Copper	78.1		3,000	780	0.1
SEACOR 1990	1990	SB-4	6	Copper	45.3		3,000	780	0.1

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	MW-4	5	Copper	23.4		3,000	780	0.0
SEACOR 1990	1990	SB-1	2.5	Copper	21.5		3,000	780	0.0
SEACOR 1990	1990	SB-1	6	Copper	19.6		3,000	780	0.0
Terra 1987	Apr-86	TP-1	4.0	Copper	19		3,000	780	0.0
SEACOR 1990	1990	SB-5	6	Copper	17.1		3,000	780	0.0
Terra 1987	Apr-86	TP-10	3.0	Copper	16		3,000	780	0.0
SEACOR 1990	1990	SB-3	3	Copper	11.5		3,000	780	0.0
Terra 1987	Dec-86	TP-3	0.8	Copper	6.6		3,000	780	0.0
SEACOR 1990	1990	SB-2	6.5	Copper	6.44		3,000	780	0.0
Terra 1987	Dec-86	TH-1	2.0	Copper	0.15		3,000	780	0.0
Terra 1987	Dec-86	TH-2	1.0	Copper	0.10		3,000	780	0.0
SEACOR 1990	1990	SB-7	1.5-3.5	Cyanides	1.6		1,600		0.0
SEACOR 1990	1990	SB-4	2	Diethylphthalate	1,142		64,000		0.0
SEACOR 1990	1990	SB-4	2	Dimethylphthalate	151.1		80,000		0.0
SEACOR 1990	1990	SB-7	1.5-3.5	Di-n-butylphthalate	121.0		8,000	39	3.1
SEACOR 1990	1990	SB-4	2	Ethylbenzene	1.21		6		0.2
SEACOR 1990	1990	SB-7	1.5-3.5	Ethylbenzene	0.15		6		0.0
SEACOR 1990	**1990**	**SB-4**	**2**	**Fluorene**	**45.8**		**3,200**	**0.081**	**565**
Terra 1987	**Apr-86**	**TP-6**	**1.0**	**Lead**	**19,800**		**250**	**1,300**	**79**
Terra 1987	**Apr-86**	**TP-3**	**0.8**	**Lead**	**9,800**		**250**	**1,300**	**39**
Terra 1987	**Apr-86**	**TP-4**	**1.0**	**Lead**	**8,800**		**250**	**1,300**	**35**
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Lead**	**7,100**		**250**	**1,300**	**28**
Terra 1987	**Apr-86**	**TP-10**	**1.0**	**Lead**	**6,700**		**250**	**1,300**	**27**
Terra 1987	**Apr-86**	**TP-2**	**0.8**	**Lead**	**6,500**		**250**	**1,300**	**26**
Terra 1987	**Apr-86**	**TP-7**	**1.0**	**Lead**	**5,800**		**250**	**1,300**	**23**
SEACOR 1990	**1990**	**SB-5**	**2**	**Lead**	**4,336**		**250**	**1,300**	**17**
SEACOR 1990	**1990**	**MW-4**	**2**	**Lead**	**2,845**		**250**	**1,300**	**11**
SEACOR 1990	1990	SB-6	4.5-6.0	Lead	1,999		250	1,300	8.0
SEACOR 1990	1990	SB-4	2	Lead	1,980		250	1,300	7.9
Terra 1987	Apr-86	TP-8	1.3	Lead	1,600		250	1,300	6.4
SEACOR 1990	1990	SB-2	3	Lead	1,441		250	1,300	5.8
SEACOR 1990	1990	MW-3	2.5	Lead	1,159		250	1,300	4.6

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-7	9-9.4	Lead	1,064		250	67	4.3
SEACOR 1990	1990	MW-3	6	Lead	344.0		250	1,300	1.4
SEACOR 1990	1990	SB-9	2	Lead	161.0		250	1,300	0.6
SEACOR 1990	1990	SB-1	6	Lead	82.0		250	1,300	0.3
SEACOR 1990	1990	SB-4	6	Lead	59.2		250	1,300	0.2
SEACOR 1990	1990	MW-2	3	Lead	50.7		250	1,300	0.2
SEACOR 1990	1990	SB-8	2-3.5	Lead	49.8		250	1,300	0.2
SEACOR 1990	1990	SB-1	2.5	Lead	30.6		250	1,300	0.1
SEACOR 1990	1990	MW-4	5	Lead	8.48		250	1,300	0.0
Terra 1987	Apr-86	TP-1	4.0	Lead	8.1		250	1,300	0.0
SEACOR 1990	1990	SB-3	3	Lead	6.57		250	1,300	0.0
SEACOR 1990	**1990**	**SB-4**	**2**	**Mercury**	**5.9**		**2**	**0.59**	**10**
SEACOR 1990	1990	SB-5	2	Mercury	4.2		2	0.59	7.1
SEACOR 1990	1990	MW-4	2	Mercury	3.53		2	0.59	6.0
SEACOR 1990	1990	SB-2	3	Mercury	3.12		2	0.59	5.3
SEACOR 1990	1990	MW-3	2.5	Mercury	0.67		2	0.59	1.1
SEACOR 1990	1990	SB-7	9-9.4	Mercury	0.52		2	0.030	17
SEACOR 1990	1990	MW-4	5	Mercury	0.27		2	0.59	0.5
SEACOR 1990	1990	SB-9	2	Mercury	0.24		2	0.59	0.4
SEACOR 1990	1990	MW-2	3	Mercury	0.21		2	0.59	0.4
SEACOR 1990	1990	SB-5	6	Mercury	0.17		2	0.59	0.3
Terra 1987	Dec-86	TH-2	1.0	Mercury	0.001		2	0.59	0.0
SEACOR 1990	**1990**	**SB-7**	**1.5-3.5**	**Naphthalene**	**22.8**		**5**	**0.20**	**114**
SEACOR 1990	1990	SB-5	2	Nickel	192.0				
SEACOR 1990	1990	MW-3	2.5	Nickel	106.0				
SEACOR 1990	1990	MW-4	2	Nickel	88.9				
SEACOR 1990	1990	MW-3	6	Nickel	86.0				
SEACOR 1990	1990	SB-4	2	Nickel	82.9				
SEACOR 1990	1990	SB-7	9-9.4	Nickel	63.3				
SEACOR 1990	1990	SB-2	3	Nickel	58.4				
SEACOR 1990	1990	SB-9	2	Nickel	27.8				
SEACOR 1990	1990	SB-4	6	Nickel	9.0				

