Lower Duwamish Waterway RM 2.2 to 3.4 West Riverside Drive

Summary of Existing Information and Identification of Data Gaps

Prepared for

DEPARTMENT OF ECOLOGY
State of Washington

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List of Acronyms

ACZA	Ammoniacal Copper Zinc Arsenate
AET	apparent effects threshold
ARI	Analytical Resources, Inc
AST	aboveground storage tank
BEHP	bis(2-ethylhexyl)phthalate
bgs	below ground surface
BMP	best management practice
BTEX	benzene, toluene, ethylbenzene, and xylenes
CFS	cubic feet per second
CNE	certificate of no exposure
COC	chemical of concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSCSL	Confirmed and Suspected Contaminated Sites List
CSL	Cleanup Screening Level
CSO	combined sewer overflow
DMR	Discharge Monitoring Reports
DW	dry weight
EAA	Early Action Area
ECHO	Enforcement and Compliance History Online
Ecology	Washington State Department of Ecology
EOF	Emergency Overflow
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GIS	Geographic Information Systems
HPAH	high molecular weight polycyclic aromatic hydrocarbon
ISGP	Industrial Stormwater General Permit
ISIS	Integrated Site Information System
KCIW	King County Industrial Waste
LAET	lowest apparent effects threshold
2LAET	second lowest apparent effects threshold
LDW	Lower Duwamish Waterway
LDWG	Lower Duwamish Waterway Group
LPAH	low molecular weight polycyclic aromatic hydrocarbon
LQG	large quantity generator
LUST	leaking underground storage tank
MAPSCO	Magnetic & Penetrant Services Co., Inc.
MEK	methyl ethyl ketone
METRO	Municipality of Metropolitan Seattle
mgy	million gallons per year
MOU	Memorandum of Understanding
MTBE	methyl tertiary butyl ether
MTCA	Model Toxics Control Act
MTI	Manufacturing Technology Inc.
NOAA	National Oceanic and Atmospheric Administration

List of Acronyms (continued)

NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
OC	organic carbon
ORC	Oxygen Release Compound
PAH	polycyclic aromatic hydrocarbon
PARIS	Permitting and Reporting Information System
PBTs	persistent bioaccumulative toxins
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
ppm	parts per million
PSDDA	Puget Sound Dredged Disposal Analysis
PS/WQF	pump station/water quality facility
PVC	polyvinyl chloride
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
SCWG	Source Control Work Group
SD	storm drain
SIC	Standard Industrial Classification
SKCDPH	Seattle-King County Department of Public Health
SMS	Sediment Management Standards
SPU	Seattle Public Utilities
SQG	small quantity generator
SQS	Sediment Quality Standard
SVOC	semivolatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TBT	Tributyltin
TCE	trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	toxic equivalency
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
µg/L	micrograms per liter
USACE	United States Army Corps of Engineers
UST	underground storage tank
VCP	Voluntary Cleanup Program
VES	vapor extraction system
VOC	volatile organic compound
WAC	Washington Administrative Code
XQG	no quantity generator

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) 2.2 to 3.4 West[1] (Riverside Drive), one of 24 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 Riverside Drive source control area. The purpose of this Data Gaps Report is to:

- Identify chemicals of potential concern (COPCs) in sediments within the Riverside Drive source control area;
- Identify and describe potential adjacent or upland sources of contaminants that could be transported to sediments;
- Evaluate potential contaminant migration pathways to RM 2.2 to 3.4 West[2] 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 consists of 5.5 miles of the Duwamish Waterway as measured from the southern tip of Harbor Island to just south of the Norfolk Combined Sewer Overflow (CSO). The LDW flows into Elliott Bay in Seattle, Washington. The LDW was added to the U.S. Environmental Protection Agency (USEPA or EPA) National Priorities List in September 2001 due to the presence of chemical contaminants in sediment. The key parties involved in the LDW site are EPA, the Washington State Department of Ecology (Ecology), and the Lower Duwamish Waterway Group (LDWG), which is composed of representatives from the City of Seattle, King County, the Port of Seattle, and The Boeing Company. In December 2000, EPA and Ecology signed an agreement with the LDWG to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the LDW site.

EPA is leading the effort to determine the most effective cleanup strategies for the LDW through the RI/FS process. Ecology is leading the effort to investigate upland sources of contamination and to develop plans to reduce contaminant migration to waterway sediments.[3] The LDWG collected data during the Phase I Remedial Investigation (RI) that were used to identify candidate locations for early cleanup action. Seven candidate early action areas (EAAs or Tier 1 sites) were identified. Ecology's *Lower Duwamish Waterway Source Control Status Report, 2003 to June 2007* (Ecology 2007e and *Lower Duwamish Waterway Source Control Status Report, July 2007 to March 2008* (Ecology 2008j) identified another 16 areas where source control actions may be necessary. The Riverside Drive source control area was identified as one of these areas. One

[1] River miles as defined in this report are measured from the southern tip of Harbor Island.
[2] Ecology originally defined the Riverside Drive source control area as RM 2.2 to 3.4 West. RM 2.2 to 2.6 West sediments were addressed in the Early Action Area 2 Supplemental Data Gaps Report (SAIC 2008, 2009) and will not be discussed in the remainder of this report.
[3] EPA and Ecology signed an interagency Memorandum of Understanding (MOU) in April 2002 and updated the MOU in April 2004. The MOU divides responsibilities for the site. EPA is the lead agency for the sediment RI/FS, while Ecology is the lead agency for source control issues (EPA and Ecology 2002, 2004).

additional source control area was added by Ecology in 2010, for a total of 24 source control areas. Subsequently, Ecology and EPA redefined the boundaries of the source control areas, generally defined by stormwater drainage basins. The seven candidate EAAs and 17 additional source control areas are shown on Figure 1. Figure 2 shows the extent of the 7th Avenue S Storm Drain (7th Avenue S SD) basin and Figure 3 shows the extent of the 8th Avenue S CSO (8th Avenue S CSO) basin and adjacent storm drain basins. The outfalls for these drainage basins are located within the Riverside Drive source control area.

Ecology is the lead agency for source control for the LDW 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 2004a) describes the process for identifying source control issues and implementing effective controls for the LDW. The plan is to identify and manage potential sources of sediment recontamination in coordination with sediment cleanups. 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* (USEPA 2002), and the *Washington State Sediment Management Standards* (SMS) (Washington Administrative Code [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 the Riverside Drive source control area, Ecology requested Science Applications International Corporation (SAIC) to prepare this Data Gaps Report.

1.2 Report Organization

Section 2.0 of this report provides background information on the Riverside Drive source control area, including location, physical characteristics, chemicals of concern (COCs), and pathways by which contaminants may reach sediments. Sections 3.0 through 6.0 describe potential sources of contaminants and data gaps that must be addressed in order to develop and implement a SCAP for the source control area. Section 7.0 provides a summary, and Section 8.0 lists the documents cited in this report. Appendix A provides sediment sampling data for the sediments near the Riverside Drive source control area. Appendix B provides a review of historical aerial photographs of the source control area and Appendix C provides a summary of facilities that are located within the 8th Avenue S CSO basin.

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

- Ecology Northwest Regional Office 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;
- Ecology Integrated Site Information System (ISIS) Database;
- Washington State Confirmed and Suspected Contaminated Sites List (CSCSL);
- Ecology Water Quality Permitting and Reporting Information System (PARIS);
- EPA Enforcement and Compliance History Online (ECHO);
- EPA Envirofacts Warehouse;
- King County Geographic Information Systems (GIS) Center Parcel Viewer, Property Tax Assessor Records, and iMap;
- GIS shape files produced by SPU; and
- Historical aerial photographs.

Information collected from the Facility/Site Database, ISIS, ECHO, EPA Envirofacts Warehouse, and King County property tax assessor records was current as of June 2011. Recent updates to these databases may not be reflected in this report.

1.3 Scope of Report

This report documents readily available information relevant to potential sources of contaminants to sediments adjacent to the Riverside Drive source control area, including outfalls, adjacent properties, and upland properties within the 7th Avenue S SD basin and 8th Avenue S CSO basin.

Air pollution is a potential source of sediment contamination with origins outside of the Riverside Drive source control area. Although limited discussion of atmospheric deposition is provided in Section 2.0, the scope of this report does not include an assessment of data gaps pertaining to the effects of air pollution on the sediments adjacent to the source control area. 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.

Information presented in this report is limited to the Riverside Drive source control area, direct discharges to the sediments adjacent to the source control area, and potential adjacent and upland contaminant sources. 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 sediments adjacent to the Riverside Drive source control area.

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.

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2.0 RM 2.2 to 3.4 West (Riverside Drive)

The Riverside Drive source control area, as defined by Ecology, is located along the western side of the LDW Superfund Site from RM 2.2 to 3.4, measured from the southern end of Harbor Island (Figure 1). Properties from RM 2.2 to 2.6 West include the Douglas Management Company and Boyer Towing/Logistics and were discussed in EAA-2 Supplemental Data Gaps Reports for each facility (SAIC 2008, SAIC 2009). The full extent of the source control area is shown on Figure 4a. For the purpose of this report, the Riverside Drive source control area will include adjacent and upland properties from RM 2.6 to 3.4 West, as shown in Figure 4a. Figures 4b through 4d show additional detail of the facilities within the source control area. Properties located directly adjacent to the LDW that could affect sediments from RM 2.6 to 3.4 West include (Figures 4b and 4c):

- Pacific Pile and Marine
- 640 S Riverside Drive
- Former Hurlen Construction
- Lukas Machine Inc.
- Independent Metals Plant 2
- Former Long Painting – 10th Avenue S Facility

Residential properties are located adjacent to the LDW within the Riverside Drive source control area, from RM 3.1 to 3.4 West (Figures 4a and 4c).

There are 68 upland properties that could potentially affect RM 2.6 to 3.4 West sediments (Figures 4b through 4d). These properties are listed on Table 1. The parcels associated with these adjacent and upland facilities are identified on Figures 5a through 5c. On Figures 5a through 5c, parcels identified with like colors are operated by the same facility.

In addition, the 8th Avenue S CSO basin was reviewed to identify any additional facilities that could represent potential sediment recontamination sources. Ecology has assigned Facility/Site identification numbers to 309 facilities within the 8th Avenue S CSO basin (Appendix C).

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; commercial and industrial operations occur near the Riverside Drive source control area.

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 sideslips 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). Groundwater flow near the Riverside Drive source control area is generally toward the LDW.

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 Riverside Drive source control area consists of less than 5 to greater than 80 percent fines (dry weight [DW]). Total organic carbon (TOC) in this area ranges from less than 1 to 3.06 percent TOC (Appendix A) (Windward 2003, 2005b, c, 2007a, b, 2010b).

In an effort to more thoroughly understand and evaluate historical facility operations and development in the Riverside Drive source control area, SAIC reviewed historical aerial photographs from 1936 to 2004. These photographs represent conditions during roughly each decade. The aerial photographs and complete descriptions are provided in Appendix B.

- 1936 – The land area in the Riverside Drive source control area appears to be residential housing and farmland. Development along the shoreline appears to be limited. Present day arterial roads and residential streets are fairly well developed. The South Park Bridge is present immediately south of the source control area.
- 1946 – Increased development has occurred along the waterway on the east side of S Riverside Drive. Residential development has increased in the source control area. Shoreline activity appears to remain restricted to residential use.
- 1960 – In the mid 1950s, the area was rezoned for industrial use (History Link 2011). Industrial activity has increased between S Webster Street and S Elmgrove Street. The area south of S Elmgrove Street remains primarily residential except for the construction of the former Spencer Industries facility on the south of S Orr Street. Shoreline activity appears to remain restricted to residential use.
- 1969 – A significant amount of industrial development has occurred in the northern and central section of the source control area. State Route 509 and West Marginal Way S are fully constructed and span the western portion of the source control area. The land area directly east of West Marginal Way S appears to be under construction. The southern portion of the source control area remains largely unchanged with the exception of a large warehouse constructed at the former Long Painting Company – 10th Avenue Facility.
- 1980 – The land area between West Marginal Way S and the LDW in the northern section of the source control area has become almost entirely industrial. Activity in the southern portion of the source control area remained consistent with 1969.
- 1995 – Development of the shoreline property has increased at the former Hurlen Construction facility. Upland facilities and the southern section of the source control area remain largely unchanged from previous years.

- 2001 – Overwater activity is conducted north of the source control area. The former Hurlen Construction facility has four barges moored along the waterway and has expanded operations to a property north of the 640 S Riverside Drive property (Figure B–7b). Silver Bay Logging occupies the facility adjacent to the waterway bordered by S Kenyon Street and 8th Avenue S. Upland facilities and the southern section of the source control area remain largely unchanged from previous years. Independent Metals Plant 2 has not started operations at the 816 S Kenyon Street facility. Unity Electric (a portion of the former Long Painting facility) occupies land near the waterway.
- 2004 – A wharf has been constructed at the property currently occupied by Pacific Pile and Marine. Overwater activities have increased at the former Hurlen Construction. Silver Bay Logging has one barge moored along the shoreline. Upland facilities remain largely unchanged from previous years.
- 2006 – Overwater operations continued at the property currently occupied by Pacific Pile and Marine and the former Hurlen Construction facility. Independent Metals Plant 2 began operations at the south yard of Silver Bay Logging between 2001 and 2006. A city park and residential houses are present along the remainder of the shoreline south of Unity Electric. Upland facilities remain largely unchanged from previous years.

2.2 Chemicals of Concern in Sediment

COCs in sediment associated with the Riverside Drive source control area were identified based on sediment sampling conducted between 1996 and 2011.

2.2.1 Sediment Investigations

Sediment samples have been collected adjacent to the Riverside Drive source control area as part of the investigations listed below and in Table 2. Data and information regarding the investigations performed prior to 2005 were compiled by Windward for the LDW RI (Windward 2003). Concentrations of COCs in surface and subsurface sediment samples detected above screening levels are presented in Tables 3 and 4, respectively.

- RCRA Facility Investigation Duwamish Waterway Sediment Investigation, Plant 2 Phase 2b (Windward 2003)

  Five surface sediment samples were collected adjacent to the source control area in April 1996. The samples were analyzed for polychlorinated biphenyls (PCBs) and TOC.
- King County CSO Water Quality Assessment (Windward 2003)

  From March to May 1997, nine surface sediment samples were collected from a sampling station located approximately 350 feet northeast of the 8th Avenue S CSO Outfall 2107. From May to June 1997, four surface sediment samples were collected from a sampling location approximately 400 feet north of the South Park Bridge. All samples were analyzed for metals. A subset of samples was analyzed for PCBs, polycyclic aromatic hydrocarbons (PAHs), phthalates, and other semivolatile organic compounds (SVOCs).
- Duwamish Waterway Sediment Characterization Study (NOAA 1998)

  Twenty-seven surface sediment samples were collected adjacent to the source control area in 1997. All 27 samples were analyzed for TOC, PCBs, and polychlorinated terphenyls.

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

  Twenty-two surface sediment samples were collected adjacent to the source control area in August and September 1998. The samples were analyzed for TOC, PCBs, SVOCs, PAHs, and metals. A subset of samples was analyzed for dioxins/furans, organometals, volatile organic compounds (VOCs), and pesticides.
- Chemical Analyses of Benthic Invertebrate and Clam Tissue Samples and Co-Located Sediment Samples (Windward 2005a)

  Two surface sediment samples were collected adjacent to the source control area in August 2004. Samples were analyzed for TOC, PCBs, SVOCs, metals, organometals, and pesticides.
- LDW RI Phase II Round 1, 2, & 3 (Windward 2005b, c, 2007b)

  In January 2005, March 2005, and October 2006, 19 surface sediment samples were collected adjacent to the Riverside Drive source control area. All samples were analyzed for TOC, PCBs, PAHs, phthalates, other SVOCs, metals, and VOCs. A subset of samples was analyzed for organometals and pesticides.
- LDW Phase II RI Subsurface Sediment Sampling (Windward 2007a)

  In February 2006, eight subsurface sediment samples were collected from two coring locations adjacent to the source control area. All samples were analyzed for TOC, PCBs, PAHs, phthalates, other SVOCs, metals, and VOCs.
- Using Sediment Profiling Imaging (SPI) to Evaluate Sediment Quality at Two Cleanup Sites in Puget Sound. Part 1–Lower Duwamish Waterway (as cited in AECOM 2010.

  In August 2006, one surface sediment sample was collected adjacent to the Riverside Drive source control area. The sample was analyzed for PCBs, SVOCs, metals, and organometals.
- LDW RI Phase II 2009/2010 Surface Sediment Sampling Results for Dioxins and Furans and Other Chemicals (Windward 2010a)

  In December 2010, one surface sediment sample was collected adjacent to the Riverside Drive source control area. The sample was analyzed for PCBs, PAHs, arsenic, and dioxins/furans.
- Surface Sediment Sampling at Outfalls in the Lower Duwamish Waterway (SAIC 2011b)

  In March and April 2011, 11 surface sediment samples were collected adjacent to the Riverside Drive source control area. All samples were analyzed for TOC, PCBs, PAHs, phthalates, other SVOCs, and metals. A subset of samples was analyzed for dioxins/furans.

Sediment sampling results are listed in Appendix A, Tables A-1 and A-2, for chemicals detected in surface and subsurface sediments. Sampling locations and analyses are listed in Table 2 and are shown in Figures 6a, 6b, and 6c.

2.2.2 Identification of Chemicals of Concern

A COC is defined in this report as a chemical that is present in sediments adjacent to the Riverside Drive source control area at concentrations above regulatory criteria, 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. Sediments that meet the SQS criteria (i.e., are present at concentrations below the SQS) have a low likelihood of adverse effects on sediment-dwelling biological resources. However, an exceedance of the SQS numerical criteria does not necessarily indicate adverse effects or toxicity, and the degree of SQS exceedance does not correspond to the level of sediment toxicity. The CSL is greater than or equal to the SQS and represents a higher level of risk to benthic organisms than the SQS levels. The SQS and CSL values provide a basis for identifying sediments that may pose a risk to some ecological receptors.

A chemical was identified as a COC for the Riverside Drive source control area if it was detected in surface or subsurface sediment at concentrations above the SQS in at least one sample. 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 3 and 4 for surface and subsurface sediments, respectively. For non-polar organics, the measured DW concentrations were organic carbon (OC) normalized to allow comparison to the SQS/CSL, unless the TOC concentration was less than or equal to 0.5 percent or greater than or equal to 4.0 percent. OC normalization is not considered appropriate for TOC concentrations outside of this range (Michelsen and Bragdon-Cook 1993, as cited in Windward 2010b). For samples with TOC concentrations outside this range, analytical results for non-polar organics were compared to the lowest apparent effects threshold (LAET) and the second lowest apparent effects threshold (2LAET), as identified in the LDW RI (Windward 2010b). The LAET and 2LAET are functionally equivalent to the SQS and CSL, respectively. Chemicals detected in sediment for which no SQS/CSL values are available may be identified as COCs on a case-by-case basis.

Chemicals with concentrations above the SQS in surface or subsurface sediment samples are listed below. Chemicals were present in sediment samples at concentrations slightly exceeding the SQS. The greatest exceedance occurred in surface sample LDW-SS95 for dibenzofuran.

Chemicals Detected at Concentrations Above the SQS/CSL	Surface Sediment		Subsurface Sediment	
	> SQS	> CSL	> SQS	> CSL
Metals				
Mercury	●	●		
PAHs				
2-Methylnaphthalene	●			
Acenaphthene	●	●		
Anthracene	●			
Benzo(a)anthracene	●			
Benzo(a)pyrene	●			
Benzo(g,h,i)perylene	●	●		
Chrysene	●		●	
Dibenzo(a,h)anthracene	●	●		
Dibenzofuran	●	●		
Fluoranthene	●		●	
Fluorene	●	●		
Indeno(1,2,3-cd)pyrene	●			
Phenanthrene	●	●		

Chemicals Detected at Concentrations Above the SQS/CSL	Surface Sediment		Subsurface Sediment	
	> SQS	> CSL	> SQS	> CSL
Total benzofluoranthenes	●			
Total HPAHs	●		●	
Total LPAHs	●	●		
Phthalates				
Bis(2-ethylhexyl)phthalate	●	●		
Butyl benzyl phthalate	●			
Other SVOCs				
1,4-Dichlorobenzene	●			
2,4-Dimethylphenol	●	●		
Benzoic acid	●	●		
Benzyl alcohol	●	●	●	
Phenol	●			
Hexachlorobenzene	●	●	●	
PCBs				
PCBs (total)	●		●	●

Exceedance factors, which are a measure of the degree to which maximum detected concentrations exceed the SQS/CSL values, are listed in Tables 2 and 3.
HPAH = high molecular weight PAH
LPAH = low molecular weight PAH

Results for these chemicals are discussed in more detail below.

Metals

Mercury concentrations exceeding the SQS were detected in one sample, LDW-SS2112-A (Figure 6b).

PAHs

PAH concentrations exceeding the SQS were detected in four surface samples, DR221, LDW-SS335, LDW-SS530, and LDW-SS95 (Figure 6b). Concentrations of acenaphthene, dibenzofuran, fluorene, phenanthrene, and total low molecular weight polycyclic aromatic hydrocarbon (LPAHs) exceeded the CSL in sample LDW-SS95. LDW-SS95 was collected upstream of Outfall 2112. PAH concentrations exceeded the SQS in two subsurface sediment samples collected from sediment core LDW-SC46, located upstream of Outfall 2112 (Figure 6b). Concentrations of chrysene, fluoranthene, and total high molecular weight polycyclic aromatic hydrocarbon (HPAH) in the 1- to 2-foot sample and fluoranthene in the 0- to 1-foot sample exceeded the SQS.