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	MW-2	3	Nickel	8.1				
SEACOR 1990	1990	SB-1	2.5	Nickel	8.02				
SEACOR 1990	1990	SB-1	6	Nickel	6.99				
SEACOR 1990	1990	SB-2	6.5	Nickel	5.82				
SEACOR 1990	1990	SB-8	2-3.5	Nickel	5.19				
SEACOR 1990	1990	SB-3	3	Nickel	5.07				
SEACOR 1990	1990	SB-6	4.5-6.0	Nickel	3.97				
SEACOR 1990	1990	SB-5	6	Nickel	2.2				
SEACOR 1990	1990	MW-4	5	Nickel	1.92				
Terra 1987	Dec-86	TH-2	1.0	Nickel	0.25				
Terra 1987	Dec-86	TH-1	2.0	Nickel	0.20				
SEACOR 1990	**1990**	**SB-5**	**2**	**PCBs**	**26.6**		**1**	**1.3**	**27**
SEACOR 1990	**1990**	**SB-4**	**2**	**PCBs**	**18.3**		**1**	**1.3**	**18**
SEACOR 1990	1990	SB-6	4.5-6.0	PCBs	6.5		1	1.3	6.5
SEACOR 1990	1990	MW-4	2	PCBs	5.2		1	1.3	5.2
SEACOR 1990	1990	SB-2	3	PCBs	5.1		1	1.3	5.1
SEACOR 1990	1990	MW-3	2.5	PCBs	5.0		1	1.3	5.0
SEACOR 1990	**1990**	**SB-6**	**9-9.5**	**PCBs**	**2.2**		**1**	**0.065**	**34**
SEACOR 1990	**1990**	**SB-7**	**9-9.4**	**PCBs**	**1.8**		**1**	**0.065**	**28**
SEACOR 1990	1990	MW-3	6	PCBs	1.1		1	1.3	1.1
SEACOR 1990	**1990**	**SB-7**	**11-12.5**	**PCBs**	**0.9**		**1**	**0.065**	**14**
SEACOR 1990	1990	MW-2	3	PCBs	0.7		1	1.3	0.7
SEACOR 1990	1990	SB-1	6	PCBs	0.3		1	1.3	0.3
SEACOR 1990	1990	SB-8	2-3.5	PCBs	0.3		1	1.3	0.3
SEACOR 1990	1990	SB-9	2	PCBs	0.3		1	1.3	0.3
SEACOR 1990	1990	SB-4	6	PCBs	0.2		1	1.3	0.2
SEACOR 1990	1990	SB-7	1.5-3.5	Phenanthrene	21.6			9.7	2.2
SEACOR 1990	1990	SB-4	2	Phenanthrene	18.8			9.7	1.9
SEACOR 1990	1990	SB-5	2	Silver	2.0		400	12	0.2
SEACOR 1990	1990	SB-4	2	Toluene	0.74		7		0.1
SEACOR 1990	1990	SB-7	1.5-3.5	Toluene	0.28		7		0.0
Terra 1987	**Apr-86**	**TP-1**	**2.0**	**Total Hydrocarbons**	**25,000**		**2,000**		**13**

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
Terra 1987	Apr-86	TP-4	2.0	Total Hydrocarbons	1,000		2,000		0.5
Terra 1987	Apr-86	TP-10	1.0	Total Hydrocarbons	610		2,000		0.3
Terra 1987	Apr-86	TP-10	2.0	Total Hydrocarbons	9		2,000		0.0
SEACOR 1990	**1990**	**SB-5**	**2**	**Total Petroleum Hydrocarbons**	**43,771**		**2,000**		**22**
SEACOR 1990	**1990**	**MW-4**	**2**	**Total Petroleum Hydrocarbons**	**28,550**		**2,000**		**14**
SEACOR 1990	**1990**	**SB-7**	**9-9.4**	**Total Petroleum Hydrocarbons**	**22,450**		**2,000**		**11**
SEACOR 1990	1990	MW-4	5	Total Petroleum Hydrocarbons	8,942		2,000		4.5
SEACOR 1990	1990	SB-2	15	Total Petroleum Hydrocarbons	7,662		2,000		3.8
SEACOR 1990	1990	MW-3	2.5	Total Petroleum Hydrocarbons	7,248		2,000		3.6
SEACOR 1990	1990	SB-2	3	Total Petroleum Hydrocarbons	3,692		2,000		1.8
SEACOR 1990	1990	MW-3	6	Total Petroleum Hydrocarbons	2,654		2,000		1.3
SEACOR 1990	1990	SB-4	2	Total Petroleum Hydrocarbons	2,266		2,000		1.1
SEACOR 1990	1990	SB-7	11-12.5	Total Petroleum Hydrocarbons	1,304		2,000		0.7
SEACOR 1990	1990	MW-2	3	Total Petroleum Hydrocarbons	1,253		2,000		0.6
SEACOR 1990	1990	MW-4	15	Total Petroleum Hydrocarbons	544.0		2,000		0.3
SEACOR 1990	1990	SB-6	9-9.5	Total Petroleum Hydrocarbons	222.0		2,000		0.1
SEACOR 1990	1990	SB-4	6	Total Petroleum Hydrocarbons	203.0		2,000		0.1
SEACOR 1990	1990	SB-9	2	Total Petroleum Hydrocarbons	133.0		2,000		0.1
SEACOR 1990	1990	SB-3	3	Total Petroleum Hydrocarbons	116.0		2,000		0.1
SEACOR 1990	1990	SB-1	6	Total Petroleum Hydrocarbons	36.8		2,000		0.0
SEACOR 1990	1990	SB-6	4.5-6.0	Total Petroleum Hydrocarbons	36.7		2,000		0.0
SEACOR 1990	1990	SB-1	2.5	Total Petroleum Hydrocarbons	31.6		2,000		0.0
SEACOR 1990	1990	MW-2	15	Total Petroleum Hydrocarbons	31.5		2,000		0.0
SEACOR 1990	1990	SB-4	12	Total Petroleum Hydrocarbons	16.0		2,000		0.0
SEACOR 1990	1990	SB-1	10	Total Petroleum Hydrocarbons	12.8		2,000		0.0
SEACOR 1990	1990	MW-3	10	Total Petroleum Hydrocarbons	7.2		2,000		0.0
SEACOR 1990	1990	SB-5	6	Total Petroleum Hydrocarbons	6.6		2,000		0.0
SEACOR 1990	1990	SB-4	2	Xylenes (total)	13.5		9		1.5
SEACOR 1990	1990	SB-7	1.5-3.5	Xylenes (total)	1.69		9		0.2
SEACOR 1990	**1990**	**SB-5**	**2**	**Zinc**	**20,953**		**24,000**	**770**	**27**
SEACOR 1990	**1990**	**SB-4**	**2**	**Zinc**	**8,616**		**24,000**	**770**	**11**
SEACOR 1990	1990	MW-4	2	Zinc	6,966		24,000	770	9.0

Table H-1
Chemicals Detected in Soil
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SB-6	4.5-6.0	Zinc	6,655		24,000	770	8.6
SEACOR 1990	1990	MW-3	2.5	Zinc	5,508		24,000	770	7.2
SEACOR 1990	1990	SB-2	3	Zinc	3,237		24,000	770	4.2
SEACOR 1990	1990	SB-7	9-9.4	Zinc	2,803		24,000	38	74
SEACOR 1990	1990	MW-3	6	Zinc	2,089		24,000	770	2.7
SEACOR 1990	1990	SB-9	2	Zinc	475.0		24,000	770	0.6
SEACOR 1990	1990	SB-4	6	Zinc	277.0		24,000	770	0.4
SEACOR 1990	1990	SB-1	6	Zinc	86.9		24,000	770	0.1
SEACOR 1990	1990	SB-8	2-3.5	Zinc	86.1		24,000	770	0.1
SEACOR 1990	1990	SB-1	2.5	Zinc	62.8		24,000	770	0.1
SEACOR 1990	1990	MW-2	3	Zinc	57.4		24,000	770	0.1
SEACOR 1990	1990	MW-4	5	Zinc	33.4		24,000	770	0.0
Terra 1987	Dec-86	TH-2	1.0	Zinc	24		24,000	770	0.0
SEACOR 1990	1990	SB-3	3	Zinc	19.6		24,000	770	0.0
Terra 1987	Dec-86	TH-1	2.0	Zinc	13		24,000	770	0.0
SEACOR 1990	1990	SB-2	6.5	Zinc	10.9		24,000	770	0.0
SEACOR 1990	1990	SB-5	6	Zinc	8.4		24,000	770	0.0