Phthalates

Bis(2-ethylhexyl)phthalate (BEHP) exceeded the SQS and CSL at sample location LDW-SS335, collected adjacent to Outfall 2112. Butyl benzyl phthalate exceeded SQS at the same location (Figure 6b).

PCBs

Total PCB concentrations exceeding the SQS were detected in 12 surface sediment samples and five subsurface sediment samples from two sediment cores. The greatest total PCB concentrations were observed in surface sample LDW-SS530 and the 1- to 2-foot subsurface sample collected from sediment core LDW-SC47; the CSL was also exceeded in the subsurface sample. These samples were collected at approximately RM 2.7 W (surface) and RM 3.0 W (subsurface) (Figures 6b and 6c).

Other SVOCs

SVOCs concentrations exceeding the SQS and/or CSL were detected in 12 surface sediment samples. Concentrations of benzyl alcohol exceeded the CSL at eight sample locations. LDW-SS336 is located upstream of Outfall 2112. Concentrations of hexachlorobenzene and benzyl alcohol exceeded SQS in the 1- to 2-foot sample collected from sediment core LDW-SC46. LDW-SC46 is located upstream of Outfall 2112 (Figure 6b).

Other COCs

Although no SQS have been promulgated, pesticides are considered potential COCs at the Riverside Drive source control area. Concentrations of pesticides including dichlorodiphenyldichloroethane, dichlorodiphenyltrichloroethane, dichlorodiphenyldichloroethylene, chlordane, endosulfan, enderin ketone, methoxychlor, and toxaphene were detected at three surface sampling locations. Greatest concentrations of pesticides were detected at surface sample location B7a.

Organotin compounds are persistent bioaccumulative toxins (PBTs) and are generally considered COCs for LDW sediments. Tributyltin (TBT) is used as the indicator chemical for organotin compounds. The mean concentration of TBT in the LDW is 90 milligrams per kilogram (mg/kg) DW (AECOM 2010). Organotin compounds were detected at 10 sampling locations near the Riverside Drive source control area in between 1998 and 2006, with concentrations of TBT up to 0.086 mg/kg DW at location DR203. Since the maximum TBT concentration in sediments near the Riverside Drive source control area is three orders of magnitude below the mean TBT concentration in LDW sediment, organotin compounds are not considered COCs for the sediments adjacent to the Riverside Drive source control area.

Dioxins and furans are considered potential COCs within the Riverside Drive source control area. These compounds were detected in five sediment samples at concentrations that exceed LDW background toxic equivalency (TEQ) concentrations of dioxins and furans as described in *Lower Duwamish Waterway Remedial Investigation Report* (Windward 2010b). Dioxin/furan TEQs ranged from 0.55 nanograms per kilogram (ng/kg) DW to 35.7 ng/kg DW (Table A-1). Although not explicitly addressed in the SMS, VOCs in pore water may cause adverse effects on benthic invertebrates and other aquatic biota and are therefore considered additional COCs for source control efforts in the LDW.

2.2.3 Chemicals of Concern

As described above, COCs were identified based on the results of sediment sampling conducted between 1998 and 2006. Chemicals that exceeded the SQS in at least one surface or subsurface sediment sample offshore of the Riverside Drive source control area are considered COCs.

The following chemicals are considered COCs for the Riverside Drive source control area with regard to potential sediment recontamination:

- Mercury
- PCBs
- PAHs
- Phthalates
- Other SVOCs
- Pesticides
- Dioxins/furans

2.3 Potential Pathways to Sediment

Potential sources of sediment recontamination associated with the Riverside Drive source control area include storm drains CSO outfalls, and discharges from adjacent and upland properties. Transport pathways that could contribute to the recontamination of sediments within the source control area 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 detail in Sections 3.0 through 6.0.

2.3.1 Direct Discharges via Outfalls

Direct discharges may occur from public or private storm drain systems, CSOs, and emergency overflows (EOFs). There is one public outfall, one private outfall, six storm drain outfalls of unknown origin, and one CSO within the Riverside Drive source control area.

Upland areas within the LDW are served by a combination of separated storm/sanitary systems and combined sewer systems. Storm drains convey stormwater runoff collected from pervious surfaces (yards, parks) and impervious surfaces (streets, parking lots, driveways, and rooftops) in the drainage basin. In the LDW, there are both public and private storm drain systems. Most of the waterfront properties are served by privately owned systems that discharge directly to the waterway. The other upland areas are served by a combination of private and publicly owned systems. Typically, private onsite storm drain systems discharge to the public storm drain in the street, which conveys runoff from private property and public rights-of-way to the LDW.

The sanitary sewer system collects municipal and industrial wastewater from throughout the LDW area and conveys it to King County's West Point wastewater treatment plant (WWTP), where it is treated before being discharged to Puget Sound. The smaller trunk sewer lines, which collect wastewater from individual properties, are owned and operated by the individual municipalities (e.g., cities of Seattle and Tukwila) and local sewer districts. The large interceptor system that collects wastewater from the trunk lines is owned and operated by King County. A King County interceptor extends along the west side of West Marginal Way SW.

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.

A mixture of untreated municipal/industrial wastewater and stormwater can potentially be discharged through CSOs to the LDW during these storm events. 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 because 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.

There are 14 CSOs/EOFs in the LDW. The county CSOs at S Brandon Street, Michigan Street, and Hanford No. 1 (discharging via the city's Diagonal Avenue S CSO/SD outfall) had the highest average discharge volumes between 2000 and 2007 (Table 5). One CSO is within the Riverside Drive source control area; the 8th Avenue S CSO is located at approximately 175 feet south of RM 2.8 West. The northern portion of the 8th Avenue S CSO basin overlaps with most of the Terminal 115 CSO basin (Figure 3).[4]

Annual stormwater discharge volumes are usually substantially higher than annual CSO discharges because storm drains discharge whenever it rains, while CSOs only occur when storm events 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 2010b).

To minimize the frequency and volume of CSO events, the county uses 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 WWTP for secondary treatment. In some areas of the system, where flows cannot be conveyed to the plant, the overflows are sent to CSO treatment facilities for primary treatment and disinfection prior to discharge. County CSOs

[4] The Terminal 115 CSO basin discharges to the LDW within the RM 1.6 to 2.1 West (Terminal 115) source control area.

discharge untreated wastewater only when flows exceed the capacity of these systems (King County 2009).[5]

As a result, some areas may overflow 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.

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.

Although COCs from individual industrial and commercial facilities within the CSO basin are significantly diluted, the cumulative effects of CSO events could contribute to recontamination of the sediments adjacent to the Riverside Drive source control area. Industrial and commercial facilities discharging industrial wastes and/or stormwater to the combined sewer system are therefore considered to represent potential, but relatively minor, sources of sediment recontamination.

Large spills of hazardous substances and waste materials containing COCs may be transported to a storm drain and therefore have the potential to impact sediment in the LDW. There is a potential for spills of COCs from many of the industrial and commercial businesses from upland properties as well as from trucks and trains transporting hazardous substances and waste materials. Spills that occur in upland properties could enter the onsite or public storm drain system and be discharged to the LDW. Spill prevention is a major element of the business inspections conducted by SPU, King County, and Ecology. Many businesses are required to have spill prevention plans. In the event of a spill, Ecology and SPU respond to and investigate spill incidents.

Within the 8th Avenue S CSO system, there are facilities within sanitary sewer service areas that also have stormwater drainage connections to combined sewers. Although there can be specific distinctions depending on whether a given sub-basin or sub-service area is a fully separated, partially separated, or a fully combined sewer system, this document uses “CSO basin” as a generic term to communicate the concept of a CSO system that is tributary to a specified CSO outfall and that includes some portion of identifiable storm drainage conveyance connected to combined sewers.

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

[5] City CSOs are generally smaller and flows are not treated prior to discharge.

practices at adjacent properties may contribute to the movement of contaminants to the LDW via runoff.

2.3.3 Spills to the LDW

Near-water and overwater activities have the potential to impact adjacent sediment from spills directly to the LDW of material containing COCs. Parcels adjacent to the LDW within the Riverside Drive source control area are a combination of residential properties and industrial properties that conduct overwater activities. Accidental spills during loading/unloading operations may result in transport of contaminants to sediment. Facilities that conduct overwater activities include Pacific Pile and Marine, and Independent Metals Plant 2.

2.3.4 Groundwater Discharges

Contaminants in soil resulting from spills and releases to adjacent and upland properties may be transported to groundwater and subsequently released to the LDW. Concentrations of chemicals in soil and groundwater were compared to draft soil-to-sediment or groundwater-to-sediment screening levels (SAIC 2006). These screening levels were initially developed to assist in the identification of upland properties that 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 media 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 exceedances of the SMS. However, upland concentrations that exceed these screening levels *may or may not* pose a threat to marine sediments; additional property-specific information must be considered in order to make such an assessment. While not currently considered COCs in sediment, these chemicals may warrant further investigation, depending on property-specific conditions, to evaluate the likelihood that they will lead to exceedances of the SMS.

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. Soil and groundwater contamination was documented at the 640 S Riverside Drive property. Contamination in soil and groundwater could be released directly to sediments via groundwater discharge.

Soil and groundwater contaminated by petroleum hydrocarbons have been identified at several properties within the Riverside Drive source control area. Where these contaminants are present in the subsurface, naturally occurring arsenic in soil can be mobilized and migrate into groundwater (Harter and Rollins 2008). Arsenic is a COC for LDW sediments, although arsenic was not identified as a COC for the sediments adjacent to the Riverside Drive source control area.

Eight seep locations were identified during the Windward seep reconnaissance survey. The Riverside Drive source control area was identified as an area with higher general seepage levels (Windward 2004). Seep 48 was selected for chemical analysis (Figure 6a and 6c). Copper was detected in Seep 48 at a concentration 3 times the Marine Chronic Water Quality Standard of 3.1 micrograms per liter (µg/L).

2.3.5 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. Banks within the Riverside Drive source control area are composed of riprap, vegetation, wharfs, and exposed soil. Facilities with exposed soil along the shoreline include Pacific Pile and Marine, 640 S Riverside Drive, former Hurlen Construction, Lukas Machine, and Independent Metals Plant 2. Contaminants in exposed soils along the banks could be released directly to sediments via erosion.

2.3.6 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; 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 Riverside Drive 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 2.2-3.4 West or in areas that drain to the LDW. Although chemical deposition from air directly to the LDW probably occurs, this mechanism is not likely to result in sediment concentrations above local background levels. Secondary impacts of air sources on the stormwater pathway to receiving waters and sediment are not well understood; additional information is needed. Recent and ongoing atmospheric deposition studies in the LDW area are summarized in the LDW Source Control Status Report (Ecology 2007e and subsequent updates). Ecology will continue to monitor these efforts.

3.0 Potential for Sediment Recontamination from Outfalls

Storm drains convey stormwater runoff collected from streets, parking lots, roof drains, and residential, commercial, and industrial properties to the LDW. Storm drain outfalls entering the LDW carry runoff generated by rain and snow. A wide range of chemicals may become dissolved or suspended in runoff as rainwater flows over the land. Urban areas generally accumulate particulates, dust, oil, asphalt, rust, rubber, metals, pesticides, detergents, or other materials because of human activities throughout the storm drain basin.

Human activities include landscaping, spills, illegal dumping, vehicle maintenance (fueling, washing), and vehicle use (wear on roads, tires, brakes, fluid leaks, and emissions). These materials can be flushed into storm drains during wet weather and are then conveyed to the waterway, mainly through the storm drain system. In addition, contaminants in soil or groundwater could enter the storm drain system through cracks or gaps in the system piping.

Within the Riverside Drive source control area, nine outfalls discharge to the LDW. Three outfalls are listed as “private,” two outfalls are listed as “public,” and four outfalls are listed as “unknown” and may be inactive.

3.1 Public Outfalls

As described in Section 2.3.1, public outfalls include public storm drains, CSOs, and EOFs. Two public storm drains and one CSO outfall discharge to the LDW within the Riverside Drive source control area:

Outfall No.	Outfall Name	Location	Pipe Diameter/Material	Outfall Type
2112	7th Avenue S SD	2.7 W	unknown	SPU SD
2107	8th Avenue S CSO	2.8 W	36-in. reinforced concrete pipe	KC CSO
3037	OF6620	3.2 W	18-in. corrugated metal pipe	KC SD

Source: LDW Phase 2 RI Final (Windward 2010b, Appendix H); Dorn 2012)

Lateral storm drain lines connect several of the surrounding facilities to these main lines. SPU has collected storm drain solids samples from the storm drain structures associated with Outfalls 2112 and 2107. The Source Control Work Group[6] (SCWG) compares analytical results from these samples to the SQS and apparent effects threshold (AET).Petroleum hydrocarbon results are compared to the Model Toxics Control Act (MTCA) Method A cleanup standards. Although these regulatory standards are not applicable to storm drain solids, the SCWG uses these values as a benchmark to describe storm drain solids quality (SPU 2010n). In this document, values described above (SQS/CSL, LAET/2LAET, and MTCA Method A) that are used for comparison to storm drain solids data are referred to as “storm drain screening values.” It should be emphasized that none of these values are applied as cleanup levels to storm drain or combined sewer solids. It is important to note that any comparison of this kind is most likely conservative

[6] The SCWG is composed of Ecology, King County, the Cities of Seattle and Tukwila, the Port of Seattle, and EPA.

given that sediments discharged from storm drains are highly dispersed in the receiving environment and mixed with the natural sedimentation taking place in the system.

3.1.1 7th Avenue S SD Outfall (Outfall 2112)

The 7th Avenue S SD basin discharges via Outfall 2112, which is located on the right-of-way at approximately RM 2.7 West (Figures 4a and 4b). Based on data provided by SPU the 7th Avenue S SD basin drains an area of approximately 230 acres (SPU 2010n). The drainage basin comprises the following areas:

- The lower 7th Avenue S SD basin is approximately 66 acres and spans east-to-west from the LDW to WA-99 and north-to-south from S Webster Street to S Rose Street.
- The middle 7th Avenue S SD basin is approximately 126 acres and spans east-to-west from WA-99 to WA-509 and north-to-south from S Rose Street to one block north of S 96th Street.
- The upper 7th Avenue S SD basin is approximately 38 acres and spans east-to-west from WA-509 to SW 97th Place and north-to-south from 2nd Avenue SW to 550 feet north of SW 100th Street.

The upper 7th Avenue S SD basin conveys stormwater to the middle 7th Avenue S SD basin via a culvert that runs under SR-509 (Figure 4a). The middle 7th Avenue S SD basin conveys stormwater to the lower 7th Avenue S SD basin via a 72-inch pipe that runs under WA-99 (Figure 4a). The storm drain lines associated with the 7th Avenue S SD basin are shown on the figures included in Appendix C.

Currently, the 7th Avenue S drainage system backs up during high tides and is not capable of adequately conveying storm flow. This creates flooding problems in the drainage basin. The South Park pump station/water quality facility (PS/WQF), currently in design (Section 4.2), is intended to improve drainage and the quality of stormwater being discharged to the LDW (SPU 2009p).

Ecology assigned Facility/Site ID numbers to eight roadway locations in the 7th Avenue S SD basin within the Riverside Drive source control area. These locations are:

Facility/Site Name	Facility/Site ID	Ecology Program ID	Ecology Interaction
4th Avenue S & S Trenton Storm Drain	15642	WAR010436 (inactive)	Construction SW GP
5th Avenue S Site (8229 5th Avenue S)	64516429	WAD988521985 (inactive)	HWG
5th Avenue & S Sullivan	74123918	WAD981767288 (inactive)	HWG
S Kenyon Street (832 S Kenyon Street)	1852818	WAD981766181 (inactive)	HWG
S Holden Abandoned Container	17878123	WA0000463794 (inactive)	HWG
Seattle City Turkey Duck Swale	6041351	200700687	401CZM Project Non Enforcement Final
S Chicago Street Dump	3644425	WAR000009381 (inactive)	HWG
Kenyon Drum	29892767	WAD980985659 (inactive)	HWG

Construction SW GP – General permit issued for construction projects that discharge stormwater to state waters.
Hazardous Waste Generator (HWG) – Facilities that generate any quantity of a dangerous waste.
401CZM Project – Ecology action based on its authority from the Clean Water Act and/or Coastal Management Act.
Non Enforcement Final – issued to the respective party, indicating the non-enforcement action was taken.

The 4th Avenue S & S Trenton Street Storm Drain location was a joint SPU/Seattle Parks drainage improvement project conducted between 2008 and 2009. The project was built to reduce flooding problems in the areas along S Director Street and S Trenton Street. A new stormwater collection system was installed in the 4th Avenue S/S Trenton Street area. A new stormwater collection system with biofiltration swale for treatment was constructed in the S Director Street area between 5th Avenue S and 7th Avenue S. The biofiltration swale is located along the west and southern edge of Parks Department property at Marra Farms (Schmoyer 2012).

It is assumed that Ecology assigned Facility/Site ID numbers to the other locations during road construction, repair activities, or for the disposal of contaminated soil or groundwater associated with construction or repair activities due to the presence of abandoned hazardous waste containers. The facilities in the above table are not represented on figures in this report.

Industrial and commercial facilities within the 7th Avenue S SD basin have been identified as follows:

- 75 facilities within the 7th Avenue S SD basin have been assigned Ecology Facility/Site ID numbers.
- 6 of these facilities are listed on the CSCSL.
- 8 of these facilities have active EPA ID numbers.
- 6 of the facilities hold NPDES permits.
- 2 of these facilities have KCIW discharge authorizations or permits.
- 15 of these facilities are listed on Ecology's UST/LUST lists.

These facilities are listed by category in Table 1. Additionally, an unknown number of undocumented industrial operations may take place within the 7th Avenue S SD basin. Undocumented industrial activities may be an ongoing source of contaminants to sediments adjacent to the Riverside Drive source control area.

SPU Storm Drain Sampling

SPU conducted sampling within the 7th Avenue S SD basin during 2005, and from 2007 to 2011 (Table 6a). SPU collected seventeen inline grab samples over the course of the sampling period. Three sediment traps were installed in September 2008 and samples were collected in March 2009 and November (7th-ST2 and 7th-ST3) and December 2010 (7th-ST1). Two catch basin samples were collected in February 2009 (CB137, Marine Lumber Services) and November 2009 (CB154, Olympic Steel Door) from two private properties. Thirteen right-of-way catch basin samples were collected between 2008 and 2011. Samples were analyzed for metals, total petroleum hydrocarbons (TPH), PAHs, phthalates, PCBs, and semi-volatile organic compounds (SPU 2010n; Schmoyer 2011). SPU also collected soil samples from 3 locations in the ROW adjacent to Marine Lumber, as discussed in Section 5.19.3. Sampling locations are presented in Figures 7a and 7b, and chemical concentrations are presented in Table 6a. Chemicals with concentrations above the storm drain screening values in sediment traps, inline grabs, and catch basins are listed below:

Chemical	Sediment Trap	Inline Grab	Catch Basin
	>Storm Drain Screening Value	>Storm Drain Screening Value	>Storm Drain Screening Value
Metals			
Copper			●
Lead			●
Mercury			●
Zinc	●	●	●
Petroleum Hydrocarbons			
TPH-diesel			●
TPH-oil	●	●	●
PAHs			
2-Methylnaphthalene			●
Benzo(a)anthracene			●
Benzo(a)pyrene			●
Benzo(g,h,i)perylenefluora	●	●	●
Benzofluoranthenes, total			●
Chrysene			●
Dibenzo(a,h)anthracene			●
Fluoranthene		●	●
Fluorene			●
Indeno(1,2,3-cd)pyrene			●
Phenanthrene			●
Pyrene			●
Total HPAH			●
Total LPAH			●
Phthalates			
BEHP	●	●	●
Butyl benzyl phthalate	●	●	●
Dimethylphthalate		●	●
Di-n-butylphthalate			●
Di-n-octylphthalate			●
PCBs			
Total PCBs	●	●	●
Other SVOCs			
Phenol			●
2-Methylphenol			●
4-Methylphenol			●
Benzoic acid	●		●
Benzyl alcohol	●		●
N-Nitrosodiphenylamine			●

HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon

Elevated levels of arsenic were detected in surface soil samples collected from streets adjacent to Marine Lumber Service's storage yard, in the 7th Avenue S SD. SPU determined the arsenic source was stormwater runoff from a treated lumber storage yard. Marine Lumber Services is working with Seattle Department of Transportation and Ecology to remove arsenic-contaminated soil from the right-of-way (SPU 2010n). Results from these samples are presented in Table 6c. Additional information regarding sampling and cleanup of the arsenic-contaminated soil is available in Section 5.19.

SPU has collected several storm drain solids samples from the storm drain structures located at 7th Avenue S and S Monroe Street. These structures include manholes MH21B, MH228, and MH229 and right-of-way catch basins RCB170, RCB213, and RCB227 (Figures 7a and 7b). Samples were collected in April 2005, May 2009, and March 2011. Concentrations of PCBs, lead, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons have exceeded the storm drain screening values (Table 6a) (SPU 2010n; Schmoyer 2011). As of December 2010, SPU planned to clean the 7th Avenue S SD system prior to building the South Park PS/WQF. Construction was scheduled for 2011–2012 but has been delayed. Construction of the PS/WQF is temporarily on hold pending re-evaluation of stormwater treatment technologies. Removal of contaminated soil present at the site will occur in 2012. The South Park PS/WQF Project involves construction of a pump station to allow the storm drain system to function under all tidal and storm conditions up to the 25 year storm. In addition, a treatment system that is designed to treat approximately 80 percent of the average annual stormwater runoff will be installed at the downstream end of the 7th Avenue S SD basin (SPU 2010n; Schmoyer 2012).