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight
CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table H-2
Chemicals Detected in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SED-7	--	Antimony	49.3		32		1.5
SEACOR 1990	1990	SED-2	--	Antimony	44.7		32		1.4
SEACOR 1990	1990	SED-6	--	Antimony	33.8		32		1.1
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Antimony	22.2		32		0.7
SEACOR 1990	1990	SED-3	--	Antimony	15.9		32		0.5
SEACOR 1990	1990	SED-4	--	Antimony	11.4		32		0.4
SEACOR 1990	1990	SED-1	--	Antimony	8.91		32		0.3
SEACOR 1990	1990	SED-5	--	Antimony	7.6		32		0.2
SEACOR 1990	1990	SED-6	--	Arsenic	48.6		20	12,000	2.4
SEACOR 1990	1990	SED-2	--	Arsenic	31.6		20	12,000	1.6
SEACOR 1990	1990	SED-3	--	Arsenic	31.6		20	12,000	1.6
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Arsenic	31.0		20	12,000	1.6
SEACOR 1990	1990	SED-4	--	Arsenic	26.5		20	12,000	1.3
SEACOR 1990	1990	SED-5	--	Arsenic	17.3		20	12,000	0.9
SEACOR 1990	1990	SED-7	--	Arsenic	11.8		20	12,000	0.6
SEACOR 1990	1990	SED-1	--	Arsenic	8.1		20	12,000	0.4
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Beryllium	8.0		160		0.1
SEACOR 1990	1990	SED-6	--	Beryllium	0.70		160		0.0
SEACOR 1990	1990	SED-2	--	Beryllium	0.40		160		0.0
SEACOR 1990	1990	SED-7	--	Beryllium	0.32		160		0.0
SEACOR 1990	1990	SED-5	--	Beryllium	0.21		160		0.0
SEACOR 1990	1990	SED-4	--	Beryllium	0.2		160		0.0
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Cadmium**	**53.2**		**2**	**34**	**27**
SEACOR 1990	**1990**	**SED-7**	**--**	**Cadmium**	**35.3**		**2**	**34**	**18**
SEACOR 1990	1990	SED-6	--	Cadmium	18.8		2	34	9.4
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Cadmium	17.2		2	34	8.6
SEACOR 1990	1990	SED-2	--	Cadmium	13.2		2	34	6.6
SEACOR 1990	1990	SED-5	--	Cadmium	12.9		2	34	6.5
SEACOR 1990	1990	SED-4	--	Cadmium	11.4		2	34	5.7
SEACOR 1990	1990	SED-3	--	Cadmium	9.10		2	34	4.6
SEACOR 1990	1990	SED-1	--	Cadmium	6.6		2	34	3.3
SEACOR 1990	**1990**	**SED-5**	**--**	**Chromium**	**193.0**		**19**	**5,400**	**10**
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Chromium	185.0		19	5,400	9.7

Table H-2
Chemicals Detected in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SED-3	--	Chromium	154.0	19	5,400	8.1
SEACOR 1990	1990	SED-6	--	Chromium	148.0	19	5,400	7.8
SEACOR 1990	1990	SED-4	--	Chromium	122.0	19	5,400	6.4
SEACOR 1990	1990	SED-2	--	Chromium	90.4	19	5,400	4.8
SEACOR 1990	1990	SED-1	--	Chromium	85.2	19	5,400	4.5
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Chromium	64.1	19	5,400	3.4
SEACOR 1990	1990	SED-7	--	Chromium	54.6	19	5,400	2.9
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**Copper**	**340,654**	**3,000**	**780**	**437**
SEACOR 1990	**1990**	**SED-2**	**--**	**Copper**	**42,798**	**3,000**	**780**	**55**
SEACOR 1990	**1990**	**SED-7**	**--**	**Copper**	**29,896**	**3,000**	**780**	**38**
SEACOR 1990	**1990**	**SED-3**	**--**	**Copper**	**24,526**	**3,000**	**780**	**31**
SEACOR 1990	**1990**	**SED-6**	**--**	**Copper**	**13,715**	**3,000**	**780**	**18**
SEACOR 1990	**1990**	**SED-4**	**--**	**Copper**	**10,649**	**3,000**	**780**	**14**
SEACOR 1990	1990	SED-1	--	Copper	5,154	3,000	780	6.6
SEACOR 1990	1990	SED-5	--	Copper	3,965	3,000	780	5.1
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Copper	1,831	3,000	780	2.3
SEACOR 1990	**1990**	**SED-7**	**--**	**Lead**	**82,893**	**250**	**1,300**	**332**
SEACOR 1990	**1990**	**SED-2**	**--**	**Lead**	**37,957**	**250**	**1,300**	**152**
SEACOR 1990	**1990**	**SED-4**	**--**	**Lead**	**36,790**	**250**	**1,300**	**147**
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**Lead**	**27,853**	**250**	**1,300**	**111**
SEACOR 1990	**1990**	**SED-5**	**--**	**Lead**	**19,177**	**250**	**1,300**	**77**
SEACOR 1990	**1990**	**SED-6**	**--**	**Lead**	**16,144**	**250**	**1,300**	**65**
SEACOR 1990	**1990**	**SED-1**	**--**	**Lead**	**15,776**	**250**	**1,300**	**63**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Lead**	**7,208**	**250**	**1,300**	**29**
SEACOR 1990	**1990**	**SED-3**	**--**	**Lead**	**6,854**	**250**	**1,300**	**27**
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Mercury	4.41	2	0.59	7.5
SEACOR 1990	1990	SED-3	--	Mercury	4.35	2	0.59	7.4
SEACOR 1990	1990	SED-2	--	Mercury	3.35	2	0.59	5.7
SEACOR 1990	1990	SED-6	--	Mercury	2.91	2	0.59	4.9
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Mercury	2.2	2	0.59	3.7
SEACOR 1990	1990	SED-7	--	Mercury	1.90	2	0.59	3.2
SEACOR 1990	1990	SED-5	--	Mercury	1.77	2	0.59	3.0
SEACOR 1990	1990	SED-4	--	Mercury	1.35	2	0.59	2.3