3.1.2 8th Avenue S CSO

The 8th Avenue S CSO basin covers approximately 2,980 acres, spanning east-to-west from the LDW to West Marginal Way SW in the northern area of the basin and from the LDW to WA-509 in the southern area of the basin (Appendix C). Land uses within the CSO basin include industrial, residential, and commercial properties. The storm drain, combined, and sanitary sewer lines associated with the 8th Avenue S CSO basin are shown in Appendix C.

From 1991 to 1996, combined wastewater and stormwater overflows were discharged through the 8th Avenue S CSO on average 2.3 times per year. The 8th Avenue S CSO did not discharge between 1997 and 2009. The CSO discharged a total of 18 gallons during one event in October 2010 (King County 2011a).

King County Industrial Waste (KCIW) estimates that industrial discharges comprise less than 0.5 percent of the total volume of a CSO event (Tiffany 2008). Typically, domestic users of the combined sewer system contribute a larger percentage of the chemical loading than industrial users. For example, KCIW testing has indicated that industrial users of the combined sewer system contribute less than 10 percent of the phthalate load, with the remainder coming from uncontrollable sources such as domestic users.

Although COCs from individual industrial and commercial facilities within the CSO basin are significantly diluted, the cumulative effects of CSO events could contribute to recontamination of sediments adjacent to the Riverside Drive source control area. Industrial and commercial facilities discharging industrial wastes and/or stormwater to the combined sewer system are therefore considered to represent potential but relatively minor sources of sediment recontamination.

The northern portion of the 8th Avenue S CSO basin overlaps with most of the Terminal 115 CSO basin. Therefore, during CSO events, discharges through the 8th Avenue S CSO may include contributions of stormwater and wastewater from facilities within the Terminal 115 CSO basin. Facilities that are co-located in the Terminal 115 and 8th Avenue CSO basins were described in the Terminal 115 Data Gaps Report (SAIC 2011a).[7]

Industrial and commercial facilities within the 8th Avenue S CSO basin have been identified as follows:

- 309 facilities within the 8th Avenue S CSO basin have been assigned Ecology Facility/Site ID numbers (Table 7, Table C-1).
- 48 of these facilities have active EPA ID numbers (Table C-2).
- 28 of these facilities are listed on the CSCSL (Table C-3).
- 24 of the facilities hold NPDES permits (Table C-4).
- 11 of these facilities have KCIW discharge authorizations or permits (Table C-5).
- 68 of these facilities are listed on Ecology's UST/LUST lists (Table C-6).

These facilities are listed by category in Tables C-2 through C-7.

One hundred eight of the 309 facilities are located within the Riverside Drive source control area (75 of these facilities are located in the 7th Avenue S SD basin). Eight facilities are listed on the CSCSL and 28 are on the UST/LUST lists. Seven facilities hold a NPDES permit and four facilities have KCIW discharge authorizations or permits. Eleven facilities have active EPA ID numbers. All facilities within the Riverside Drive source control area are discussed in Sections 4, 5, and 6 of this Data Gaps Report.

Ninety-five of the 309 facilities are located within EAA-2, EAA-5, Terminal 115, or 1st Avenue S SD source control areas for which a Data Gaps Report has been prepared or is in progress. Nine facilities area on the CSCSL and 19 facilities are on the UST/LUST lists. Eight facilities hold a NPDES permit and five facilities have a KCIW discharge permit or authorization. Ten facilities have active EPA ID numbers. Although activities at these 95 facilities, such as Boyer Towing or Crowley Marine Services, may result in discharges that are eventually conveyed to the 8th Avenue S CSO, they are not discussed further in this Data Gaps Report because the source control actions (if any) identified in previous reports are considered to be adequate for source control with regard to the 8th Avenue S CSO.

One hundred one of the 309 facilities are located within the Sea King Industrial Park and Restoration Areas source control areas for which a Data Gaps Report is planned but has not yet been prepared. Ten facilities are on the CSCSL and 21 are on the UST/LUST lists. Nine facilities hold a NPDES permit. Twenty-four facilities have active EPA ID numbers.

Seven of the 309 facilities are located within the 8th Avenue S CSO drainage basin but outside of source control areas. Of these facilities, one has an active EPA ID number (SPU Highline Well Riverton Heights) and one facility is a LUST/UST facility (McCall Oil). Two facilities, M & M

[7] The Terminal 115 CSO discharges to the LDW within the RM 1.6 to 2.1 West (Terminal 115) source control area.

Grinding and Warner Transmission were inspected as part of the Urban Waters Initiative program in June 2010. The Urban Waters inspection reports were not available for review. Additional information regarding these seven facilities is presented in Table C-8.

Additionally, an unknown number of undocumented industrial operations may take place within the 8^{th} Avenue S CSO basin. Unregulated industrial activities may be an ongoing source of contaminants to sediments adjacent to the Riverside Drive source control area.

SPU Combined Sewer Sampling

SPU conducted sampling within the combined sewer system in the South Park area during 2007, 2009, 2010, and 2011 (Table 6b). SPU collected three catch basin samples on private property (CB113, National Products and CB206, Independent Metals Plant 2) and six right-of-way catch basin samples. Samples were analyzed for metals, TPH, PAHs, phthalates, PCBs, and other organic compounds (SPU 2010n; Schmoyer 2011). Sampling locations are presented in Figures 7a and 7b, and chemical concentrations are presented in Table 6b. Chemicals with concentrations above the storm drain screening values in catch basins are listed below:

Chemical	Catch Basin >Storm Drain Screening Value
Metals	
Copper	●
Lead	●
Mercury	●
Zinc	●
Petroleum Hydrocarbons	
TPH-diesel	●
TPH-oil	●
PAHs	
2-Methylnaphthalene	●
Benzo(g,h,i)perylene	●
Chrysene	●
Fluoranthene	●
Phenanthrene	●
Benzyl alcohol	●
Hexachlorobenzene	●

Chemical	Catch Basin >Storm Drain Screening Value
Phthalates	
BEHP	●
Butyl benzyl phthalate	●
Diethylphthalate	●
Dimethylphthalate	●
Di-n-butylphthalate	●
PCBs	
Total PCBs	●
Other SVOCs	
4-Methylphenol	●
Benzoic acid	●
Benzyl alcohol	●

3.1.3 Outfall 3037

Outfall 3037 is an active stormwater outfall located just north of S Southern Street in unincorporated King County (Figure 4c and 6c). Land uses within the drainage area include industrial, residential, and commercial properties. Outfall 3037 is operated by King County and regulated under King County's Phase I Municipal Stormwater Permit. The King County Stormwater Services Section was generating a drainage map and sampling data for Outfall 3037 when this Data Gaps report was finalized (Tiffany 2012c; Dorn 2012). Additional information about this outfall, if any, will be included in the Riverside Drive SCAP.

3.1.4 Potential for Sediment Recontamination

7th Avenue S SD Outfall

Sediment trap, in-line, and catch basin storm drain solids sampling has indicated that concentrations of sediment COCs exceeding storm drain screening values are present in the 7th Avenue S SD basin. These COCs may be discharged to the LDW through the 7th Avenue S SD outfall (Outfall 2112) and may represent a source of contaminants to the sediments adjacent to the Riverside Drive source control area.

Mercury, PCBs, SVOCs, PAHs, and phthalates concentrations that exceed screening levels are present in both LDW sediment samples near Outfall 2112 (Figure 6b) and in storm drain solids samples collected from the 7th Avenue S SD system.

8th Avenue S CSO Basin

Concentrations of sediment COCs are likely to be highly diluted especially when the infiltrating groundwater commingles with stormwater. Therefore, the potential for sediment recontamination via this pathway is likely to be lower than for direct discharges from adjacent facilities and the 7th Avenue S SD basin. Only one CSO event occurred from the 8th Avenue S CSO basin since 1997. While the cumulative effects of CSO discharges could contribute to recontamination of sediments near the Riverside Drive source control area, the potential for sediment recontamination via this pathway is low due to the highly diluted nature of the discharge and the infrequent occurrence of CSO events.

Outfall 3037

Stormwater source tracing data were not available for Outfall 3037 during the preparation of this report. This information will be included in the Riverside Drive SCAP if source tracing has been performed. The potential for sediment recontamination via this pathway is unknown.

3.1.5 Data Gaps

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

- Additional information is needed to verify that cleanup of arsenic-contaminated soil at the right-of-way near Marine Lumber Services is complete.
- Additional information is needed to determine if undocumented industrial operations are occurring within the 7th Avenue S SD basin that may be an ongoing source of sediment recontamination.
- Source tracing information is needed for Outfall 3037 to determine if discharges from the outfall are a potential source of sediment recontamination.

3.2 Private Outfalls

Outfall 2110, owned and operated by Independent Metals, is the only permitted, private storm drain outfall in the source control area. The outfall is located approximately 50 feet south of RM

2.9 West (Figure 4b). Three outfalls of unknown or unresolved origin are also present in the Riverside Drive source control area (Figures 4b and 4c).

Outfall No.	Secondary ID	Location	Pipe Diameter/Material	Type
2113	355W	2.6 W	6-in. concrete	Unknown SD
2106	358W	2.8 W	24-in. ductile iron	Unknown SD
2108	359W	2.8 W	8-in. ductile iron	Unknown SD
2111	360W	2.9 W	12-in. ductile iron	Independent Metals Plant 2
2110	361W	2.9 W	15-in. concrete	Independent Metals Plant 2
2109	362W	2.9 W	11-in. wood	Independent Metals Plant 2

Stormwater from the eastern portion of the Independent Metals Plant 2 facility drains into a single catch basin. Stormwater is conveyed through an oil/water separator and a stormwater treatment system before it is discharged to the LDW via Outfall 2110 (Nisqually 2010b). Outfall 2109 and 2111 are located on Independent Metals Plant 2 property and may be inactive. Additional information regarding stormwater discharge from Independent Metals Plant 2 is discussed in Section 4.5.1.

3.2.1 Potential for Sediment Recontamination

Little information was available to determine whether three outfalls of unknown or unresolved origin are abandoned or active. Active outfalls with undocumented drainage have the potential to transport contaminants present in stormwater (if any) to LDW sediments near the Riverside Drive source control area.

3.2.2 Data Gaps

Information needed to assess the potential for sediment recontamination associated with the unknown/unresolved storm drain outfalls is listed below:

- Information regarding the status of the three unresolved outfalls is needed to determine if they are operational or have been abandoned.
- Additional information is needed to determine if storm drain lines are connected to the unresolved outfalls and the associated drainage areas of these outfalls, if any, to determine the potential for sediment recontamination via the stormwater pathway.

Data gaps related to Outfalls 2109, 2110, and 2111 are listed with Independent Metals Plant 2 in Section 4.5.

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4.0 Potential for Sediment Recontamination from Adjacent Properties

The LDW shoreline spans approximately 4,100 feet of the source control area. Parcels along the shoreline are a mix of city parks and residential, industrial, and commercial properties. Five properties located adjacent to the LDW were identified as potential sources of contaminants to the Riverside Drive source control area (Figures 4a through 4c):

- Pacific Pile and Marine
- 640 S Riverside Drive
- Former Hurlen Construction
- Lukas Machine Inc.
- Independent Metals Plant 2
- Former Long Painting – 10^{th} Avenue S Facility

Parcels for adjacent properties of concern within the Riverside Drive source control area are shown in Figures 5a and 5b, identified by the last four digits of the tax identification number. Aerial photographs of the Riverside Drive source control area for the years 1936 to 2006 are provided in Appendix B. All of the adjacent facilities are located within the 8^{th} Avenue S CSO basin.

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

4.1 Pacific Pile and Marine

Facility Summary: Pacific Pile and Marine	
Tax Parcel No.	7327906755
Address	582 S Riverside Drive
Property Owner	Brackish Properties LLC
Parcel Size	0.12 acre (5,100 sq ft)
Facility/Site ID	56779778: DC Tooling Repair
Alternate Name(s)	DC Tooling Repair
SIC Code(s)	9999: Nonclassifiable Establishments
EPA ID No.	WAD117347641
NPDES Permit No.	None
UST/LUST ID No.	11414

The property was purchased by Brackish Properties LLC in December 2008. Pacific Pile and Marine is the current operator at the property. The facility operates on parcel 6755 (Figure 5a), located on the eastside of S Riverside Drive. The property is bordered to the south by a residential property and the LDW to the east.

According to King County tax assessor records, a 2,400 sq ft machine shop, built in 1967, is located on the southern portion of the property. Based on review of aerial photographs, an employee parking lot is on the western portion of the property and two temporary housing structures have been constructed on the northern portion of the property. The riverbank appears to be lined with riprap and vegetation. Ecology blocks line the boundary between the pavement and riverbank.

Stormwater and surface runoff from this property discharges directly to the LDW (SPU 2009be).The property is located within the 8th Avenue S CSO basin.

4.1.1 Current Operations

Pacific Pile and Marine specializes in marine and heavy civil construction services such as pile driving, dredging, bridge construction, and foundation projects (Jones 2011). Pacific Pile and Marine has operated at the facility since 2008 (SPU 2009be). Based on review of aerial photographs, one wharf extends from the northern portion of the property, and another wharf extends from the southern portion of the property. Barges and marine construction equipment are moored along the wharfs. No additional information regarding current operations was available for review.

4.1.2 Historical Operations

DC Tooling Repair operated at this property beginning in approximately 1967. Based on historical aerial photographs, it appears residential homes were on the property until the company's machine shop was built in 1967. The wharf extending from the southern portion of the property is first visible in a 2004 aerial photograph. Information regarding historical operations by DC Tooling Repair was not available for review.

This property is listed in CERCLA Section 104(e) Request for Information Letters that the EPA sent to Hurlen Construction and American Civil Constructors in August 2007 (EPA 2007a, b), which suggests that one or both companies may have historically operated at the property. No information regarding historical operations by these companies at this property, if any, was available for review.

4.1.3 Regulatory History

DC Tooling Repair reported to Ecology as a hazardous waste generator from June 1987 until July 1992. No additional information regarding current operations at the facility was available for review.

SPU conducted an initial inspection of Pacific Pile and Marine in December 2009. The inspectors identified the following corrective actions (SPU 2010n):

- Develop and implement spill response procedures, obtain spill response materials.
- Educate employees with regard to best management practice (BMPs).
- Implement proper washing practices.
- Properly store and label containerized materials and non-containerized materials.
- Implement proper fueling operations.
- Properly perform maintenance of vehicles and equipment.

In February 2010, a follow-up inspection by SPU determined that Pacific Pile and Marine achieved stormwater and spill management corrective actions and was in compliance (SPU 2010f).

EPA sent CERCLA Section 104(e) Request for Information Letters to Hurlen Construction and American Civil Constructors in August 2007 (EPA 2007a, b) and to Pacific Pile and Marine in December 2010 (EPA 2010c). EPA sent a supplemental information requests to American Civil Constructors in November 2009 (EPA 2009b) and to Hurlen Construction in September 2010 (EPA 2010b). Responses to the requests were not available for review at the time this report was prepared.

4.1.4 Environmental Investigations and Cleanup

No records of environmental investigations or cleanups at this property were identified.

4.1.5 Potential for Sediment Recontamination

Pacific Pile and Marine is adjacent to the LDW. No SMS exceedances have been observed in LDW sediment samples collected offshore of the Pacific Pile and Marine property (Figure 6b). The potential for sediment recontamination associated with this property is summarized below by transport pathway.

Stormwater and Surface Runoff

Stormwater and surface runoff from this property discharges directly to the LDW (SPU 2009be). Contaminants in stormwater/surface runoff, if any, could recontaminate.

SPU conducted an inspection in December 2009 and identified corrective actions related to stormwater, spill prevention, and hazardous waste. In February 2010, SPU determined that the facility had implemented the corrective actions and was in compliance. The potential for sediment recontamination via the stormwater discharge and surface runoff pathways is therefore low, provided that Pacific Pile and Marine maintains appropriate source control BMPs.

Spills

Pacific Pile and Marine performs barge loading and unloading operations, where spills to the dock area have the potential to enter the LDW. Spills from loading and unloading activities are a potential pathway for sediment recontamination.

Soil and Groundwater

Soil and groundwater contamination has not been identified at the property. However, given the historical machine shop operations at this property, there is a potential for soil and groundwater contamination. The potential for sediment recontamination via groundwater discharge is unknown.

Bank Erosion/Leaching

The bank at the facility consists of exposed soil, vegetation and riprap. Contaminants in bank soils (if any) could be released directly to sediments via erosion. The potential for sediment recontamination via bank erosion/leaching is unknown.

4.1.6 Data Gaps

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

- A facility plan showing the locations of catch basins and storm drains is needed to evaluate the potential for contaminant transport to the LDW via the stormwater discharge and surface runoff pathways.
- A review of the responses from Hurlen Construction, American Civil Constructors, and Pacific Pile and Marine to the CERCLA Section 104(e) Request for Information letters is needed to identify potential sources of sediment recontamination that may be associated with current and historical operations at the property.
- Additional information regarding the historical operations performed by DC Tooling Repair is needed to determine if operations may have resulted in releases of contaminants to soil and/or groundwater.

4.2 640 S Riverside Drive

Facility Summary: 640 S Riverside Drive	
Tax Parcel No.	7327905700, 7327905710
Address	5700: 640 S Riverside Drive 5710: 636 S Riverside Drive
Property Owner	5700, 5710: City of Seattle
Parcel Size	5700: 0.10 acre (4,520 sq ft) 5710: 0.14 acre (6,000 sq ft)
Facility/Site ID	22726
Alternate Name(s)	South Park PS/WQF, City of Seattle Industrial Shop, Pro Fab Inc., Rocket Research Corporation, The Peyser Company, TNW Company, Tnemec Coatings
SIC Code(s)	33271: Machine Shops
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Parcels 5700 and 5710 (Figure 5a) are being developed as the South Park PS/WQF (Figure 4b). The property is bordered by the former Hurlen Construction facility to the north and south, S Riverside Drive to the west, and the LDW to the east. The combined parcels are referred to as the 640 S Riverside Drive property by Ecology and in this report.

According to King County tax assessor records, a 3,060 sq ft industrial shop, built in 1960, was present on parcel 5700 and a single-family residence, built in 1910, was present on parcel 5710.

The buildings have been demolished in preparation for the construction of the South Park PS/WQF (Ecology 2011b).

4.2.1 Current Operations

SPU acquired parcels 5700 and 5710 via condemnation on February 24, 2009 (SPU 2009p). SPU planned to build the South Park PS/WQF on parcels 5700 and 5710 during 2011–2012; however, construction has been delayed. The South Park PS/WQF Project involves construction of a pump station to allow the storm drain system to function under all tidal and storm conditions up to the 25 year storm. Construction of the PS/WQF is temporarily on hold pending re-evaluation of stormwater treatment technologies. Removal of contaminated soil present at the property will occur in 2012 (SPU 2010n; Schmoyer 2012).

Stormwater Discharges

Stormwater is collected in the 7th Avenue S SD basin and discharged to the LDW via Outfall 2112 (Ecology 2011b).

Currently, the drainage system backs up during high tides and is not capable of adequately conveying storm flow. This creates flooding problems in the drainage basin. The pump station will handle flows up to 44 cubic feet per second (cfs) and future development will expand the capacity 86 cfs. The water quality facility is designed to improve the quality of stormwater being discharged to the LDW. All stormwater flows up to 11 cfs from the 7th Avenue S SD basin will be treated at the facility. Flows over 11 cfs will bypass the water quality facility (SPU 2009p).

4.2.2 Historical Operations

According to a Phase I Environmental Site Assessment (ESA), Rocket Research Corporation (a design and development firm), The Peyser Company and TNW Company, Inc. (manufacturing businesses), and Tnemec Coatings (a waterproofing service) occupied parcel 5700 from the 1960s to the early 1990s. No information was found that indicated whether any of these businesses used, stored, or handled hazardous materials during their operations. There is potential for Tnemec Coatings to have mixed or handled paint products in the mid- to late-1980s. Pro-Fab Inc., a metal fabrication business, occupied the property from the early 1990s until February 2009, when the property was acquired by SPU (Herrera 2007).

Parcel 5710 was a residential property from the early 1900s until it was acquired by SPU in 2009 (SPU 2009p).

4.2.3 Regulatory History

In April 2005, SPU collected an inline storm drain solids sample from manhole MH20, which is located on 7th Avenue S, just south of the 640 S Riverside Drive property. Concentrations of PCBs, zinc, BEHP, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n). The inline storm drain solids sample is representative of stormwater entering the planned PS/WQF from upstream.

EPA sent a CERCLA Section 104(e) Request for Information Letter to Mark Hansen (historical owner of the parcel 5710 and operator of Pro Fab, Inc.) in July 2008 (EPA 2008d). A response to the request was not available for review.

Prior to SPU's acquisition, Phase I and II assessments conducted at the 640 S Riverside Drive property found limited soil and groundwater contamination. COCs in soil include lead, carcinogenic PAH (cPAH), tetrachloroethene (PCE), and trichloroethene (TCE). COCs in groundwater include PCE, TCE, cis-1,2, dichloroethene, and vinyl chloride (SPU 2009s). SPU entered the Voluntary Cleanup Program (VCP) with Ecology on July 8, 2009 in preparation for construction of the South Park PS/WQF (SPU 2009t).

SPU submitted a cleanup action plan to Ecology on October 9, 2009. Ecology determined that, upon completion of the proposed cleanup, further remedial action would likely be necessary to clean up contamination at the property (Ecology 2009g).

4.2.4 Environmental Investigations and Cleanups

Several environmental investigations have been conducted at the 640 S Riverside Drive property. Sample locations are shown on Figure 8 and a summary of chemicals that exceeded soil and groundwater screening levels are provided in Tables 8 and 9. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-3 and D-4.

Phase I Environmental Site Assessment (2007)

In 2007, a Phase I ESA was performed for parcel 5700 prior to the city's acquisition of the property for the proposed South Park PS/WQF. Potential COCs associated with the operations of previous property occupants and surrounding businesses included petroleum products, solvents, acidic and caustic materials, and metals. COCs in river sediments adjacent to surrounding properties include PCBs, PAHs, and heavy metals. Petroleum releases from tugboats and barges moored offshore over the years were determined to have the potential to impact the adjacent shoreline. Building age and visual observations indicated that asbestos, lead-based paint, and fluorescent light ballasts containing PCBs may have been used at the historical facility. These items were removed when the building was demolished (Herrera 2007).

A records search indicated that an oil heating system was present on parcel 5710. Although no visual evidence of an UST was found on the parcel, it is possible that an UST was used to store heating oil for the historical single-family residence (Herrera 2007).

Limited Phase II Site Investigation (2008)

Three soil borings were advanced near the property using a push probe drill (Figure 8). The probe borings were advanced within the city right-of-way along S Riverside Drive to determine if groundwater had been impacted by potential off site and upgradient contaminant sources. Soil samples were not submitted for chemical analysis because no evidence of contamination was observed from field screening. Groundwater samples were collected from each boring and analyzed for TPH, VOCs, and metals (Herrera 2008).

Diesel-range hydrocarbons, VOCs, and PAH constituents were detected in groundwater at concentrations below their respective cleanup levels, with the exception of vinyl chloride. Vinyl chloride was detected in one sample at a concentration 200 times the MTCA Method A cleanup level. The detection of these chemicals in groundwater indicated that petroleum and solvent releases occurred; however, the sources were unknown (Herrera 2008).

Groundwater Investigation 7th Avenue S and S Riverside Drive (2008)

In January 2008, 14 direct push borings were advanced near the 640 S Riverside Drive property. Groundwater samples were collected from the borings and one existing City monitoring well. The groundwater samples were analyzed for VOCs. The groundwater sample from the existing monitoring well was also analyzed for dissolved arsenic. Four soil samples were collected and analyzed for VOCs, PAHs, petroleum hydrocarbons, and metals (PGG 2008).

Vinyl chloride was not detected in any soil or groundwater samples. Concentrations of PCE and 1,1,2,2-tetrachloroethane exceeding the MTCA Method A and MTCA Method B cleanup levels, respectively, were found in groundwater at only one location (B-3) near the previous detection of vinyl chloride. Low concentrations measured in nearby samples indicate this contamination was very localized (PGG 2008).

Dissolved arsenic and lead concentrations in groundwater exceeded the MTCA Method A cleanup levels at Stations ALN-493 and B-2, respectively. No other exceedances were reported. Lead, total cPAHs and naphthalene exceeded MTCA Method A cleanup levels in one soil sample (PGG 2008). Concentrations of arsenic and PAHs exceeded the draft soil-to-sediment screening level at Stations B-2A and B-8S, respectively. Lead concentrations in groundwater exceeded the draft groundwater-to-sediment screening level at Station B-2.

Soil and Groundwater Characterization (2009)

In April 2009, 23 soil samples and 7 groundwater samples were collected to characterize soil and groundwater prior to the construction of the South Park PS/WQF. Soil and groundwater samples were collected in the proposed footprints of the water quality facility, the pump station, the yard piping, and other areas of the yard (Figure 8). Soil samples were analyzed for VOCs, PAHs, TPH, total arsenic, and total lead. Soil samples with a total lead concentration of 100 micrograms per kilogram (µg/kg) or greater were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) lead. Groundwater grab samples were analyzed for VOCs, PAHs, TPH, and dissolved arsenic and lead (PGG 2009a).

PAHs, lead, diesel- and heavy oil-range hydrocarbons, PCE, TCE concentrations in soil exceeded MTCA Method A cleanup levels PCE and associated breakdown products in groundwater appeared to be localized around two soil source areas. Dissolved lead was detected in one sample, but was below MTCA Method A cleanup levels. Dissolved arsenic concentrations were slightly above the background level of 8.0 µg/L. PAHs and TPH were not detected in groundwater. Concentrations of PAHs and lead in soil exceeded the draft soil-to-sediment screening levels (PGG 2009a).

Pre-Excavation Soil Confirmation Sampling (2009 to 2010)

In December 2009 and February 2010, 53 soil samples were collected to guide the design of an Interim Remedial Action. All soil samples were analyzed for VOCs. The samples collected in December 2009 were also analyzed for PAHs and total lead. Two groundwater samples were collected in February 2010; these samples were analyzed for VOCs and dissolved lead and arsenic (PGG 2010). In soil, concentrations of lead, PCE, TCE, and PAHs exceeded MTCA cleanup levels. PAHs and lead concentrations also exceeded the draft soil-to-sediment screening levels. Concentrations of PCE, TCE, and vinyl chloride in groundwater exceeded MTCA cleanup levels (PGG 2010).

Cleanup Action Plan (2009)

SPU submitted a cleanup action plan to Ecology in October 2009. The preferred remedial action included excavation and removal of approximately 1,075 cubic yards of contaminated soils from the two PCE/TCE soil source areas, and the cPAH and lead areas. A total of 652 cubic yards would be excavated as part of the planned facility construction. An additional 423 cubic yards of contaminated soil would be excavated for cleanup (PGG 2009b). Cleanup of contaminated soil present at the property will occur in spring 2012 (Schmoyer 2012).

Interim Action Plan (2010)

SPU submitted an Interim Action Plan to Ecology in September 2010. The preferred interim remedial action for soil and groundwater included the excavation and removal of contaminated soils from PCE/TCE, cPAH, lead, diesel, and oil areas on the northeastern side of the shop building to the southeastern portion of the property. Contaminated soil would be removed during demolition and PS/WQF construction. Volatile organic compound (VOC) hotspots would be removed during deep excavation from 6 to 12 feet below ground surface (bgs). Areas of shallow soil contaminated with cPAH and lead would be excavated during surface grading work to a depth of 3 feet bgs (PGG 2010).

In a January 2011 opinion letter, Ecology determined that upon completion of the proposed cleanup, further remedial action would likely be necessary to clean up contamination at the property. Ecology determined that the cleanup levels and points of compliance established by SPU for the property did not meet substantive requirements of MTCA (Ecology 2011b). In March 2011, Ecology issued an updated opinion letter that described cleanup standards in relation to the LDW Superfund Site. In addition to soil and groundwater cleanup levels, Ecology directed SPU to incorporate stormwater cleanup levels as well as sediment cleanup levels (Ecology 2011c). Ecology determined that cleanup standards will not be set for the 640 S Riverside Drive property until final cleanup action is proposed and until cleanup levels specific to the LDW site have been established (Ecology 2011e). Cleanup of contaminated soil present at the property will occur in spring 2012 (Schmoyer 2012).

4.2.5 Potential for Sediment Recontamination

Concentrations of mercury, PCBs, PAHs, phthalates and other SVOCs in LDW sediments adjacent to the 640 S Riverside Drive property have exceeded the SQS and/or CSL (Figure 6b, Table 3). The potential for sediment recontamination associated with this property is summarized below by transport pathway.

Stormwater and Surface Runoff

SPU plans to construct the South Park PS/WQF at 640 S Riverside Drive. The facility will be paved and stormwater will be treated prior to being discharged to the LDW. Surface runoff will be collected and processed at the PS/WQF. Once operational, the potential for sediment recontamination via stormwater discharge at the South Park PS/WQF is considered low.

Spills

During construction of the South Park PS/WQF, there may be potential for spills of construction materials to the LDW. It is assumed that construction materials will not contain sediment COCs. While spills of this nature may be harmful to the river environment, the potential for sediment recontamination associated with these spills is very low. In addition, appropriate BMPs to prevent impacts to surface water will be implemented during the construction of the facility. Per City stormwater code, a Construction Stormwater Control Plan will be developed and implemented for the project (Schmoyer 2012).

Following the completion of the South Park PS/WQF, it is assumed that all activities will be performed outdoors. Overwater activities will not be performed. Maintenance activities associated with removing sediment that will accumulate in the treatment facility will follow an operations and maintenance plan to contain all sediment (Schmoyer 2012). After the completion of the PS/WQF, the spills pathway will be incomplete.

Soil and Groundwater

Soil and groundwater contamination has been identified at the property. In soil, concentrations of arsenic, lead, PAHs, petroleum hydrocarbons, and VOCs have exceeded MTCA cleanup levels. In groundwater, concentrations of arsenic, lead, and VOCs have exceeded MTCA cleanup levels. Of these contaminants, only PAHs have been identified as sediment COCs for the Riverside Drive source control area. PAH concentrations in soil have also exceeded the draft soil-to-sediment screening level. Although PAHs have been detected in groundwater, the concentrations are below MTCA cleanup levels and the draft groundwater-to-sediment screening levels. Therefore the potential for sediment recontamination via the groundwater discharge pathway is low.

SPU will excavate PCE/TCE-contaminated soil as part of the 2012 property cleanup. Groundwater monitoring will be conducted to confirm that soil removal action is effective in controlling the groundwater pathway (Schmoyer 2012). The potential for sediment recontamination via groundwater will be reduced following the remediation of the property.

Bank Erosion/Leaching

Soil and groundwater contamination has been identified at the property; however, PAHs are the only sediment COC that has been detected at concentrations exceeding MTCA cleanup levels and the draft soil-to-sediment screening levels. Due to the proximity of the property in relation to the LDW, contaminants in bank soils have the potential to enter the LDW through erosion or leaching. Currently, the potential for sediment recontamination via the bank erosion/leaching pathway is high. During remediation, lead and PAH contaminated soil located adjacent to the river will be removed to the extent practical and the material left in place will be covered with clean soil or pavement. The potential for sediment recontamination via bank erosion/leaching will be reduced following remediation of the property.

4.2.6 Data Gaps

SPU is working closely with Ecology to ensure that appropriate cleanup levels are established with regard to soil and groundwater contamination at the property. Ecology has directed SPU to develop property-specific cleanup levels that will be protective of LDW sediments. Final cleanup levels will not be established for the 640 S Riverside Drive property until cleanup levels specific to the LDW have been established. For these reasons, no data gaps have been identified with regard to the current development of the property. However, the following data gap has been identified with regard to the history of the property:

- A review of the response from Mark Hansen to the CERCLA Section 104(e) Request for Information letter is needed to identify potential sources of sediment recontamination that may be associated with historical operations at the property.

4.3 Former Hurlen Construction Company

Facility Summary: Former Hurlen Construction Company	
Tax Parcel No.	7327905350, 7327905725
Address	5350: 700 S Riverside Drive 5725: 620 S Riverside Drive
Property Owner	5350: Hurlen Logistics LLC 5725: Six Twenty South Logistics
Parcel Size	5350: 1.02 acres (44,233 sq ft) 5725: 0.24 acre (10,550 sq ft)
Facility/Site ID	42127616
Alternate Name(s)	American Civil Constructors
SIC Code(s)	1629: Heavy Construction
EPA ID No.	WAD988518239
NPDES Permit No.	None
UST/LUST ID No.	11414

The former Hurlen Construction Company (Hurlen Construction) property occupies parcels 5725 and 5350 and is located at approximately RM 2.7 W (Figure 5a). The 640 S Riverside Drive property is located between the parcels that compose the former Hurlen Construction property. Parcel 5350 is bordered on the northwest by 640 S Riverside Drive, on the south by S Riverside Drive, and by the LDW on the east (Figure 4b). Parcel 5725 is bordered on the north by a residential property, on the south by 640 S Riverside Drive, S Riverside Drive on the west, and the LDW on the east. The facility consists of three buildings:

- a 1,560 sq ft office building constructed in 1947;
- a 1,200 sq ft industrial light manufacturing building constructed in 1984; and
- a 600 sq ft office building constructed in 1980.

Hurlen Construction was acquired by Colorado-based American Civil Constructors in May 2002 (Jones 2011). According to King County tax assessor records, Hurlen Logistics LLC retained ownership of the property.

A 2010 SPU inspection determined stormwater at the facility is conveyed to the 7th Avenue S SD system. Direct discharge to the LDW occurs at the dock area (SPU 2009b).

4.3.1 Current Operations

American Civil Constructors was recently sold and relocated to Tacoma. The company has used the property for storage since March 2010. Catch basins and private outfalls are not present on the property (SPU 2009b).

4.3.2 Historical Operations

Based on review of aerial photographs, the parcel appeared to be residential from the earliest available photograph in 1936 until at least 1960. A wharf was constructed adjacent to the property during the 1960s. Additional information regarding historical development of the area is presented in Appendix B.

Hurlen Construction operated at 700 S Riverside Drive from the early 1970s until May 2002 (Herrera 2007). Hurlen Construction used the property and continues to use as a boneyard for storage of surplus marine construction material and equipment and for repair of floating equipment (City of Seattle 1980). During the 1980s and 1990s, Hurlen Construction developed its waterway and shoreline property. In the mid 1980s, Hurlen Construction built pier and wharf extensions, a storage grid, and a marine lift over the LDW. In addition, the company installed riprap and conducted maintenance dredging offshore along the wharfs (USACE 1983).

Hurlen Construction was acquired by American Civil Constructors in May 2002. American Civil Constructors continued marine construction operations. American Civil Constructors vacated the property in March 2010 and moved operations to Tacoma (SPU 2009b).

At the time of a January 2010 SPU source control inspection, acids, antifreeze, caustic bases, paints/coatings, oils, solvents, and grease were stored at the facility. The storage areas were not protected from stormwater run-on/run-off. A visible sheen was present and there was evidence of leaking from the storage areas. A large forklift was leaking oil. American Civil Constructors contracted a consultant to manage hazardous waste disposal and environmental compliance. Compliance was achieved when American Civil Constructors left the property in March 2010 (SPU 2009b).

Spills

In 1997, approximately 10 gallons of fuel oil spilled into the LDW from a tugboat owned by Hurlen Construction that was moored along the wharf (Herrera 2007).

4.3.3 Regulatory History

Hurlen Construction applied for shoreline management permits in 1980, 1983, 1987, and 1990. Shoreline management included bulkhead and wharf construction, dredging, and related property improvements. Additional information regarding sediment sampling prior to dredging activities is presented in Section 4.2.4.

Hurlen Construction decommissioned and removed the tanks in March 1993 (A-1 Pump 1993). Sample results indicated that some contamination was present at the north end and bottom of the excavation.

EPA sent a CERCLA Section 104(e) Request for Information Letter to Hurlen Construction and American Civil Constructors in August 2007 (EPA 2007a, b). Additionally, EPA sent a follow-up letter to American Civil Constructors in February 2008 after no response to the August letter was received (EPA 2008a). EPA sent requests for supplemental information to American Civil Constructors in November 2009 and to Hurlen Construction in September 2010 (EPA 2009b), EPA 2010b). All of these letters included requests for information for parcel 7327905760, one of the three residential properties that are located between Pacific Pile and Marine and the former Hurlen Construction property, which is currently owned by Mark Hansen, who is the historical owner of the 640 S Riverside Drive property. Responses to the requests were not available for review.

Hurlen Construction removed a part of an existing ecology block wall in 2008, to allow removal of derelict barges from the LDW. In order to remove the barges, Hurlen Construction built a ramp, which was constructed of fill materials. The fill materials sloughed off into the LDW. During a visit by the United States Army Corps of Engineers (USACE) in April 2008, the ramp was stable and no erosion was observed (Pell 2008). The composition of the fill materials was not described in the available information. In photographs of the ramp (Pell 2008), the fill materials appear to consist primarily of soil mixed with rocks, pieces of wood and vegetation, and possibly pieces of metal and rebar. Contaminants in the fill material, if any, may be transported to LDW sediments.

In January 2010, Ecology and SPU conducted a joint inspection at American Civil Constructors. American Civil Constructors notified inspectors that the company had been recently sold and was relocating to Tacoma (SPU 2009b). SPU identified the following corrective actions for American Civil Constructors, which were to be implemented while they remained at the 700 S Riverside Drive facility (SPU 2010d):

- Develop a plan and implement a procedure to prevent spills and other accidental releases of materials that may contaminate drainage water.
- Train employees on the spill plan and the location and use of spill response equipment.
- Implement housekeeping measures and BMPs to achieve source control.

Compliance was achieved when American Civil Constructors left the property in March 2010 (SPU 2009b).

4.3.4 Environmental Investigations and Cleanups

Several environmental investigations have been performed at the property. Sample locations are shown on Figures 9 and 10 and a summary of chemicals that exceeded soil screening levels is provided in Table 10. Summaries of all chemicals in sediment and soil detected at the facility are included in Tables D-1 and D-2.

Shoreline Management (1980–1990)

In 1980, Hurlen Construction applied for a Seattle Shoreline Substantial Development Permit for dredging, bulkhead, wharf, and related property improvements. Hurlen Construction collected four composite subsurface sediment samples at four coring locations with a maximum depth of 2 feet. Samples were analyzed for sulfide and PCBs. The laboratory conducted an elutriate test for zinc, mercury, lead, and copper to estimate the concentrations of these metals in the water during dredging activities (Laucks 1980).

In December 1983, Hurlen Construction submitted an application to construct pier and wharf extensions, a storage grid, and marine lift. The application included placement of riprap and dredging of 2,000 cubic yards the first year, along with maintenance dredging of 1,500 cubic yards each year thereafter for 9 years (USACE 1983). Hurlen Construction conducted sediment core sampling at two locations to characterize sediment prior to dredging on January 25, 1985. Sample cores were advanced to depths of between 2 and 4 feet. The following table shows chemicals detected at concentrations that exceeded the LAET (Laucks 1984):

Chemical	LAET	Site 1 1/25/1984	Site 2 1/25/1984
PAHs			
Benzo(a)pyrene	1.6	TR	2.2
Benzo(g,h,i)perylene	0.67	<0.1	1.3
Fluoranthene	1.7	0.8	3.9
Fluorene	0.54	<0.1	0.75
Phenanthrene	1.5	TR	4.2
Pyrene	2.6	0.54	4.1
PCBs			
PCBs (total)	0.13	0.02	0.36

All concentrations are in mg/kg DW
TR- trace detection
<- Analyte not detected at or above the laboratory reporting limit; number represents the laboratory reporting limit
Concentration exceeds the LAET

The sediments represented by sample Site 2 were above background levels of the Four-Mile Rock disposal site and were unsuitable for in-water disposal. Sediments represented by sample Site 1 were below background levels at the Four-Mile Rock disposal site. Additional sampling was required to delineate the extent of contamination. The dredging plans were removed from the application when the sediments failed to meet in-water disposal criteria and an alternate disposal area could not be found (City of Seattle 1984).

In 1986, Hurlen Construction conducted sediment sampling prior to obtaining permits for dredging. Individual cores from two sample locations were composited to form one sample for analysis from each location. The following table shows chemicals detected at concentrations that exceeded the LAET (Laucks 1986):

Chemical	LAET	Site 1 9/26/1986	Site 2 9/26/1986
PAHs			
Dibenzofuran	0.54	<0.03	1
Fluoranthene	1.7	0.12	3.6
Phenanthrene	1.5	0.04	1.7

All concentrations are in mg/kg DW
<- Analyte not detected at or above the laboratory reporting limit; number represents the laboratory reporting limit
Concentration exceeds the LAET

Results indicated that the sediment sample collected from the northern area (Site 2 [8]) of the waterway adjacent to Hurlen Construction did not meet criteria for in-water disposal at the Four-Mile Rock disposal area. Ecology required that the dredged material be disposed of at an upland disposal area. The sediment sample collected from the southern area (Site 1) of the waterway met criteria for disposal at the Four-Mile Rock site (Ecology 1986d).

Hurlen Construction applied to conduct additional maintenance dredging of up to 4,000 cubic yards of material from 1990 to 1995. Sediments from four sampling locations were composited for one laboratory analysis (Rep 1). A duplicate analysis was performed on the sample (Rep 2). Proposed dredge material was found to exceed the Puget Sound Dredged Disposal Analysis (PSDDA) criteria for uncontained in-water disposal and Ecology required dredged material to be disposed of at a suitable upland property (Ecology 1990b). The following table shows chemicals detected in sediment at concentrations that exceeded the LAET (Ecology 1990b):

Chemical	LAET	Rep 1 08/31/1990	Rep 2 8/31/1990
PAHs			
2-Methylnaphthalene	0.67	0.24	2.1
Acenaphthene	0.5	1.1	1.7
Anthracene	0.96	1.1	6.6
Benzo(a)anthracene	1.3	1.4	5.9
Benzo(a)pyrene	1.6	0.86	2.2
Benzofluoranthenes	3.2	2.3	4.2
Chrysene	1.4	1.2	4.9
Dibenzofuran	0.54	0.67	11
Fluoranthene	1.7	3.9	23
Fluorene	0.54	0.94	16
HPAH (total)	12	17	61
LPAH (total)	5.2	8.2	108
Naphthalene	2.1	0.99	2.12
Phenanthrene	1.5	4	55
Pyrene	2.6	6.8	20

All concentrations are in mg/kg DW
Total HPAH – total high molecular weight PAH
Total LPAH – total low molecular weight PAH
Concentration exceeds the LAET

Amphipod and microtox bioassays were run concurrently with chemical characterizations. The test sediment passed both bioassays with no significant difference exhibited between the test and reference sediments (Ecology 1990b).