Table H-2
Chemicals Detected in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	SED-1	--	Mercury	0.9		2	0.59	1.5
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Nickel	1,050				
SEACOR 1990	1990	SED-6	--	Nickel	318.0				
SEACOR 1990	1990	SED-3	--	Nickel	178.0				
SEACOR 1990	1990	Comp SB-7-1C, SB-7-2B	1.5-2, 2.7-3.5	Nickel	139.0				
SEACOR 1990	1990	SED-2	--	Nickel	115.0				
SEACOR 1990	1990	SED-5	--	Nickel	101.0				
SEACOR 1990	1990	SED-4	--	Nickel	96.0				
SEACOR 1990	1990	SED-7	--	Nickel	66.8				
SEACOR 1990	1990	SED-1	--	Nickel	59.8				
SEACOR 1990	**1990**	**SED-3**	**--**	**PCBs**	**163.0**		**1**	**1.3**	**163**
SEACOR 1990	**1990**	**SED-2**	**--**	**PCBs**	**73.0**		**1**	**1.3**	**73**
SEACOR 1990	**1990**	**Comp FD-1, FD-2, FD-3 & FD-4**	**--**	**PCBs**	**31.0**		**1**	**1.3**	**31**
SEACOR 1990	**1990**	**SED-6**	**--**	**PCBs**	**23.0**		**1**	**1.3**	**23**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**PCBs**	**18.8**		**1**	**1.3**	**19**
SEACOR 1990	1990	SED-4	--	PCBs	4.8		1	1.3	4.8
SEACOR 1990	1990	SED-7	--	PCBs	3.9		1	1.3	3.9
SEACOR 1990	1990	SED-1	--	PCBs	3.3		1	1.3	3.3
SEACOR 1990	1990	SED-5	--	PCBs	2.2		1	1.3	2.2
SEACOR 1990	1990	SED-3	--	Selenium	26.2		400		0.1
SEACOR 1990	1990	SED-5	--	Selenium	16.4		400		0.0
SEACOR 1990	1990	SED-4	--	Selenium	14.1		400		0.0
SEACOR 1990	1990	SED-6	--	Selenium	12.5		400		0.0
SEACOR 1990	1990	SED-6	--	Silver	9.70		400	12	0.8
SEACOR 1990	1990	SED-2	--	Silver	7.9		400	12	0.7
SEACOR 1990	1990	SED-3	--	Silver	5.72		400	12	0.5
SEACOR 1990	1990	SED-5	--	Silver	4.52		400	12	0.4
SEACOR 1990	1990	SED-4	--	Silver	4.3		400	12	0.4
SEACOR 1990	1990	SED-7	--	Silver	4.01		400	12	0.3
SEACOR 1990	1990	SED-1	--	Silver	2.91		400	12	0.2

Table H-2
Chemicals Detected in Floor Drain and Storm Drain Solids Samples
Former Sternoff Property

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg DW)		MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level (Based on CSL)[b] (mg/kg)	Exceedance Factor
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Silver	1.31		400	12	0.1
SEACOR 1990	**1990**	**SED-3**	**--**	**Total Petroleum Hydrocarbons**	**48,615.4**		**2,000**		**24**
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Total Petroleum Hydrocarbons**	**45,880**		**2,000**		**23**
SEACOR 1990	**1990**	**SED-6**	**--**	**Total Petroleum Hydrocarbons**	**40,123**		**2,000**		**20**
SEACOR 1990	**1990**	**SED-7**	**--**	**Total Petroleum Hydrocarbons**	**33,042**		**2,000**		**17**
SEACOR 1990	1990	SED-4	--	Total Petroleum Hydrocarbons	17,863.01		2,000		8.9
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Total Petroleum Hydrocarbons	17,688		2,000		8.8
SEACOR 1990	1990	SED-2	--	Total Petroleum Hydrocarbons	8,023		2,000		4.0
SEACOR 1990	1990	SED-5	--	Total Petroleum Hydrocarbons	7,516		2,000		3.8
SEACOR 1990	1990	SED-1	--	Total Petroleum Hydrocarbons	6,283		2,000		3.1
SEACOR 1990	**1990**	**Comp SB-7-1C, SB-7-2B**	**1.5-2, 2.7-3.5**	**Zinc**	**12,351**		**24,000**	**770**	**16**
SEACOR 1990	1990	Comp FD-1, FD-2, FD-3 & FD-4	--	Zinc	5,210		24,000	770	6.8
SEACOR 1990	1990	SED-2	--	Zinc	4,435		24,000	770	5.8
SEACOR 1990	1990	SED-6	--	Zinc	3,860		24,000	770	5.0
SEACOR 1990	1990	SED-7	--	Zinc	2,660		24,000	770	3.5
SEACOR 1990	1990	SED-4	--	Zinc	2,308		24,000	770	3.0
SEACOR 1990	1990	SED-5	--	Zinc	2,104		24,000	770	2.7
SEACOR 1990	1990	SED-3	--	Zinc	1,305		24,000	770	1.7
SEACOR 1990	1990	SED-1	--	Zinc	1,272		24,000	770	1.7