UST Closure (1993)

A 1,000-gallon diesel UST and a 675-gallon gasoline UST were decommissioned and removed in March 1993. The USTs and pump island were located at the north end of the maintenance

[8] Site identification names were duplicated but locations were not consistent over different sampling periods.

shop and were used for fueling equipment. The USTs were installed in the late 1960s. Gasoline-range hydrocarbon concentrations were detected above MTCA Method A cleanup levels and xylenes were detected below MTCA Method A cleanup levels in soil samples collected from the sidewalls and bottom of the excavation. Groundwater was not encountered in the excavation. Approximately 60 cubic yards of soil were excavated and stockpiled for treatment. According to Ecology records, the excavation was backfilled with clean soil (A1 Pump Service 1993).

4.3.5 Potential for Sediment Recontamination

During the 1980s and early 1990s, PSDDA evaluation of sediment cores collected prior to dredging indicated that concentrations of PAHs exceeded limits for open water disposal of dredged spoils. Sediment collected during the LDW RI indicated that concentrations of PCBs, PAHs, phthalates, and other SVOCs in the LDW sediment adjacent to the former Hurlen Construction property have exceeded the SQS and/or CSL. A surface sediment sample collected during the LDW Outfall Sampling Study in April 2011 exceeded SQS for mercury and other SVOCs (Figure 6b, Tables 3 and 4). The potential for sediment recontamination associated with this property is summarized below by transport pathway.

Stormwater and Surface Runoff

Based on aerial photographs, most of the property appears paved or occupied by buildings. There are no catch basins or private outfalls present on the property. Stormwater and surface runoff are conveyed to the 7th Avenue S SD system via sheet flow (SPU 2009b). Surface runoff from the dock area is conveyed to the LDW via direct discharge. Contaminants in stormwater and surface runoff, if any, have the potential to be released to the LDW via stormwater discharge.

Spills

Historical operations at the property have included loading and unloading of construction equipment and waste from ships and barges. Various tugboats and barges were previously moored at the facility. The property is currently vacant; therefore, the spills pathway is incomplete. If similar marine operations occur in the future, spills to the LDW have the potential for sediment recontamination.

Soil and Groundwater

Gasoline-range hydrocarbons and xylenes were detected at concentrations below MTCA Method A cleanup levels in soil samples collected during the excavation of USTs in 1992. In addition, petroleum hydrocarbons are not LDW sediment COCs. While the presence of petroleum hydrocarbons in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

Bank Erosion/Leaching

The shoreline at the property is a mix of exposed soil, riprap, piers, wharfs, and bulkhead. Ecology has identified a barge removal ramp, constructed of fill materials, that extends from the shoreline to the LDW as a potential source of contaminants to the LDW (Thomas 2008). Based on photographs of the fill material, pieces of metal may be present in the fill. Contaminants in the exposed bank soils and fill, if any, could be released directly to sediments via erosion or leaching and are a potential source of sediment recontamination.

4.3.6 Data Gaps

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

- A review of the responses from Hurlen Construction and American Civil Constructors to the CERCLA Section 104(e) Request for Information letter is needed to identify potential sources of sediment recontamination that may be associated with historical operations at the property.
- Additional information is needed to determine if fill used for the barge removal ramp is a potential source of contaminants to adjacent sediments.

4.4 Lukas Machine Inc.

Facility Summary: Lukas Machine Inc.	
Tax Parcel No.	7327904100, 7327904135, 7327904190
Address	4100: None 4135: 707 S Riverside Drive 4190: 712 S Portland Street
Property Owner	4100, 4190: Lukas Billie Macksene 4135: Lukas Machine Co
Parcel Size	4100: 0.62 acre (27,014 sq ft) 4135: 0.49 acre (21,203 sq ft) 4190: 0.39 acre (16,981 sq ft)
Facility/Site ID	39232961: Lukas Machine Inc. 41888934: Hansen Machine Corp.
Alternate Name(s)	Hansen Machine Corp.
SIC Code(s)	33271: Machine Shops
EPA ID No.	None
NPDES Permit No.	WAR011064
UST/LUST ID No.	None

Lukas Machine Inc. (Lukas Machine) operates on parcels 4100, 4135, and 4190 (Figure 5a). The facility is bordered by S Portland Street and Cain, Bolt & Gasket to the south, 7th Avenue S to the west, S Holden Street to the north and the LDW to the east. According to King County tax assessor records the Lukas Machine facility consists of three buildings:

- a 16,360 sq ft office building/storage warehouse built in 1976 (parcel 4135),
- a 12,400 sq ft industrial light manufacturing/open office building constructed in 1958 (parcel 4190), and
- a 2,400 sq ft industrial light manufacturing building constructed in 1980 (parcel 4190).

4.4.1 Current Operations

The Lukas Machine facility consists of buildings and paved areas with a small, vegetated area located between the manufacturing buildings. Lukas Machine performs milling, tuning, assembly, repairs, fabrications, and tooling operations and provides short-run and full production runs of prototype and research and development parts. Lukas Machine serves the aerospace, laser, nuclear, marine, and water cutting industries as well as governmental agencies. Lukas Machine also operates a shipping and receiving department (Lukas Machine 2011b). The eastern portion of the property, which is adjacent to the LDW, is used as a parking area for semi-trucks. The parking area is not paved. A King County Municipality of Metropolitan Seattle (METRO) pump station is located to the east of the parking area. A facility map is provided in Figure 11.

Materials and Waste Handling

Lukas Machine uses titanium, iron, steel, copper, brass, bronze, aluminum, nickel, and plastic in the manufacturing process. Other materials used in manufacturing include castings, forgings, bar extrusions, plate, nylon, and exotic aerospace alloys (Lukas Machine 2011b).

At the time of a joint inspection by SPU and Ecology in January 2008, coolants and burn oils used in the manufacturing process were recycled at the facility. A hazardous waste shed on the northwestern portion of the property houses 55-gallon oil drums and 5-gallon solvent containers. Lukas Machine recycles metal products with Independent Metals (SPU 2008b).

Stormwater Discharges

Lukas Machine has operated under an Industrial Stormwater General Permit (ISGP) since October 2008. A sump pump, located in the southeastern corner of the property, pumps stormwater north to S Riverside Drive. There is one catch basin located on the northwestern corner of the property (Figure 11). The facility does not have a stormwater detention or treatment system. Stormwater from the facility discharges to the 7th Avenue S SD system (SPU 2008b).

4.4.2 Historical Operations

Aerial photographs reviewed for the property indicate that a number of buildings have occupied the parcels since 1936. The entrance to the former 8th Avenue electric railway bridge bordered the facility on the eastern side. According to its website, Lukas Machine was established at the location in 1968 (Lukas Machine 2011b).

Hansen Machine Corp. operated at parcel 4190 from at least 1982 until 1996 using 712 S Portland Street as its operating address. According to Ecology’s Facility/Site Database, the facility was regulated as a hazardous waste generator from December 14, 1982 until December 31, 1996. No additional information regarding Hansen Machine Corp.’s historical operations at the facility was available for review.

4.4.3 Regulatory History

In May 2002, an anonymous caller reported that Lukas Machine had previously dumped methyl ethyl ketone (MEK), used coolant, and oils between buildings at the facility (Ecology 2005a). Ecology conducted an initial investigation on May 25, 2005. During the inspection, the plant manager provided records of proper disposal of hazardous materials used at the facility. The inspector investigated the area allegedly used for dumping of hazardous materials. The area was completely filled with plant growth and there were no visible signs of contamination. No further action was taken (Ecology 2005b).

Ecology and SPU conducted a joint inspection of Lukas Machine on January 30, 2008. The following items were identified as corrective actions (SPU 2008f):

- Post a written spill plan at appropriate locations at the facility.
- Designate and properly dispose of waste drums with unknown contents.
- Properly store scrap metal.
- Implement proper housekeeping to reduce the potential for scrap metal shavings and petroleum residue to enter the city's stormwater system.
- Install a permanent connection to the combined sewer system or discontinue power washing and steam cleaning of vehicles and equipment.

SPU and Ecology conducted follow-up inspections in March and July 2008 (SPU 2008m. y). Lukas Machine made necessary changes to industrial waste discharges, stormwater pollutant source control BMPs, and general hazardous product storage and disposal BMPs. The joint inspections determined Lukas Machine was in compliance (SPU 2008z).

Lukas Machine completed an ISGP annual report on April 4, 2011. The facility exceeded benchmarks for copper (3rd and 4th quarter) and zinc (3rd quarter) during 2010. In order to address these exceedances, Lukas Machine increased sweeping frequency and repaired a berm to prevent stormwater runoff originating at other properties from entering the facility (Lukas Machine 2011a).

EPA sent CERCLA Section 104(e) Request for Information Letters to Lukas Machine, Inc. and Billie Macksene Lukas in October 2011 (EPA 2011b, c). Responses to the requests were not available for review at the time this report was prepared.

4.4.4 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups were identified for Lukas Machine.

4.4.5 Potential for Sediment Recontamination

Concentrations of PCBs and 1,4-dichlorobenzene in LDW sediment adjacent to the Lukas Machine property have exceeded the SQS (Figure 6b, Table 3). The potential for sediment recontamination associated with this property is summarized below by transport pathway.

Stormwater and Surface Runoff

Stormwater and surface runoff from Lukas Machine is pumped to the 7th Avenue S SD system. The January 2008 source control inspection identified corrective actions that included implementing housekeeping measures to prevent scrap metal shavings, petroleum residue, and wash water from entering the storm drain system (SPU 2008f). Ecology and SPU determined Lukas Machine was in compliance in July 2008. Lukas Machine exceeded benchmarks for zinc in the 3rd quarter and copper in the 3rd and 4th quarter monitoring of 2010. The facility implemented BMPs and structural controls to address the exceedances. Potential for sediment recontamination via the stormwater pathway is low provided that the improvements and source control BMPs are maintained.

Spills

Lukas Machine has implemented appropriate spill prevention and response procedures as requested by Ecology and SPU. The area of the property that is immediately adjacent to the LDW is used for parking and it appears that no industrial activities are performed in this area. The parking area is not paved; therefore, spills in this area may infiltrate the ground surface. No overwater operations occur at the facility. Therefore, the potential for sediment recontamination via the spills pathway is low.

Soil and Groundwater

Soil and groundwater contamination has not been identified at the property. However, given the historical machine shop operations at this property, there is a potential for soil and groundwater contamination. The potential for sediment recontamination via groundwater discharge is unknown.

Bank Erosion/Leaching

The bank adjacent to the facility consists of exposed soil, vegetation, and riprap. Contaminants in bank soils (if any) could be released directly to sediments via erosion. The potential for sediment recontamination via bank erosion/leaching is unknown.

4.4.6 Data Gaps

Lukas Machine appears to maintain appropriate source control BMPs and has complied with corrective actions identified by Ecology and SPU.

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

- Additional information regarding the historical operations performed by Hansen Machine Corp. is needed to determine if operations may have resulted in releases of contaminants to soil and/or groundwater.
- A review of the responses from Lukas Machine to the CERCLA Section 104(e) Request for Information letters is needed to identify potential sources of sediment recontamination that may be associated with current and historical operations at the property.

4.5 Independent Metals Plant 2

Facility Summary: Independent Metals Plant 2	
Tax Parcel No.	7327902520, 7327903645
Address	2520: 7814 8th Avenue S (Silver Bay Logging, Former Workboats Northwest) 3645: 7760 8th Avenue S (Silver Bay Logging Inc.) Independent Metals Plant 2 operating address: 816 S Kenyon Street
Property Owner	Silver Bay Logging

Facility Summary: Independent Metals Plant 2	
Parcel Size	2520: 1.91 acres (83,180 sq ft) 3645: 0.82 acre (35,699 sq ft)
Facility/Site ID	16139: Independent Metals Plant 2 861945: Silver Bay Logging 95749157: Former Workboats Northwest
Alternate Name(s)	Silver Bay Logging, Former Workboats Northwest
SIC Code(s)	3728: Aircraft Equipment 5093: Scrap and Waste Materials
EPA ID No.	None
NPDES Permit No.	WAR009725
UST/LUST ID No.	None

Independent Metals Plant 2 operates on two parcels that are adjacent to the LDW. The facility is bordered by S Kenyon Street to the south, 8th Avenue S to the west, and the LDW to the east (Figure 5a).

According to King County tax assessor records, there are three buildings on parcel 2520:

- a 3,166 sq ft office built in 1950,
- a 2.490 sq ft paint storage warehouse built in 1970, and
- a 18,690 sq ft shop building/warehouse built in 1974.

Parcel 3645 is a vacant, industrial lot. Independent Metals also operates at 747 S Monroe Street, referred to in this report as Independent Metals Plant 1. Independent Metals Plant 1 is upland of the LDW and is discussed in Section 6. This section of the report will refer to Independent Metals Plant 2 as Independent Metals.

4.5.1 Current Operations

Independent Metals operates a scrap metal sorting and handling facility at 816 S Kenyon Street. Trucks carrying scrap metal enter through an access gate on 8th Avenue S and S Kenyon Street. The facility also accepts raw materials by barge. Scrap is unloaded, sorted, and then cut or sheared to a manageable size. Most of the heavy scrap metal processing at the facility takes place outdoors (Ecology 2008c). Once the scrap is broken down, it is transferred inside the warehouse to a scrap processor. Finished scrap metal is loaded onto trucks and exits the facility via the street access points (Nisqually 2010b).

The property includes a paved process yard, dock for barge loading/unloading, parking areas, and three buildings, as well as an area occupied by heavy equipment temporarily stored by Silver Bay Logging, as shown in Figure 12. The buildings consist of an unused office building, a large prefabricated steel warehouse, and a smaller prefabricated steel storage building. The office, palletized scrap storage, scrap processing machine, and maintenance shop are located in the large warehouse. There are no floor drains inside the warehouse (Nisqually 2010b). A facility map is provided in Figure 12.

Information regarding Independent Metals' expansion to parcel 3645 was not available for review.

Materials and Waste Handling

According to its website, Independent Metals recycles copper/insulated copper wire, brass, auto radiators, aluminum/aluminum cans, stainless steel, electric motors, and steel/iron. Independent Metals also accepts used electrical gear, transformers, balers, and trash compactors (Independent Metals 2011).

Paint, chemical, and petroleum products are sometimes mixed with the recyclable materials. The liquid chemical and petroleum waste may infiltrate the stormwater system. Ecology block walls are used as bins to hold scrap metal. During the course of placing and removing material from these bins, scrap metal periodically falls onto the riverbank (Ecology 2009h).

Stormwater Discharges

According to a Stormwater Pollution Prevention Plan (SWPPP) prepared in February 2010, the southern portion of the property conveys stormwater to the City of Seattle combined sewer via sheet flow. Catch basins on 8th Avenue S are connected to the combined sewer system (Ecology 2011y). A single catch basin drains the interior yard and eastern roof drains. Stormwater from the Silver Bay Logging storage area also drains to this catch basin. The catch basin is routed to an oil/water separator (installed in 2008), which is connected to a stormwater treatment system (installed in 2009). After stormwater is treated, it is discharged via Outfall 2010 to the LDW (Nisqually 2010b).

Discharges to the LDW are covered under the NPDES permit number WAR009725. Independent Metals was required to apply for coverage under the NPDES program because it is classified as a scrap metal yard, its industrial activity is exposed to stormwater, and it discharges to surface waters. Independent Metals has operated under an ISGP since August 2007.

SPU’s outfall survey (Herrera 2004) identified three outfalls on the Independent Metals property (Outfalls 2109, 2110, and 2111). Independent Metals is not permitted to discharge via Outfall 2109 or 2111. Further investigation is needed to determine if Outfalls 2109 and 2111 are operational and the drainage area associated with these outfalls.

4.5.2 Historical Operations

Workboats Northwest

Workboats Northwest operated on parcel 2520 from 1976 to 1995 under the address 7814 8th Avenue S. Workboats Northwest produced a variety of industrial boats, including fishing boats, police and fire boats, oil-spill cleanup boats, and Coast Guard tenders (Seattle PI 2008). Fiberglass and paint were used during the manufacturing process. Workboats Northwest stopped operating at the facility after filing for bankruptcy in 1995. The property and manufacturing warehouse building were sold to a Canadian holding company. The former owner started Northwind Marine Service Company (Northwind Marine), which manufactured aluminum boats in a rented area of the manufacturing warehouse (Ecology 1995). Northwind Marine moved to a new facility in 1995 and is discussed in Section 5.1 of this report.

Silver Bay Logging

Silver Bay Logging registered with the State of Washington in January 1996. Silver Bay Logging operated at parcels 3645 and 2520 under the addresses 7760 8th Avenue S and 7814 8th Avenue S, respectively. It is assumed that the facility served as a base for Silver Bay Marine, the company's sea operation in Seattle. Processed logs were loaded onto barges in Alaska and offloaded in Seattle before being transferred to a lumber mill (Bridgestone 2011).

Information regarding the end of Silver Bay Logging's operations at parcel 3645 was not available for review.

4.5.3 Regulatory History

In October 1990, Ecology visited Workboats Northwest to assess compliance with hazardous waste regulations. Waste streams generated at the facility included spent acetone, toluene, sandblasting material, fiberglass material, and paint. Ecology informed the facility that hazardous waste must be properly contained, labeled, and shipped off the property (Ecology 1990). Ecology conducted inspections in 1993 and 1995 and encountered similar hazardous waste management issues. After filing for bankruptcy in 1995, Workboats Northwest's owner informed Ecology of his intent to dispose of remaining hazardous waste (Ecology 1995). No further information regarding hazardous waste disposal was available.

Independent Metals was issued coverage under NPDES Permit No. SO3009725 on August 15, 2007. During an Ecology inspection on December 12, 2007, Independent Metals provided a letter from Ecology indicating that sampling was not required by the facility. Ecology inspectors could not determine why the facility would be exempted from monitoring requirements. Ecology conducted a follow-up inspection on February 6, 2008 to determine if the facility had correct permit coverage and were in compliance.

The following corrective actions were identified (Ecology 2008c):

- Revise and update the SWPPP for the facility to meet permit requirements including an updated facility map, monitoring plan, and spill prevention/emergency cleanup plan.
- Immediately begin stormwater sampling as required by the permit.
- Provide a copy of the material safety data sheet and pertinent product information for the E2000 petroleum-eating product being used for breaking down petroleum spilled on the ground.
- Discontinue the use of E2000 in areas that are tributary to surface waters until Ecology completes the product review.

The inspection called into question the structural integrity of the storm drain system that discharges stormwater to the LDW. A consultant for Independent Metals believed that there were obstructions in the line that may have resulted in exfiltration from the pipe to the ground (Ecology 2008c).

EPA sent a CERCLA Section 104(e) Request for Information Letter to Silver Bay Logging in March 2008 (EPA 2008b) and Independent Metals in February 2010 (EPA 2010a). Additionally, EPA sent a follow-up letter to Silver Bay Logging in November 2009 after a response to the

August letter was not received (EPA 2009c). Responses to the requests were not available for review.

On June 3, 2009, SPU collected a sediment sample from the catch basin filter insert (CB206). Concentrations of PCBs, copper, lead, mercury, zinc, PAHs, phthalates, diesel- and heavy oil-range hydrocarbons, 4-methylphenol and benzoic acid exceeded storm drain screening values (Table 6a) (SPU 2010n). Due to the high PCBs and mercury concentrations, Ecology required Independent Metals to include these two parameters in its stormwater discharge monitoring (Ecology 2009h). Independent Metals is also required to monitor TPH, zinc, copper, lead, pH, and turbidity under its NPDES permit.

Independent Metals was issued a modified NPDES permit on October 21, 2009 to include parcel 3645 (former Silver Bay Logging) (Ecology 2009h).

Ecology and EPA conducted a follow-up stormwater compliance inspection on November 4, 2009. The following issues were identified (Ecology 2009h):

- Inspectors noted that an updated SWPPP was needed to include all stormwater drainage pipes and structures for the expanded Silver Bay Logging area. The SWPPP also needed to address leaking equipment on the expanded property.
- Inspectors observed that vehicles leaving the facility periodically tracked out dirt and debris onto 8th Avenue S.
- A green sludge was observed in the process yard. Ecology instructed Independent Metals to carefully screen the materials accepted for recycling in order to prevent the intake of paint, chemical, and petroleum products.
- Outrigger feet from some of the heavy equipment were breaking up the asphalt in the process yard. Contaminated stormwater could infiltrate to groundwater through the holes and be discharged to the LDW.
- Block walls were used as storage bins to contain scrap metal stacks. Given the close proximity to the LDW, there was potential for stormwater to flow from the ecology block bins to the waterway. Ecology also observed that scrap metal periodically fell out of storage bins and onto the riverbank during scrap management operations.

The following corrective actions were identified (Ecology 2009h):

- Revise and update the SWPPP to include a facility map, and an O&M manual for the oil/water separator and sand filter treatment system.
- Revise and update source control and pollution prevention BMPs for expanded areas of the facility.
- Implement measures to prevent track-out of dirt and debris to 8th Avenue S.
- Prevent the discharge of petroleum and/or contaminated stormwater into holes in the pavement.
- Add total mercury and total PCBs to the sampling of stormwater discharges from the treatment system.