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database

b - From: SAIC 2006. Where two screening levels are listed for a single chemical, the higher screening levels are for soil samples collected from the vadose zone and the lower screening levels are for soil samples collected from the saturated zone.

DW - dry weight

CSL - Contaminant Screening Level from Washington Sediment Management Standards

NA - Not available

Notes:

(1) Table presents detected chemicals only.

(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.

(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Table H-3
Chemicals Detected in Groundwater
Former Sternoff Property

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)		MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level (Based on CSL)[b] (ug/L)	Exceedance Factor
Terra 1987	1986	B-1	Aroclor 1242	2.57				
Terra 1987	1986	B-2	Aroclor 1260	1.52			0.31	4.9
Terra 1987	1986	B-1	Arsenic	0.003		5	370	0.0
Terra 1987	1986	B-2	Arsenic	0.003		5	370	0.0
SEACOR 1990	1990	MW-2	Chromium	88		50	320	0.3
SEACOR 1990	1990	MW-3	Chromium	86		50	320	0.3
Terra 1987	1986	B-1	Chromium	0.001		50	320	0.0
SEACOR 1990	1990	MW-2	Copper	136		590	120	1.1
SEACOR 1990	1990	MW-3	Copper	69		590	120	0.6
Terra 1987	1986	B-1	Lead	0.02		15	13	0.0
SEACOR 1990	**1990**	**MW-1**	**Mercury**	**0.3**		**2**	**0.0074**	**41**
Terra 1987	**1986**	**B-1**	**Mercury**	**0.09**		**2**	**0.0074**	**12**
Terra 1987	1986	B-2	Mercury	0.07		2	0.0074	9.5
Terra 1987	1986	B-1	Nickel	0.05				
Terra 1987	1986	B-1	Selenium	0.18		80		0.0
SEACOR 1990	1990	MW-3	Total Petroleum Hydrocarbons	4,000		500		8.0
SEACOR 1990	1990	MW-2	Total Petroleum Hydrocarbons	2,400		500		4.8
SEACOR 1990	1990	MW-1	Total Petroleum Hydrocarbons	2,000		500		4.0
SEACOR 1990	1990	Sump	Total Petroleum Hydrocarbons	1,800		500		3.6

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - From: SAIC 2006

CSL - Contaminant Screening Level from Washington Sediment Management Standards
NA - Not available

Notes:
(1) Table presents detected chemicals only.
(2) Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Value, whichever is lower.
(3) Chemicals with exceedance factors greater than 10 are shown in **Bold**.

Appendix H-2

Terra 1987: Report of Soil and Groundwater Sampling and Testing, Sternoff Metals Site

TERRA ASSOCIATES, Inc.
Geotechnical Consultants

May 1, 1987
Project No. T-291-1

Mr. Charles R. Blumenfeld
Bogle and Gates
The Bank of California Center
Seattle, WA 98104

Subject: Soil and Groundwater Sampling and Testing
Sternoff Metals Site
East Marginal Way South
Seattle, Washington