Ecology issued a noncompliance warning letter to Independent Metals on December 23, 2009 (Ecology 2009i). In response, Independent Metals made appropriate revisions to their SWPPP. Independent Metals increased sweeping frequency at facility entrances and indicated it would assess other BMPs to decrease the potential for dirt track-out. The SWPPP included plans to implement BMPs to screen incoming recyclable material for leakage or potential leakage of fluids. Independent Metals planned to design the process area to retain all fluids that may be spilled or released so they do not disperse and pollute stormwater or groundwater. The facility operator contracted a paving company to repair holes created by heavy machinery. Independent Metals indicated that the block bins were moved away from the LDW and the scrap piles are monitored regularly to prevent the stacks from falling toward the waterway. Independent Metals contracted a consultant to collect one stormwater sample per quarter for PCBs and mercury (Nisqually 2010a). In March and April 2011, SPU collected a storm drain solids samples from a right-of-way catch basin (RCB229) located near Independent Metals and from onsite catch basin CB206. Concentrations of PCBs, copper, mercury, zinc, PAHs, phthalates, phenol, benzyl alcohol, n-nitrosophenylamine, and diesel- and heavy oil-range hydrocarbons exceeded storm drain screening values (Tables 6a and 6b) (Schmoyer 2011).

Ecology conducted a follow-up stormwater compliance inspection on August 16, 2011. Independent Metals had been analyzing stormwater discharge samples for PCBs and mercury for almost two years, but samples had not been collected or analyzed using methods acceptable to Ecology. The following issues were identified (Ecology 2011y):

- Inspectors noted that an updated SWPPP was needed to include the requirement to implement mandatory source control BMPs.
- Inspectors observed that vehicles leaving the facility tracked out dirt and debris onto 8th Avenue S.
- Pavement was distressed and broken in the main processing area of the facility. Steel plates were used in an attempt to protect the asphalt from the stabilizer feet of heavy equipment. Stormwater from the processing area was dirty and oily.

The stormwater treatment system had a weir that allows high flows to bypass the treatment system. The following corrective actions were identified (Ecology 2011y):

- Revise and update the SWPPP to address the collection of industrial stormwater from dock areas, the prevention of flow into holes in pavement, and the vacuum sweeping of all paved surfaces.
- Include the hydraulic analysis calculations for the stormwater treatment system in the SWPPP.
- Implement measures to prevent track-out of dirt and debris to 8th Avenue S.
- Prevent the discharge of petroleum and/or contaminated stormwater into holes in the pavement.
- Monitor stormwater discharge for total PCBs and total mercury using sampling techniques and analytical methods with detection limits acceptable to Ecology.
- The facility must ensure that all industrial stormwater from the dock area at the former Silver Bay Logging is collected and routed into the storm drainage system. Stormwater flow patterns near the auto fluff (non-metallic vehicle residue from shredding) dumpster must be verified and included in the SWPPP.

Discharge monitoring report (DMR) data indicate Independent Metals exceeded monitoring limits for zinc during the fourth quarter of 2011. Copper, lead, petroleum hydrocarbons, and turbidity did not exceed monitoring limits during the 2011 monitoring period (Ecology 2011a).

4.5.4 Environmental Investigations and Cleanups

No records of environmental investigations or cleanups were identified for the property.

4.5.5 Potential for Sediment Recontamination

Concentrations of PCBs and hexachlorobenzene in the LDW sediment adjacent to the Independent Metals property have exceeded the SQS (Figure 6b, Table 3). The potential for sediment recontamination associated with this property is summarized below by transport pathway.

Stormwater and Surface Runoff

Stormwater from Independent Metals is treated by an oil/water separator and sand filter treatment system before being discharged via Outfall 2010 to the LDW. Elevated levels of PCBs and mercury were detected in onsite catch basin solids samples. Untreated stormwater has the potential to discharge to the LDW if the facility’s stormwater system capacity is exceeded. Paint, chemical, and petroleum products are sometimes mixed with recyclable materials and have the potential to leak to the ground in the process yard. Independent Metals has implemented source control BMPs to mitigate the potential for waste fluids contained in recyclable materials to co-mingle with stormwater. Independent Metals plans to design a process area that would contain fluids released from recyclable materials. The potential for sediment recontamination via this pathway is moderate to high depending on the effectiveness of other source control BMPs and frequency of untreated stormwater discharges to the LDW. In April 2011, concentrations of PCBs, metals, PAHs, phthalates, other SVOCs, and petroleum hydrocarbons exceeded the storm drain screening values in a storm drain solids sample that was collected from an onsite catch basin by SPU.

Spills

Independent Metals receives scrap metal from barges on the LDW. Ecology observed scrap metal periodically spilled over storage bins and onto the LDW bank. Independent Metals has moved the storage bins away from the LDW and has implemented a monitoring program to prevent spills to the LDW. The potential for sediment recontamination via the spills is currently low to moderate, provided that these BMPs are maintained. The potential for sediment recontamination via this pathway may decrease if the plans to design a process area, which will contain spills of fluids from recyclable material, are completed and implemented.

Soil and Groundwater

In the past, heavy machinery operation has created holes in the pavement of the process yard. Contaminated stormwater and released/spilled fluids from recyclable materials had the potential to infiltrate groundwater through these holes, indicating the potential for soil and groundwater contamination at the property. No environmental investigations have been performed to assess the potential for soil and groundwater contamination. Therefore, there is a potential for sediment recontamination via the soil and groundwater discharge pathway.

Bank Erosion/Leaching

Exposed soil is present along the banks adjacent to Independent Metals. In 2009, Ecology observed scrap metal periodically spilled over storage bins and onto the riverbank. Paint, chemical, or petroleum products contained in the scrap metal had the potential to leak into bank soils. An environmental investigation has not been performed to evaluate the potential presence of contamination in the bank soil. There is a potential for sediment recontamination via the bank erosion/leaching pathway.

4.5.6 Data Gaps

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

- A follow-up business inspection is needed to verify compliance with Ecology's recommendations, applicable regulations, and BMPs to prevent the release of contaminants to the LDW. Additional information is needed to determine if incoming recyclable material is managed properly to prevent spills or leaks from becoming entrained with stormwater or infiltrating the ground.
- Additional information is needed to determine if Independent Metals has completed and implemented the plans to design a process area that would contain fluids released or spilled from recyclable materials.
- Additional information is needed to determine if Independent Metals has implemented a control plan to prevent track-out onto 8th Avenue S.
- A review of PCBs and mercury data for stormwater discharge samples collected and analyzed with techniques, analytical methods, and detection limits acceptable to Ecology is needed to determine potential for sediment recontamination via stormwater discharge.
- Further investigation is needed to determine if Outfalls 2109 and 2111 are operational and the drainage areas associated with the outfalls, if any.
- A review of the responses to the CERCLA Section 104(e) Request for Information letter from Independent Metals and Silver Bay Logging is needed to identify potential sources of sediment recontamination that may be associated with current or historical operations.
- An environmental investigation is needed to determine if LDW sediment COCs are present in soil, groundwater, and bank soil at concentrations that indicating a potential for sediment recontamination.

4.6 Former Long Painting – 10th Avenue S Facility

Facility Summary: Former Long Painting – 10th Avenue S Facility	
Tax Parcel No.	2185000590, 2185000610, 3224049002, 3224049003, 3224049004, 3224049037, 7327900915, 7327901045, 7327901055, 7327901065, 7327901095, 7327901215, 7327906900, 7327906930, 7327907020

Facility Summary: Former Long Painting – 10th Avenue S Facility	
Address	6930: 8025 10th Avenue S 1065: 1015 S Elmgrove Street 1095: 1025 S Elmgrove Street 1215: 1024 S Elmgrove Street 0590, 0610, 0915, 1045, 1055, 9004, 9037: Private Residence 6900, 7020, 9002: None
Property Owner	1065: Jac Elmgrove Diecast LLC 1095: Jac Elmgrove Powercoat LLC 1215 & 9002: Elm Grove LLC 6900, 6930 & 7070: Rodia Properties LLC 0590, 0610, 0915, 1045, 1055, 9003, 9004, 9037: Private Residence
Parcel Size	0590: 0.23 acre (10.000 sq ft) 0610: 0.17 acre (7,500 sq ft) 0915: 0.12 acre (5,200 sq ft) 1045: 0.10 acre (4,300 sq ft) 1055: 0.11 acre (5,000 sq ft) 1065: 0.23 acre (10,000 sq ft) 1095: 0.47 acre (20,523 sq ft) 1215: 0.98 acre (42,510 sq ft) 6900: 0.11 acre (5,000 sq ft) 6930: 4.38 acres (190,750 sq ft) 7020: 0.16 acre (7,020 sq ft) 9002: 0.01 acre (420 sq ft) 9003: 0.13 acre (5,655 sq ft) 9037: 0.05 acre (1,972 sq ft)
Facility/Site ID	16838: National Products S Elmgrove 29633897: Shawnee Painting and Sandblasting 71678662: Former Long Painting
Alternate Name(s)	National Products, Shawnee Painting and Sandblasting, Unity Electric, Seattle Freight, King County METRO bus yard, South Park Electrical Repair
SIC Code(s)	1721: Painting and Paper Hanging
EPA ID No.	WAD044036747 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	5585

The former Long Painting facility includes four parcels that are adjacent to the LDW and ten upland parcels.

Parcels 1215, 9002, 9003, and 9037 (Figure 5b) are located adjacent to the LDW. The LDW borders the parcels to the northeast. The parcel is bordered by a residential property on the east, S Elmgrove Street to the south, and a public park to the west and north.

Parcels 1045, 1055, 1065, and 1095 (Figure 5b) are located on the south side of S Elmgrove Street, across from Parcel 1215. Residential properties are located to the south of these parcels. Parcels 1045 and 1055 are bordered by 10th Avenue S to the west and by parcel 1065 to the east. Parcel 1065 is bordered by parcel 1095 to east. Residential properties are present to the east of parcel 1095. These four parcels are collectively referred to as the Long Painting Southeast Parcels in this report.

Parcels 0915, 6900, 6930, and 7020 (Figure 5b) are located on the western side of 10th Avenue S, upland of the LDW. Parcel 6930 is bordered by 10th Avenue S to the east, residential properties to the south, 8th Avenue S to the west, and Sound Propeller Systems and Smith Berger Marine to the north. Parcel 6900 is located adjacent to the northwest corner of parcel 6930 and parcel 7020 is located adjacent to the southwest corner of parcel 7020.

King County tax assessor records indicate that structures on the parcels include the following:

- Parcel 1065: Warehouse with office space, 7,050 sq ft, built in 2004;
- Parcel 1095: Warehouse with office space, 10,872 sq ft, built in 2007;
- Parcel 1215: Service/repair garage, 5,600 sq ft, built in 1979; and
- Parcel 6930: Office building, 3,090 sq ft, built in 1920.

4.6.1 Current Operations

Unity Electric operates on parcel 1215. The company is an electrical and design services contractor (Unity Electric 2011). Unity Electric began operating at parcel 1215 after 2003 (when Long Painting relocated to Kent, Washington); however, the start date of its operations at this facility is unknown. No additional information regarding Unity Electric's current operations was available for review.

National Products operates on parcels 1065 and 1095. The company uses 1017 S Elmgrove Street as its operating address. Based on King County tax assessor records, the owner of National Products purchased parcel 1065 in 1990 and parcel 1095 in 2003. A single family home was present on parcel 1065 until 2001, when construction of current warehouse and office building began. Parcel 1095 was purchased from Long Painting.

National Products operates an aluminum foundry. Powder coating, acid etching, and dye casting operations are performed at the facility. Two storm drain catch basins and a stormwater detention system are present on the National Products facility. Floor drains are present in the buildings, but have been blocked (SPU 2008c, 2010o).

Seattle Freight operates on the eastern half of parcel 6930. The company provides intermodal transport services to railroads and ports in the Pacific Northwest (Seattle Freight 2011). A King County METRO bus yard operates on the western half of parcel 6930.

Stormwater from the facilities located on these parcels is discharged to the combined sewer system.

4.6.2 Historical Operations

Shawnee Painting and Sandblasting historically operated on parcel 6930 in the 1980s. **South Park Electrical Repair** historically operated on parcel 1065 in the 1970s (AGRA 1997a). No additional information regarding the historical operations of these companies was available for review.

Long Painting

Long Painting operated from 1970 to 2002 (Ecology 2002a). Painting, sandblasting, and vehicle and equipment maintenance were performed at the facility (KCIW 1996b). Prior to development by Long Painting, the property was primarily used for agriculture. Residences in the footprint of the facility were acquired by the company for its employees. Several of the residences were demolished as the Long Painting facility expanded. Heating oil USTs may be associated with the former residential buildings (AGRA 1997a). Long Painting has indicated that heating oil USTs were removed from residential units that were converted to commercial uses, such as the former main office and from one residential unit that is now privately owned (Kleinfelder 2000b).

The Long Painting facility consisted of commercial paint application buildings, automotive maintenance and repair facilities, office buildings, and residential buildings. Numerous paint booths were operated at the facility and included indoor and outdoor booths. Sandblasting, painting, zinc metalizing, waste storage, and vehicle maintenance occurred at the facility.

Temporary and permanent ASTs and USTs were present at the facility. The temporary ASTs were generally used at job locations and stored, empty, at the facility. The permanent ASTs had secondary containment. A 350-gallon paint thinner UST, a 550-gallon heating oil UST, and a 1,000-gallon gasoline UST were present at a covered storage area on parcel 6930. Two 10,000-gallon gasoline and diesel USTs, installed in 1976 or 1978, were part of an automotive repair and fueling facility operated on parcel 1215 by Long Painting for its equipment and vehicle fleet. Two hydraulic lifts and other hydraulic equipment were used at the automotive repair facility (AGRA 1997a; Department of Health 2001; Kleinfelder 2002). The fueling facility USTs passed tightness tests performed in 1996, 1997, and 1998 (Jensen 1996a, 1997a, 1998).

Long Painting was a large quantity generator (LQG) of Resource Conservation and Recovery Act (RCRA)-regulated materials including paints, resins, acids, flammable solvents, spent solvents, solvent contaminated water, and ignitable, expired chemicals. Liquid and solid hazardous wastes were stored in drums on the property. Liquid wastes were generally recycled, while solid wastes were generally disposed of off property. Parcel 1215 was developed as a holding facility with containment for hazardous materials and a recycling still. Paints and solvents were stored in this area. The recycling still was used to recover solvents from paint/solvent waste (AGRA 1997a).

Floor drains were present in the buildings and were plumbed to the sanitary sewer. The drains were sealed in areas where hazardous materials were stored or used (AGRA 1997a).

Pole-mounted transformers were present at the facility. At the time of the 1997 Phase I ESA, Seattle City Light reported that the transformers had not been tested for PCBs (AGRA 1997a).

On March 4, 1996, a spill of diesel fuel occurred at the portion of the facility that was adjacent to the LDW. A 250-gallon fuel tank fell from a forklift. Less than 150 gallons of fuel leaked from the damaged tank into soil and the LDW (Ecology 1996d). An Ecology letter dated August 1996 indicates that the fuel spill was cleaned up and that Long Painting was preparing a final cleanup report (Ecology 1996g). Approximately 21,000 pounds of contaminated soil associated with the spill was excavated and removed from the property (AGRA 1997a, Kleinfelder 2000a).

4.6.3 Regulatory History

Long Painting

In March 1994 and October 1995, EPA determined that Long Painting was in violation of hazardous waste generator requirements following facility inspections (AGRA 1997a). The inspection reports were not available for review during the preparation of this Data Gaps Report.

KCIW inspected the Long Painting facility (upland parcels 6900, 6930, and 7020) on August 20, 1996, following a complaint. Wastewater from a chromating process was identified as a potential source of contamination if spilled. However, the chromating process was not performed regularly and the wastewater was held in a 4,000-gallon plastic tank prior to offsite disposal. Multiple chemical storage and dispensing areas were present at the facility. KCIW recommended consolidating the storage areas to improve general housekeeping and to decrease the potential for spills or runoff to reach the combined sewer system (KCIW 1996b).

Ecology performed an inspection at the Long Painting facility on August 28, 1996. The portion of the facility that was adjacent to the LDW (parcel 1215) was the only area inspected. Photographs taken during the inspection show stained and pitted asphalt and drum storage areas (Ecology 1996f). The full inspection report was not available for review during the preparation of this Data Gaps Report.

On September 13, 1996, Long Painting reported a fire to Ecology and the local fire department. The fire was contained in a 55-gallon drum that was used to store waste resins, paints, and powdered oxidizer. Ecology issued two Notices of Violation (NOVs) to Long Painting for improper personnel training and mixing of incompatible wastes (AGRA 1997a).

Ecology inspected the facility for hazardous waste compliance on May 7, 1999 (Ecology 2002a). The inspection report was not available for review.

In June 1999, Ecology received a complaint from a concerned citizen regarding the levels of lead in sandblast grit in the soil around the Long Painting facility and surrounding neighborhood. Ecology notified Puget Sound Air Pollution Control Agency and the Seattle-King County Department of Public Health (SKCDPH) (Ecology 1999a).

In August 1999, Ecology notified Long Painting that the property had been added to the CSCSL due to TCE, PCE, and diesel-range hydrocarbon contamination at the facility (Ecology 1999c). Long Painting applied for the VCP in March 2000 (Kleinfelder 2000a).

In 2001, city of Seattle inspectors determined that Long Painting had not obtained 30 city permits for the construction and use of 11 structures at the facility, four Fire Department permits, and Puget Sound Clean Air Agency permits. Long Painting settled with the city and agreed to obtain the permits (Cargill 2001, Seattle Weekly 2001).

Ecology inspected the facility in April 2002 to assess compliance with dangerous waste regulations and assess the status of work at the facility. Long Painting was in the process of closing the facility and moving all operations to Kent, Washington. Ecology found no violations of dangerous waste regulations during the inspection (Ecology 2002a).

In February 2003, Ecology determined that no further actions were necessary with regard to TCE, PCE, and diesel-range hydrocarbon contamination at the facility and removed Long Painting from the CSCSL (Ecology 2003a).

National Products

In October 2007, a citizen reported to SPU the presence of aluminum shavings near the storm drain catch basins on S Elmgrove Street, near the National Products facility (Lord 2007). In response, SPU performed an inspection of the facility on December 5, 2007. National Products was discharging a waste fluid from its machinery to catch basins on the property. The SPU inspector collected a sample of a water and aluminum mixture in the stormwater detention tank (CB113). As a result of the inspection, SPU identified the following corrective actions (SPU 2007f, 2008c):

- Properly label and dispose of waste containers.
- Improve spill response procedures, purchase spill response materials, and educate employees with regard to spill response.
- Cease disposal of waste to catch basins on the facility.
- Clean the stormwater detention system and remove aluminum shavings from the system.

Analytical results from the water/aluminum sample indicated high concentrations of aluminum (25,100 mg/kg) and concentrations of copper (285 mg/kg), lead (40 mg/kg), and zinc (392 mg/kg) (Robinson 2008). Concentrations of phenanthrene, BEHP, and diesel- and heavy oil-range hydrocarbons exceeded storm drain screening values (Table 6b). National Products cleaned the stormwater detention system and installed a filter and holding tank to prevent metal shavings from entering the storm drain system (Wilkinson 2007). SPU re-inspected the facility on February 5, 2008. SPU determined that National Products had achieved compliance with the corrective actions (SPU 2008c, d).

SPU performed an initial source control inspection of the National Products facility on December 8, 2010. No corrective actions were identified during the inspection (SPU 2010o, p).

CERCLA Section 104(e) Requests

EPA sent a CERCLA Section 104(e) Request for Information letter to Elm Grove LLC, the current owner of parcels 1215 and 9002 in April 2009 (EPA 2009a). A response to the request was not available for review. Unity Electric currently operates at parcel 1215.

4.6.4 Environmental Investigations and Cleanups

Several environmental investigations and cleanups have been performed at this property. Sample locations are shown on Figures 13a, 13b, 14 and 15, and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Tables 11, 12, and 13. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-5, D-6, and D-7.

Phase I Environmental Site Assessment (1997)

A Phase I ESA was performed at the facility in 1997 to identify recognized environmental conditions at the property. Based on the historical painting and sandblasting operations performed by Long Painting, the presence of known and suspected USTs, and the condition of the property, it was determined that the potential for environmental contamination was high. A Phase II investigation was recommended (AGRA 1997a).

Limited Phase II Environmental Site Assessment (1997)

In August 1997, eight soil borings were advanced at the Long Painting facility. Six of the eight borings were converted to groundwater monitoring wells. The soil borings were advanced adjacent to a heating oil UST, the paint mixing location, the hazardous materials storage area and solvent recycling station (parcel 1215), the fueling station, and other areas of environmental concern at the facility. Groundwater was encountered at approximately 10 feet bgs. One soil sample from each boring and one groundwater sample from each well was submitted for laboratory analysis. Samples were analyzed for petroleum hydrocarbons, VOCs and metals (AGRA 1997b).

Concentrations of arsenic, methylene chloride, PCE and TCE in soil exceeded MTCA cleanup levels. In groundwater, concentrations of arsenic and lead exceeded MTCA cleanup levels (AGRA 1997b). The lead concentration also exceeded the groundwater-to-sediment screening level.

Underground Storage Tank Removal (1998)

The two 10,000-gallon USTs, associated piping, and fuel dispensers were removed from the facility (parcel 1215) in October 1998. Soil samples were collected from the sidewalls of the excavations and analyzed for gasoline- and diesel-range hydrocarbons and benzene, toluene, ethylbenzene, and xylenes (BTEX). No analytes were detected in the sidewall samples (AGRA 1998). Ecology determined that no further action was required for the soils adjacent to the former USTs (Ecology 2000b).

In November 1998, two new 10,000-gallon USTs were installed in the same location. The new USTs were also used to store gasoline and diesel fuel (RETEC 2003a).