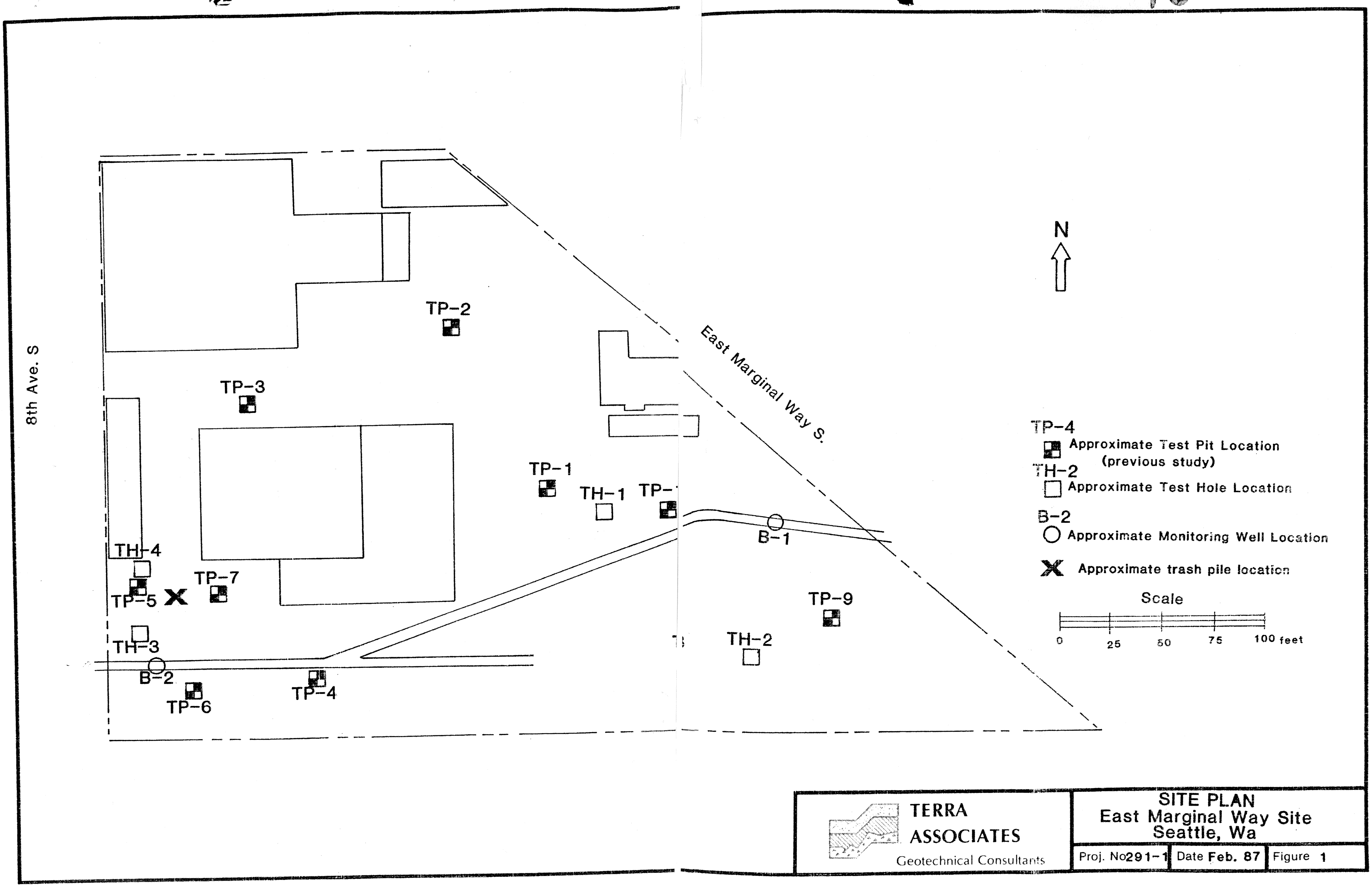
Dear Mr. Blumenfeld:

As requested and in accordance with our proposal dated November 4, 1986 we have conducted subsurface soil and groundwater sampling at the Sternoff Metals site on East Marginal Way in Seattle, Washington. The scope of our work included installation of two monitoring wells for sampling of groundwater and the excavation of several test holes by hand to collect soil samples for chemical analyses for PCB's, and heavy metals by the EP Toxicity procedure. In addition, we also collected a sample from a trash pile for chemical analysis to determine its possible designation as hazardous waste material. We had previously conducted a subsurface exploration on the property in the spring of 1986, at which time PCB's were identified at the site. Our present subsurface soil and groundwater sampling and chemical analyses was undertaken to further identify the levels and extent of potentially contaminated soils on the site and to develop additional information with which to assess the possible migration of contaminants off the site through surface or groundwater movement. This report presents the results of our sampling and analyses along with our interpretation of these test data.

SUMMARY

During the 45 years that the site was operated as a scrap metal salvage yard, a variety of materials were accepted and handled on the site including electrical transformers and capacitors which were sometimes filled with oils which may have contained PCB's.

15301 N.E. 90th Street • Redmond, Washington 98052 • **Phone: 881-5570**
Mailing Address: P.O. Box 3338 • Redmond, Washington 98073


8th Ave. S
East Marginal Way S.
N
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-9
TH-1
TH-2
TH-3
TH-4
B-1
B-2
TP-4 Approximate Test Pit Location (previous study)
TH-2 Approximate Test Hole Location
B-2 Approximate Monitoring Well Location
Approximate trash pile location
Scale
0 25 50 75 100 feet
TERRA ASSOCIATES
Geotechnical Consultants
SITE PLAN
East Marginal Way Site
Seattle, Wa
Proj. No291-1
Date Feb. 87
Figure 1

Appendix H-3

SEACOR 1990: Report of Preliminary Results, Soil and Groundwater Investigation, 7201 East Marginal Way South, Seattle, Washington, Sternoff Property

Sternott Metals
file - TCP

October 1, 1990

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OCT 09 1990
DEPT. OF ECOLOGY

SEACOR

Mr. Dan Cargill
Unit Leader, Urban Bay Action Teams
Northwest Regional Office
Washington State Department of Ecology
4350 150th Avenue N.E.
Redmond, Washington 98052

Dear Mr. Cargill:

PRELIMINARY RESULTS, SOIL AND GROUNDWATER INVESTIGATION, 7201 EAST MARGINAL WAY SOUTH, SEATTLE, WASHINGTON

SEACOR is proceeding with remedial investigations at the Sternco site located at 7201 East Marginal Way South, Seattle, Washington. As we discussed during our meeting with you on August 29, 1990, enclosed with this letter are sampling results and a sample location map. The results for soil generally confirm the results of the Terra Associates investigation that we discussed during the meeting. Relatively low concentrations of total petroleum hydrocarbons were detected in groundwater.