Soil and Groundwater Investigation (2000)

In July 2000, 16 soil borings were advanced in areas of the property that were suspected to be contaminated based on industrial operations. Two soil samples were collected from each boring and submitted for laboratory analysis. Groundwater samples were collected from five of the six groundwater monitoring wells (Well MW-6 had been damaged during the 1998 UST removal

(Dwyer 2000). Soil and groundwater samples were analyzed for one or more of the following contaminants: priority pollutant metals, chlorinated and petroleum-based solvents and petroleum hydrocarbons, and herbicides and organochlorines (Kleinfelder 2000c).

Arsenic, PCE, and TCE concentrations in soil exceeded MTCA cleanup levels. Arsenic, chromium, and lead concentrations in groundwater exceeded MTCA cleanup levels (Kleinfelder 2000c). Lead concentrations in all groundwater samples also exceeded the groundwater-to-sediment screening levels.

Neighborhood Surface Soil Investigation (2000)

In October 2000, Ecology and SKCDPH collected surface soil samples from 16 residential properties and two parks in the neighborhood surrounding the Long Painting facility. One soil sample was collected from each residential property and four soil samples were collected from each park. The soil samples were analyzed for total metals and hexavalent chromium. Metals concentrations were generally higher in the immediate vicinity of the Long Painting facility. Ecology did not identify Long Painting because the source of the metals as other potential sources were present. Arsenic and lead concentrations exceeded MTCA cleanup levels (Ecology 2000d). The Washington State Department of Health (Department of Health) indicated that concentrations were above Puget Sound regional natural background concentrations but below health-based levels of concern (Department of Health 2001). Arsenic and lead concentrations did not exceed the soil-to-sediment screening levels.

Cleanup Action Report (2002)

In September 2002, the 350-gallon paint thinner UST, the 550-gallon heating oil UST, and piping associated with the USTs were removed from the upland property (parcel 6930). The USTs and piping were in good condition when removed. Soil samples were collected from the base and sidewalls of the UST excavations and analyzed for petroleum hydrocarbons. No analytes were detected (Kleinfelder 2002).

The 1,000-gallon gasoline UST was abandoned in place because underground utilities blocked access to the UST. Soil beneath the UST was exposed by cutting holes in the UST and a sample of the soil was collected. Subsurface soil samples were also collected around the perimeter of UST. The soil samples were analyzed for petroleum hydrocarbons and BTEX. No analytes were detected (Kleinfelder 2002).

A concrete sump and TCE-contaminated soil were removed from parcel 6930. TCE was not detected in the four confirmation soil samples collected from the excavation. Approximately 12 tons of soil were removed from the property. A new sump was installed and the area was paved with asphalt (Kleinfelder 2002).

A second concrete sump and PCE-contaminated soil were removed from the former solvent still area (parcel 1215). PCE was not detected in the five confirmation soil samples collected from the excavation. Approximately 17 tons of soil were removed from the property (Kleinfelder 2002).

Underground Storage Tank Removal (2003)

In June 2003, the 10,000-gallon gasoline and diesel USTs on parcel 1215 (installed in November 1998) were removed from the property. Groundwater was encountered at approximately 12 feet bgs in the excavation. Nine soil samples and one groundwater sample were collected from the excavation and analyzed for petroleum hydrocarbons and BTEX. The groundwater sample was also analyzed for methyl tertiary butyl ether (MTBE) and lead. In soil, toluene and xylenes were detected at concentrations below MTCA cleanup levels. In groundwater, gasoline-range hydrocarbons, benzene, MtBE and lead concentrations exceeded MTCA cleanup levels (RETEC 2003a). The lead concentration also exceeded the groundwater-to-sediment screening level.

Groundwater Investigation (2003)

In September 2003, six direct-push borings were advanced near the former 10,000-gallon gasoline and diesel USTs on parcel 1215. Groundwater was encountered at approximately 14 feet bgs in each boring. Six groundwater samples were collected and analyzed for gasoline-range hydrocarbons, BTEX, and MtBE. No analytes were detected (RETEC 2003b).

4.6.5 Potential for Sediment Recontamination

Ten samples have been collected from LDW sediment near the former Long Painting facility (Figure 6c). Chemical concentrations in these samples did not exceed the SQS or CSL. The potential for sediment recontamination via this facility is summarized below by transport pathway.

Stormwater and Surface Runoff

Stormwater from the facilities/parcels associated with the former Long Painting facility is discharged to the combined sewer system. However, given that Unity Electric (parcel 1215) is adjacent to the LDW, there is potential for surface runoff to be conveyed to the LDW. Contaminants in surface runoff, if any, may have the potential to be released to the LDW.

Spills

Unity Electric (parcel 1215) is adjacent to the LDW. If near-water activities are performed at the facility, there is potential that spilled materials may be conveyed to the LDW. Contaminants in spilled materials, if any, may have the potential to recontaminate sediments near the Riverside Drive source control area.

The remaining parcels associated with the former Long Painting facility are upland of the LDW; therefore, the spills pathway is incomplete.

Soil and Groundwater

Concentrations of arsenic, lead, and VOCs have been identified in soil and groundwater at parcel 1215. Arsenic concentrations in soil and groundwater are below the draft soil-to-sediment and groundwater-to-sediment screening levels (SAIC 2006). Lead concentrations in groundwater exceeded the draft groundwater-to-sediment screening level (SAIC 2006). Although arsenic and lead are COCs for LDW sediments, these metals were not identified as sediment COCs for the sediments adjacent to the Riverside Drive source control area. The potential for sediment recontamination via this pathway is low.

Bank Erosion/Leaching

Banks along the Unity Electric facility (parcel 1215) are reinforced with riprap and some vegetation is present (Figure B-9d). The potential for sediment recontamination via the bank erosion/leaching pathway is low.

4.6.6 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current or historical operations at the former Long Painting facility is listed below.

- A business inspection is needed at Unity Electric to verify compliance with applicable regulations and BMPs to prevent the release of contaminants to the LDW. Unity Electric currently operates at parcel 1215.
- A review of the response from Elm Grove LLC to the CERCLA Section 104(e) Request for Information letter is needed to identify potential sources of sediment recontamination that may be associated with current operations at parcels 1215 and 9002.

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5.0 Potential for Sediment Recontamination from Upland Properties in the 7th Avenue S SD Basin

Upland properties in the 7th Avenue S SD basin that could potentially affect Riverside Drive source control area sediments are described in the following sections. All upland properties located in the 7th Avenue S SD basin are also located in the 8th Avenue S CSO basin. Parcel ownership for upland properties within the Riverside Drive source control area are shown in Figure 5.

The upland properties are discussed by city blocks, starting at the northern end of the source control area, with the facilities located between S Webster Street and S Austin Street. The facilities on the easternmost block (closest to the LDW) along the east-west trending streets are discussed first, followed by the facilities on the blocks to the west.

The upland properties are not adjacent to the LDW; therefore, surface runoff or spills directly to the waterway and bank erosion are not potential sediment recontamination pathways and will not be discussed in this section. Contaminants from upland properties could be transported to the LDW via stormwater, groundwater discharge, and CSO discharge pathways.

Stormwater and Spills

- Stormwater associated with these properties is conveyed to the sediments adjacent to the Riverside Drive source control area through the 7th Avenue S SD system. Sediment COCs suspended in stormwater, if any, may be conveyed to the LDW.
- If spills occur at these properties, the spilled materials may flow directly to storm drain catch basins on or adjacent to the property or become commingled with stormwater and be conveyed to the catch basins.
- Contaminants in soil and groundwater beneath these properties, if any, may leach into groundwater and infiltrate the storm drain system. Any concentrations of sediment COCs are likely to be highly diluted, especially when the infiltrating groundwater commingles with stormwater.

Groundwater Discharge

For many of the upland properties within the 7th Avenue S SD basin, there is no available information that indicates the presence of soil and/or groundwater contamination. Soil and/or groundwater investigations have been performed at the facilities listed below. Additional information regarding the environmental investigations and cleanups is included in the facility-specific sections.

Facility	Contaminated Soil	Contaminated Groundwater
Coach Maintenance	●	
Coast Crane Company	●	

Facility	Contaminated Soil	Contaminated Groundwater
Custom Crating		
Fire King of Seattle, Inc.	●	
Former Glitsa American	●	●
Interstate Coatings, Inc.	●	
Marine Lumber Service Inc.	●	●
Modern Machine Company & Olsson Manufacturing	●	
Ness Cranes, Inc.	●	
Olympic Steel Door	●	●
Rasmussen Equipment Company		
Seidelhuber Iron & Bronze Works Inc.		

CSO Discharges

Operations or activities at these properties may result in discharges to the sanitary sewer. Contaminants in wastewater, if any, may be transported to LDW sediment near the Riverside Drive source control area during a CSO event via the 8^{th} Avenue S CSO. Contaminants in soil and groundwater beneath these properties, if any, may leach into groundwater and infiltrate the combined sewer system. Therefore, there is potential for sediment recontamination associated with combined sewer discharges from these properties. Combined sewer discharges are significantly diluted prior to discharge. In addition, the 8^{th} Avenue CSO has discharged only once since 1997. In October 2010, a total of 18 gallons was discharged during one event (King County 2011a). The potential that contaminants from these properties will recontaminate the sediments near the Riverside Drive source control area is very low; therefore, this pathway is not discussed in the facility-specific sections.

5.1 Northwind Marine

Facility Summary: Northwind Marine	
Tax Parcel No.	7327905775
Address	605 S Riverside Drive
Property Owner	Reagan Properties LLC
Parcel Size	0.63 acre (27,238 sq ft)
Facility/Site ID	7221
SIC Code(s)	3499: Fabricated Metal Products
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Northwind Marine operates at parcel 5775 (Figure 5a), which is bordered by S Austin Street to the south, S Riverside Drive to the east, and S Webster Street to the north. Northwest Plasma

Cutting & Fabrication, a subsidiary of Northwind Marine, occupies the warehouse to the west. Portable Storage of America is also located to the west of Northwind Marine.

King County tax assessor records indicate that two buildings are located on parcel 5775:

- a 12,000 sq ft storage warehouse built in 1963, and
- a 5,292 sq ft open office building built in 1963.

5.1.1 Current Operations

Northwind Marine manufactures and repairs research, fire, military, and search and rescue boats (Northwind Marine 2011). The company cuts aluminum and/or steel with a waterjet as part of the boat construction process. The facility washes saltwater from boats brought in for repair. Wax and grease is removed from boats with acetone. Grinding and sanding byproducts are swept up and disposed of in a dumpster. Aluminum oxide from plasma cutting is stored in barrels outside prior to being disposed of in the dumpster.

There are no storm drains located at the facility. Stormwater from the facility is conveyed to a right-of-way catch basin at the corner of 5th Avenue S and S Austin Street (SPU 2009i), which is plumbed to the 7th Avenue S SD system.

Workboats Northwest was the predecessor to Northwind Marine and historically operated at 7814 8th Avenue S, the property now occupied by Independent Metals Plant 2 (Section 4.5). The founders of Workboats Northwest started Northwind Marine in 1995 and moved to the current facility.

5.1.2 Historical Operations

Information regarding historical operations at this property was not available for review.

5.1.3 Regulatory History

On June 5, 2008, Ecology conducted a source control inspection at Northwind Marine. During the inspection, Ecology provided the company with guidance on how to apply for the ISGP or a certificate of no exposure (CNE) (Jeffers 2009b).

In April 2009, a Northwind Marine employee dumped waste containing water and sludge from the plasma tank into the street. This resulted in an illicit discharge to the storm drain located to the west of the facility. After SPU received an anonymous report of the incident, they conducted an Environmental Compliance Inspection on April 16, 2009. The inspection identified the following corrective actions (SPU 2009j):

- Obtain King County Waste Clearance to dispose of dusts, sludge, paint booth filters, and other industrial wastes to the dumpster.
- Dispose of excess waste and old equipment promptly and properly.
- Use absorbent pads, granular sorbent, or rags to clean up leaks and spills as they occur.
- Provide secondary containment for fuels and hazardous materials storage area to contain spills and leaks from tipped, overfilled, or ruptured containers.
- Label and identify all waste containers.

- Increase sweeping to prevent metal chips from being tracked out onto the northern parking lot.
- Discontinue washing vehicles and steam cleaning equipment if untreated wash water is discharged to the public storm drain system.
- Due to the facility's Standard Industrial Classification (SIC), obtain coverage under an ISGP or CNE for discharge to surface water.

On April 21, 2009, a CNE was issued to Northwind Marine (Schmoyer 2012).

SPU conducted a follow-up inspection on June 5, 2009. Northwind Marine had no outstanding compliance issues and was working with King County to obtain the King County Waste Clearance to dispose of aluminum dust and sludge in the dumpster (SPU 2009q). SPU directed Northwind Marine to ensure their new boat-washing system is effective and does not allow wash water to discharge to storm drains (SPU 2009r).

EPA sent CERCLA Section 104(e) Request for Information Letters to Reagan Properties (land owner of Northwind Marine) in October 2011 (EPA 2011a). Responses to the requests were not available for review at the time this report was prepared.

5.1.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Northwind Marine completed the corrective actions required by SPU in 2009 (SPU 2009q); however, there is potential that wash water from the boat-washing systems is conveyed to storm drains. Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.1.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- A follow-up inspection is needed to assess the effectiveness of the boat-washing system.
- A review of the responses from Reagan Properties to the CERCLA Section 104(e) Request for Information letters is needed to identify potential sources of sediment recontamination that may be associated with current and historical operations at the property.

5.2 Portable Storage of America

Facility Summary: Portable Storage of America	
Tax Parcel No.	7327905855
Address	7510 5th Avenue S
Property Owner	21st Century Builders
Parcel Size	0.23 acre (10,000 sq ft)
Facility/Site ID	7936495
SIC Code(s)	5271: Mobile Home Dealers
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 850 (active)

Portable Storage of America operates at parcel 5855 (Figure 5a), which is bordered by S Austin Street to the south, Northwind Marine to the east, S Webster Street to the north, and 5th Avenue S to the west. King County tax assessor records indicate that there is one building on the property, a 1,872 sq ft warehouse and office building constructed in 1958.

The facility is listed as REDD, Inc. in Ecology's Facility/Site ID database.

5.2.1 Current Operations

Portable Storage of America is a division of 21st Century Builders, LLC (Portable Storage of America 2011). The company builds portable sheds at the property and ships them to customer locations. The facility uses paint products on the portable sheds and hydraulic oil for the occasional maintenance of a forklift. Portable Storage of America stores containerized products, stockpiled material, and equipment outdoors (SPU 2009k).

There are no catch basins at the facility. Stormwater is conveyed to a right-of-way catch basin at the southwest corner of the property (SPU 2009k).

5.2.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.2.3 Regulatory History

SPU conducted an initial inspection at Portable Storage of America on April 22, 2009. On April 30, 2009, SPU identified the following corrective actions as a result of the initial inspection (SPU 2009l):

- Implement BMPs to prevent paint or other materials from coming into contact with stormwater.
- Keep waste buckets with residual materials covered or inside to prevent stormwater pollution.
- Analyze the contents of a 55-gallon drum containing an unknown substance stored in an unsecured area.

- Provide secondary containment for fuels and hazardous materials storage areas to contain spills and leaks from tipped, overfilled, or ruptured containers.
- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.

During a follow-up inspection on July 21, 2009, SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2009u).

5.2.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Portable Storage of America completed the corrective actions required by SPU in 2009 (SPU 2009u). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.2.5 Data Gaps

Portable Storage of America appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.3 Machinists Inc. – Main Facility

Facility Summary: Machinists Inc. – Main Facility	
Tax Parcel No.	7327905070, 7327905170
Address	5070: 540 S Holden Street 5170: 7600 5th Avenue S
Property Owner	Allito LLC
Parcel Size	5070: 1.02 acres (44,624 sq ft) 5170: 1.19 acres (51,750 sq ft)
Facility/Site ID	22736 (Machinists Inc. 5th Ave) 72567932 (Machinists Inc Plant 2)
SIC Code(s)	3599: Industrial and Commercial Machinery and Equipment
EPA ID No.	WAD988503058
NPDES Permit No.	WAR010782 (active)
UST/LUST ID No.	None

Machinists Inc. operates at parcels 5070 and 5170 (Figure 5a). The facility is bordered by S Holden Street and Schuchart to the south, Industrial Tire Services to the east, S Austin Street to the north, and 5th Avenue S to the west. There are three buildings on the property:

- a 25,200 sq ft industrial light manufacturing warehouse built in 1966,
- a 25,900 sq ft industrial light manufacturing warehouse built in 1967, and
- a 2,586 sq ft storage warehouse built in 1992.

Machinists Inc. also operates a tooling facility on 7th Avenue S (parcel 0310). The facility on 7th Avenue S is discussed in Section 5.32.

5.3.1 Current Operations

Machinists Inc. has been in operation for more than 50 years and specializes in welding, machining, and engineering applications serving the aerospace, energy, marine, research lab, and transportation industries (Machinists Inc. 2011). It is assumed Machinists Inc. began operations at the current location.

Stormwater enters storm drains on the city right-of-way from several locations and is conveyed to the LDW (Ecology 2008g).

5.3.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.3.3 Regulatory History

On May 6, 2008, Ecology conducted a stormwater compliance inspection at Machinists Inc. Inspectors determined that the facility is required to have coverage under the ISGP due to its listing as a machine shop, because industrial activity at the facility is exposed to stormwater, and because the facility discharges stormwater to surface waters. Inspectors made the following observations during the inspection (Ecology 2008g):

- Metal chips and fines were present on the ground near the scrap metal bin.
- Liquid products and wastes were stored outside without adequate cover and containment.
- Pressure washing generated wastewater that could not be discharged to storm drains or surface waters.
- Cutting oils used inside the main machine shop were tracked out onto outside paved areas.
- Oily residue at the northeast corner of the facility migrated beyond the fence toward the LDW.
- The strip drain along the eastern edge of the facility was clogged with dirty oily sediment.
- Facility representatives were not sure where a strip drain terminates.

On May 19, 2008, Ecology sent a Noncompliance Notification for discharging stormwater from an industrial activity without proper coverage under the ISGP (Ecology 2008i).

Industrial stormwater testing was performed during the fourth quarter of 2008. High levels of zinc (180–1,460 µg/L) and oil and grease (16 mg/L) were detected at two monitoring points.

Locations of the monitoring points were not provided in the report. The cutting shed and the drip tray of the shavings bin were identified as two potential sources for zinc. The nearby parking lot and shaving bin were identified as sources of oil and grease. Construction of a roof over a large portion of the area between buildings was recommended to increase the protected storage area for the shavings bin (Nisqually 2009).

According to the PARIS database, Ecology issued coverage under the ISGP to Machinists Inc. in October 2009.

Machinists Inc. submitted an ISGP Annual Report to Ecology on May 12, 2011. Machinists Inc. exceeded benchmarks for copper and zinc during all four quarters of sampling conducted in 2010 and exceeded the turbidity benchmark during the third and fourth quarter of 2010. Machinists Inc. increased sweeping frequency and repaired a crack in the asphalt at an upstream location of the sampling point (Ecology 2011h). The facility exceeded benchmarks for copper, zinc, and turbidity (1^{st} and 2^{nd} quarter) during 2011 (Ecology 2012b).

The facility planned to install a treatment system in September 2011 (Ecology 2011h).

5.3.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Machinists Inc. has implemented corrective actions to reduce concentrations of copper and zinc in its stormwater discharge and planned to install a stormwater treatment system at the facility in September 2011. Copper and zinc have not been identified as sediment COCs for the Riverside Drive source control area.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and potentially historical machine shop operations, there is a potential for soil and groundwater contamination. The facility is approximately 500 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.3.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- Additional information regarding the installation of a stormwater treatment system in September 2011 is needed to determine the potential for sediment recontamination via stormwater discharge**.**

5.4 Global Fabricators Inc.

Facility Summary: Global Fabricators Inc.	
Tax Parcel No.	7327904770
Address	7619 5th Avenue S
Property Owner	George Gorog
Parcel Size	0.52 acre (22,500 sq ft)
Facility/Site ID	10128921
Alternate Name(s)	Global Metalworks, Modern Iron & Steel Inc.
SIC Code(s)	3441: Fabricated Structural Metal
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	1496 (inactive)

Global Fabricators Inc. (Global Fabricators) operates at parcel 4770 (Figure 5a), which is bordered by S Holden Street to the south, 5th Avenue S to the east, Modern Coach Modern Pattern to the north, and Fire King of Seattle to the west. According to King County tax assessor records, an 11,294 sq ft aggregated warehouse, built in 1956, is present on the property.

5.4.1 Current Operations

Global Fabricators is a metal fabricator. The company has been in operation at this location since approximately 1993. All metal fabrication is performed inside the main warehouse. There is an outdoor loading/unloading area and small outdoor storage area. The facility generates 5 gallons of steel shavings per week, which are disposed of as solid waste (SPU 2007c).

There are no floor drains or catch basins located at the facility. The facility is swept once a month (SPU 2007c).

No additional information regarding current operations at the facility was available for review.

5.4.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.4.3 Regulatory History

On January 9, 2003, SPU conducted a business inspection at Global Fabricators. SPU identified a corrective action to implement a spill prevention plan that addresses spills on the property and contaminated runoff reaching the catch basins in the street (SPU 2003b). SPU re-inspected the facility in May 2003 and determined the facility was in compliance for stormwater pollution prevention (SPU 2003s).