MW-4 has not been sampled due to the presence of free product in the well. The product has been identified as heavy oil. SEACOR is pursuing the identification of other potentially liable parties (PLPs) that may be responsible for this hydrocarbon release. This action is being taken because the accumulation of free product appears to be inconsistent with the history of chemical usage and handling at the site.

Finally, as part of the final cleanup at this site, SEACOR intends to claim two exemptions from RCRAs Third Third or Toxicity Characteristics Final Rule. The first exemption (Federal Register, Vol. 55, No. 61, Thursday, March 29, 1990, page 11835) applies to underground storage tanks (USTs) subject to Subtitle 1 corrective action requirements. This exemption is claimed because USTs scrapped at the site were subject to Subtitle 1. The second exemption (Federal Register, Vol. 55, No. 61, Thursday, March 29, 1990, page 11862) is claimed because soils at the site are petroleum-contaminated media. Photocopies of the cited pages of the Federal Register are enclosed.

Please review the enclosed data and information and call of you have any questions. We will contact you in the near future to discuss these results.

Sincerely,

Del Christenson for:

Jim Flynn
Principal Hydrogeologist

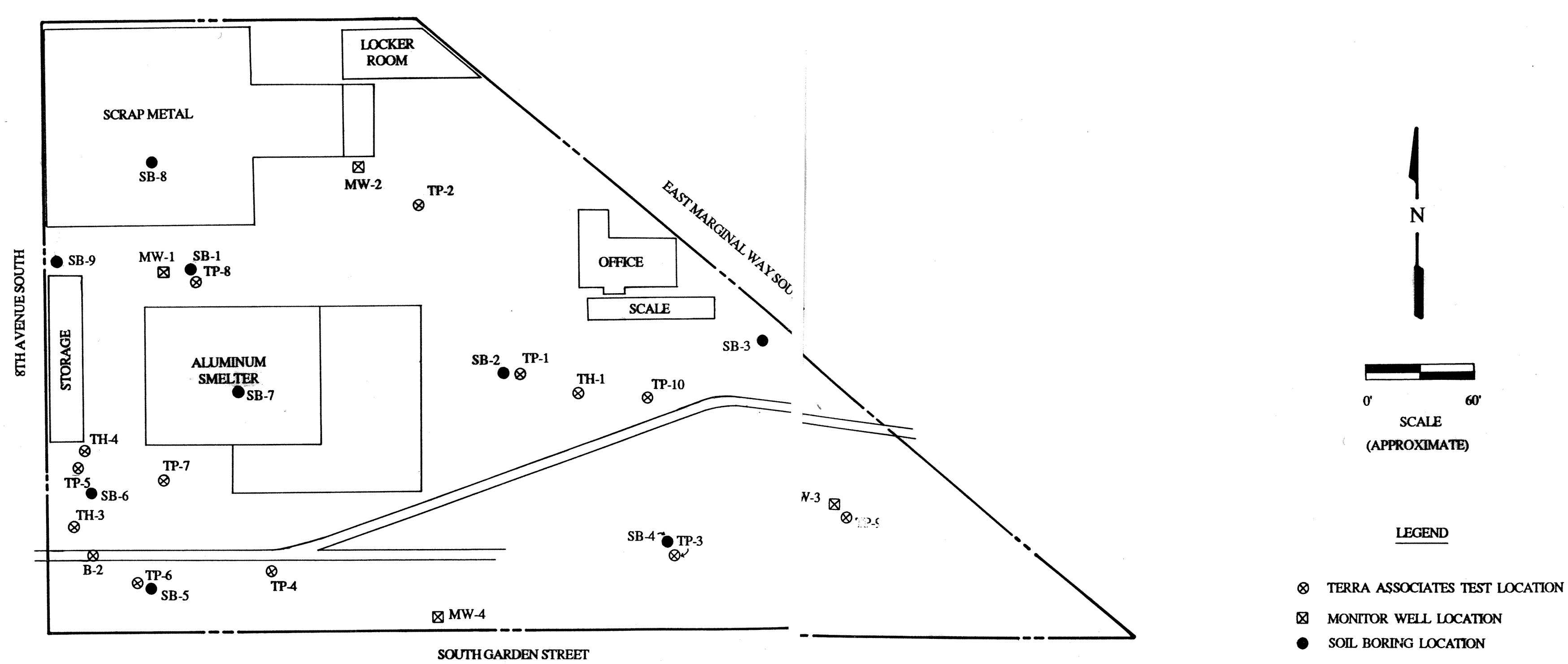
Lee Dorigan

Lee Dorigan
Senior Environmental Scientist

LD/hea
Enclosure (4)
cc: Mr. Robert I. Goodstein
Attorney at Law
Short Cressman & Burgess
3000 First Interstate Center
999 Third Avenue
Seattle, Washington 98104-4008

330 112th Northeast
#104
Bellevue, WA 98004
206.646.0280

SITE PLAN
EAST MARGINAL WAY SITE



SEACOR