On November 21, 2007, SPU conducted an inspection at Global Fabricators. There was evidence of leaks and a visible sheen in the storage yard. Paints and thinners were improperly stored. A paint spray gun was present, but was disassembled. The inspection resulted in the following corrective actions (SPU 2007e):

- Improve housekeeping by sweeping more frequently.
- Dispose of excess waste and old equipment stored outside promptly and properly.
- Post the company spill plan near all waste storage areas and educate employees on plan.
- Obtain spill containment and cleanup materials.
- Train all employees on the proper handling and disposal of materials to avoid contact with stormwater.
- Clean up leaks and spills as they occur and employ the spill plan when necessary.
- Properly store, label, and dispose of waste oil, paint, thinners, solvents, filters, and associated rags and maintain waste disposal records.
- Never dump waste materials onto the ground or into the storm drain.

SPU referred Global Fabricators to Ecology for a follow-up inspection. Ecology conducted a Dangerous Waste Compliance Inspection at Global Fabricators on January 10, 2008. Ecology directed Global Fabricators to implement the following corrective actions immediately (Ecology 2008b):

- Take all appropriate mitigation and control actions after any spill or discharge of dangerous waste or hazardous chemicals.
- Keep containers of used oil closed except to add or remove waste oil.
- Assure that any old releases of used oil and contaminated soil are cleaned up and properly managed.
- Label all used oil collection containers with the words “Used Oil.”
- Begin managing wastes so that human health and/or the environment are no longer threatened.

On January 18, 2008, SPU collected a storm drain solids sample from a right-of-way catch basin south of the facility (RCB129). Zinc, BEHP, butyl benzyl phthalate, and heavy oil-hydrocarbon concentrations exceeded the storm drain screening values (Table 6a) (SPU 2010n).

Ecology conducted follow-up compliance inspections on March 19 and July 31, 2008. The issues identified during the January 2008 inspection had not been addressed (Ecology 2008h,i).

On August 25, 2008, Global Fabricators sent a completed compliance certificate to Ecology detailing steps taken to achieve compliance (Global Fabricators 2008). On September 25, 2008, Ecology notified Global Fabricators that compliance was achieved through the receipt of the compliance certificate (Ecology 2008m).

5.4.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Global Fabricators appears to have completed the corrective actions identified by Ecology and SPU in 2007 and 2008 (Ecology 2008m). The potential for sediment recontamination via the stormwater and spills pathway is low provided that the company maintains appropriate source control BMPs.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and historical metalworks shop operations, there is a potential for soil and groundwater contamination. The facility is approximately 800 feet southwest of the LDW. The potential for sediment recontamination via the groundwater pathway is unknown, but it is likely to be low due to the distance between the facility and the LDW.

5.4.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- A follow-up business inspection is needed to verify compliance with Ecology's recommendations, applicable regulations, and BMPs to prevent the release of contaminants to the LDW.

5.5 Fire King of Seattle, Inc.

Facility Summary: Fire King of Seattle, Inc.	
Tax Parcel No.	7327904985, 7327905005
Address	4985: 244 S Holden Street 5005: 240 S Holden Street
Property Owner	James & Tami Moore
Parcel Size	4985: 0.23 acre (10,000 sq ft) 5005: 0.46 acre (20,000 sq ft)
Facility/Site ID	68488062
SIC Code(s)	7839: Business Services, NEC
EPA ID No.	CRK000022560 (active)
NPDES Permit No.	None
UST/LUST ID No.	None

Fire King of Seattle, Inc. (Fire King) operates at parcels 4985 and 5005 (Figure 5a), which are bordered by S Holden Street to the south, Global Fabricators to the east, Modern Coach Modern Pattern and the former Guinns Automotive & Electric to the north, and a forging and tooling company to the west. King County tax assessor records indicate the following buildings are present on the property:

- a 3,690 sq ft light manufacturing building, built in 1958, on parcel 5005; and
- a 7,400 sq ft storage warehouse, built in 1970, on parcel 4985.

5.5.1 Current Operations

Fire King operates at 240 S Holden Street and has a warehouse at the adjacent property at 244 S Holden Street. Fire King is an industrial gas and fire equipment company. There is a carbon dioxide aboveground storage tank (AST) on the northern boundary of 240 S Holden Street (parcel 5005). The warehouse building at 244 S Holden Street (parcel 4985) is used for cylinder storage.

Scrap metal from the facility is sent to a metal recycler. A shot-blast machine preps compressed gas cylinders to be painted with water-based paint. Powder from the used fire extinguishers is put into a plastic bag and disposed of as solid waste. Employees sweep the yard monthly. Water from hydrostatic pressure testing is conveyed to the sanitary sewer drain. There are two catch basins at the facility, which are located on the central southern boundary of each parcel (SPU 2007b).

5.5.2 Historical Operations

A single-family residence occupied parcel 5005 from approximately 1898 to 1963. A dirt floor garage was used by the property owner for automotive maintenance of personal vehicles. Heavy oil contamination was identified in soils inside the garage during a 1995 Phase II ESA. The garage was demolished in July 1985 in preparation for remedial excavation (Columbia Environmental 1995). Historical records indicate that a metal fabrication and pipe fitting shop operated at the property (Bison Environmental 1995). It is assumed that this operation happened after residential use and before operations by Fire King.

No information regarding historical operations at parcel 4985 was available for review.

5.5.3 Regulatory History

SPU performed a business inspection at the facility on December 19, 2002, and a follow-up inspection on March 24, 2003. After the December 2002 inspection, SPU requested Fire King to write a spill plan and cleanup the cylinder storage area (SPU 2002w). During the follow-up inspection in March 2003, SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2003i).

SPU performed an initial inspection of the facility on November 20, 2007, and a follow-up inspection on January 8, 2008. SPU identified a corrective action to clean the catch basin located near the office entrance at 240 S Holden Street (parcel 5005) (SPU 2007d). SPU determined Fire King was in compliance during the follow-up inspection in March 2008 (SPU 2008a).

5.5.4 Environmental Investigations and Cleanups

Two environmental investigations and cleanups have been performed at this property. Sample locations are presented on Figure 16 and a summary of chemicals that exceeded soil screening levels is presented in Table 14. A summary of all chemicals in soil detected at the facility is included in Table D-8.

Phase II Environmental Site Assessment (1995)

In June 1995, a Phase I ESA was conducted at Fire King. The report was not available for review.

A Phase II ESA, also conducted in June 1995, summarized the following environmental concerns that were identified in the Phase I report (Bison Environmental 1995).

- Past use of an onsite garage for automotive maintenance;
- Past use of the property for metal fabrication; metal shavings and related waste products may have been disposed of on the undeveloped east half of the property; and
- The presence of a layer of fill material on the east half of the property that is roughly 4 feet thick, and was reportedly obtained by dredging the nearby LDW.

During the Phase II ESA, five hand auger borings were advanced on the property. Combustible gas concentrations were measured to determine subsurface concentrations of methane. Concentrations of methane were detected at 2 percent of the lower explosive limit. Groundwater was not encountered in the borings. One sample was collected from the garage area, and three samples were collected from the fill area on the eastern portion of the property. All samples were analyzed for heavy-oil range hydrocarbons, and the samples from the fill area were also analyzed for metals. Arsenic, cadmium, and chromium concentrations exceeded MTCA Method A cleanup levels (Bison Environmental 1995).

Independent Remedial Action Report (1995)

Remedial excavation of the property was conducted on July 26, 1995. Approximately 223 cubic feet of petroleum-contaminated soil was excavated and removed from the property. One sample was collected from the bottom of the excavation and each sidewall. Samples were analyzed for heavy oil-range hydrocarbons and PCBs. Heavy-oil range hydrocarbons and PCBs were either not detected or were below MTCA Method A cleanup levels (Columbia Environmental 1995). PCB concentrations exceeded the draft soil-to-sediment screening level (SAIC 2006).

5.5.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Fire King completed the corrective actions required by SPU in 2008 (SPU 2008a). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

There is potential that the groundwater beneath this property may be contaminated by PCBs. Contaminants in groundwater, if any, may infiltrate the storm drain system and be conveyed to LDW sediments via the 7^{th} Avenue S SD outfall (Outfall 2112). PCB concentrations exceeded the SQS in a sediment sample LDW-SS530, which was collected near Outfall 2112 in December 2009.

Groundwater Discharge

Concentrations of PCBs in soil exceeding the draft soil-to-sediment screening levels were identified at the property. Groundwater beneath this property has not been tested for PCBs. Concentrations of arsenic, cadmium, and chromium in soil exceeded MTCA Method A cleanup levels; however, the contaminated soil may have been removed through remedial excavation.

These metals have not been identified as sediment COCs for the Riverside Drive source control area. The facility is approximately 800 feet southwest of the LDW. The potential for sediment recontamination via the groundwater pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.5.6 Data Gaps

- Due to the potential for PCB-contaminated soil and groundwater beneath the property, additional information is needed to determine if PCBs are present in groundwater at concentrations exceeding the storm drain screening values (Section 3.1).

5.6 Consistent Coatings, Inc.

Facility Summary: Consistent Coatings, Inc.	
Tax Parcel No.	7327904110
Address	719 S Riverside Drive
Property Owner	James Armstrong
Parcel Size	0.04 acre (1,797 sq ft)
Facility/Site ID	9604
Alternate Name(s)	EDIFX: Carpentry, Interior Effects
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Consistent Coatings, Inc. (Consistent Coatings) operates the facility on parcel 4110 (Figure 5a), which is bordered by Lukas Machine on the west, south, and east, and by S Riverside Drive to the north. According to King County tax assessor records, a 460 sq ft building, built in 1909, is present on parcel 4110.

5.6.1 Current Operations

Consistent Coatings is a painting company that serves residential and commercial customers. The company also operates an interior finishing service under the name Interior Effects and a carpentry service under the name EDIFX Carpentry. The companies use the location as a small office for business management and accounting. The office is used for some inside storage and a small storage shed is located on the southern portion of the property. Consistent Coatings has operated at this location since 2004. There are no catch basins on the property (SPU 2009ah).

5.6.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.6.3 Regulatory History

SPU conducted an initial inspection on October 1, 2009, and a follow-up on November 9, 2009. During the initial inspection, SPU identified the following corrective actions (SPU 2009am):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.

SPU determined Consistent Coatings was in compliance during the follow-up inspection in November 2009 (SPU 2009av).

5.6.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Consistent Coatings completed the corrective actions required by SPU in 2009 (SPU 2009). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.6.5 Data Gaps

Consistent Coatings appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.7 Cain Bolt & Gasket

Facility Summary: Cain Bolt & Gasket	
Tax Parcel No.	7327904170
Address	7724 7th Avenue S
Property Owner	NPF Properties LLC
Parcel Size	0.23 acre (10,000 sq ft)
Facility/Site ID	7503
SIC Code(s)	3452: Bolts, Nuts, Screws, Rivets, and Washers
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Cain Bolt & Gasket operates at parcel 4170 (Figure 5a), which is bordered by S Portland Street to the south, 7th Avenue S to the west, and Lukas Machine to the north and east. According to King County tax assessor records, a 5,149 sq ft light manufacturing building, built in 1940, is present on parcel 4170.

5.7.1 Current Operations

Cain Bolt & Gasket is a small bolt and gasket distributor. A forklift is used to load and unload boxes of bolts and gaskets. Scrap metal waste is placed in a metal container and covered (SPU 2009w).

The loading area is composed of dirt and gravel that drains to a catch basin at the intersection of S Portland Street and 7th Avenue S. There are no catch basins on the property (SPU 2002c).

No additional information regarding current operations at the facility was available for review.

5.7.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.7.3 Regulatory History

SPU conducted a business inspection on September 10, 2002, and a follow-up on January 24, 2003. SPU did not identify any threats to water quality during the business inspection; however, SPU identified the following corrective actions (SPU 2002o):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.

SPU determined the facility was in compliance during the follow-up inspection in January 2003 (SPU 2003c).

SPU inspected the facility on August 26, 2009, and performed a follow-up inspection on October 10, 2009. During the initial inspection, a visible oil sheen from the forklift was present and general housekeeping was unacceptable. SPU identified the following corrective actions (SPU 2009x):

- Immediately take steps to prevent forklift oil leak from contaminating the soil on and around the facility and from causing or contributing to water pollution.
- Use absorbent pads, granular sorbent, or rags to clean up leaks and spills as they occur.
- Improve housekeeping at the facility.
- Designate and properly dispose of all waste.
- SPU determined the facility was in compliance during the follow-up inspection in October 2009 (SPU 2009al).

5.7.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Cain Bolt & Gasket completed the corrective actions required by SPU in 2009 (SPU 2009al). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

SPU observed oil leaking from a forklift and contaminating the soil at the property. Petroleum hydrocarbons are not sediment COCs and while the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.7.5 Data Gaps

Cain Bolt & Gasket appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.8 The Gear Works

Facility Summary: The Gear Works	
Tax Parcel No.	7327903180, 7327903210, 7327904230
Address	3180 & 3210: 500 S Chicago Street 4230: 500 S Portland Street Mill Engineering & Supply Co.: 516 S Chicago Street
Property Owner	City of Seattle
Parcel Size	3180: 0.34 acre (15,000 sq ft) 3210: 0.92 acre (40,00 sq ft) 4230: 2.38 acres (103,720 sq ft)
Facility/Site ID	26215242: Rockwell Automation 78952325: Mill Engineering & Supply Co 93436287: Gear Works Seattle, Inc.
Alternate Name(s)	Mill Engineering & Supply Co., Rockwell Automation
SIC Code(s)	3566: Speed Changers, Drives, and Gears (The Gear Works & Rockwell Automation)
EPA ID No.	WAD009241142: Mill Engineering & Supply Co (inactive) WAD009247305: The Gear Works (inactive) WAD14986033: Rockwell Automation (inactive)
NPDES Permit No.	WAR000763: The Gear Works (active)
UST/LUST ID No.	None

The Gear Works (Gear Works) operates at parcels 3180, 3210, and 4230 (Figure 5a). The facility is bordered by S Chicago Street to the south, 5th Avenue S to the west, S Holden to the north, and 7th Avenue S and West Coast Wire Rope & Rigging to the east.

King County tax assessor records indicate the following structures are present at the property:

- a 7,520 sq ft light industrial manufacturing building, built in 1956, on parcel 4230;
- a 15,000 sq ft open lot on parcel 3180;
- a 20,160 sq ft light manufacturing building, built in 1961, on parcel 3210; and
- a 73,011 sq ft light manufacturing building, built in 1940, on parcel 4230.

5.8.1 Current Operations

Gear Works is a gear manufacturing facility providing precision gear products and power transmission services. Gear types include industrial, marine, mining, wind, and high speed compressor gears. Gear Works serves the aerospace, military, mining, oil and gas, utilities, and steel industry (Gear Works 2011). Gear Works has been operating at this property since 1962 (SPU 2008o).

Gear Works stores feedstock material and raw steel at parcel 4230. Petroleum, chemical, and scrap metal products are stored under covered areas. All stormwater from the outside industrial activity area is conveyed to an oil/water separator and is then pumped through a stormwater treatment system (Ecology 2010g).

Parcels 3180 and 3210 are used for materials and gear box testing and has minimal outside industrial activity (Ecology 2010g).

5.8.2 Historical Operations

Mill Engineering & Supply Co historically operated at 516 S Chicago Street, on parcel 3210. **Rockwell Automation** historically operated at 500 S Chicago Street, on parcel 3210. No additional information regarding historical operations at the property was available for review.

5.8.3 Regulatory History

Mill Engineering & Supply Co reported to Ecology as a hazardous waste generator from November 4, 1994 until December 31, 1994 (Ecology 2011n).

Rockwell Automation reported to Ecology as a hazardous waste generator and planner from June 24, 1988 until December 31, 2003. The company reported as a Tier 2 facility from January 1, 1999 until June 1, 2005 (Ecology 2011q). No additional information regarding regulatory interactions for these companies was available for review.

In February 1986, EPA received an anonymous complaint that **Gear Works** dumped approximately 40 gallons of cutting oil and coolant to the ground and/or storm drain. Ecology inspected the facility in March 1986 and found evidence of oil on the ground around the drum storage and dumpster area and observed oil leaching to stormwater. In July 1986, a follow up inspection found that the drum storage area was bermed and covered and the dumpster was no longer in use. Ecology determined Gear Works was in compliance (Ecology 1986b).

Gear Works was granted coverage under the NPDES Permit in March 1993. Coverage under the permit required the development of a SWPPP and application of BMPs (Ecology 1993b). Gear Works developed and initiated a SWPPP in July 1993 (Kennedy Jenks 1993). Gear Works was renewed coverage under the NPDES permit in December 1995 (Ecology 1996a).

Ecology conducted a compliance inspection at the Gear Works facility in April 1997. Processes that generated wastes included cutting gears, cleaning parts, and cutting machine maintenance. Waste streams identified included contaminated used oil (skimmings from coolant recycling), wastes from the parts washer, rags, metal shavings, and occasional use of synthetic machine coolant. Rags were disposed of through an industrial laundry service, while oil and metal shavings were disposed of through separate recyclers. Ecology identified the following compliance actions (Ecology 1997b):

- Provide containers with lids, labels, start dates, and secondary containment.
- Keep waste storage area clean.
- Prepare hazardous waste manifests for hazardous wastes disposal.
- Include wastes and waste codes shipped off property in Annual Report.

In June 1997, Ecology granted Gear Works an extension to complete actions needed to achieve compliance (Ecology 1997c). No additional information regarding Gear Works' compliance with corrective actions was available.

SPU inspected Gear Works on December 11, 2002, and conducted a follow-up inspection on March 7, 2003. The following corrective actions were identified during the initial inspection (SPU 2002u):

- Implement a spill prevention plan that states how to handle spills and contaminated runoff.
- Obtain a spill kit for the loading/unloading area.
- Develop a written summary of the plan that is posted above the spill kit.
- Train employees on procedures of the spill plan.
- Place an additional berm around uncontained areas or provide secondary containment for portable containers.

SPU determined no further action was required during the follow-up inspection in March 2003 (SPU 2003r).

SPU and Ecology conducted an initial inspection on April 15, 2008. SPU identified the following corrective actions during the April 2008 inspection (SPU 2008o):

- Complete a written spill plan and post at appropriate locations at the facility.
- Discontinue vehicle washing at the facility, install a permanent connection to the sanitary sewer for wash water, or use an alternative washing policy.
- Make sure all outside materials that have a potential to leach or spill to stormwater are covered, contained, or moved to an indoor location.
- Use absorbent pads, granular sorbent, or rags to clean up leaks and spills as they occur.
- Properly store the two 250-gallon totes containing waste acid etch solution.
- Properly label all waste containers.

Ecology provided guidance on management of dangerous waste generated from an acid etch inspection process and a water-based spray cabinet parts washer (Ecology 2008f). SPU determined all corrective actions were completed during a follow-up inspection in June 16, 2008 (SPU 2008t).

Ecology conducted a stormwater compliance inspection on June 8, 2010. The Ecology inspector recommended using pads or trays to collect fluid drips during forklift maintenance, making additional efforts to minimize track-out, and providing secondary containment and cover for plastic totes and drums near doorways. Ecology required Gear Works to update the SWPPP to include the facility at 500 S Chicago Street. An operations and maintenance manual was needed for the stormwater treatment system at the main facility where petroleum, chemical, and scrap metal products are stored (Ecology 2010g).

Gear Works did not exceed benchmarks for pH, turbidity, zinc, or copper during the 2011 monitoring period (Ecology 2012c).

5.8.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Gear Works completed the corrective actions required by SPU and Ecology in 2008 (SPU 2008t). No information was available to determine if Gear Works completed the recommendations and corrective actions identified by Ecology in 2010. Potential for sediment recontamination due to current facility operations is low to moderate.

There is potential the groundwater at this facility may be contaminated by waste oil and metals. Waste oils may contain many COCs, including PAHs and PCBs. Contaminants in groundwater, if any, may infiltrate the storm drain system and be conveyed to LDW sediments via the 7th Avenue S SD outfall (Outfall 2112). PCB and PAH concentrations exceeded the SQS in sediment samples collected near Outfall 2112.

Groundwater Discharge

Historical waste oil disposal practices at this facility may have resulted in soil and/or groundwater contamination. Metals contamination may also be present due to the historical gear manufacturing operations. The facility is approximately 800 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.8.5 Data Gaps

- A follow-up inspection is needed to verify that Gear Works has complied with the corrective actions and recommendations identified by Ecology during the June 2010 inspection.
- Additional information is needed to determine if soil and groundwater beneath the property has been contaminated through historical waste disposal practices.

5.9 Seattle Heat Treaters, Inc.

Facility Summary: Seattle Heat Treaters, Inc.	
Tax Parcel No.	7327904315
Address	521 S Holden Street
Property Owner	George Chiaro
Parcel Size	0.20 acre (8,780 sq ft)
Facility/Site ID	6407
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Seattle Heat Treaters, Inc. (Seattle Heat Treaters) operates at parcel 4315 (Figure 5a), which is bordered by S Holden Street to the north and surrounded by Gear Works on the west, south, and east. There is one building located on the property, a 4,000 sq ft industrial light manufacturing building that was built in 1958.

5.9.1 Current Operations

Seattle Heat Treaters currently operates at 521 S Holden Street. The company uses gas-fired furnaces to heat treat materials for customers. No manufacturing is performed at the facility (Ecology 1986c). No additional information regarding current operations at the facility was available for review.

5.9.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.9.3 Regulatory History

Ecology inspected Seattle Heat Treaters on September 4, 1986. The Ecology inspector observed cooling water overflowing a 300-gallon galvanized tan, which was piped to a loading dock sump. The water was then pumped to S Holden Street and conveyed to the storm drain at the corner of 7^{th} Avenue S and S Holden Street. Ecology determined the overflow was an illegal discharge and Seattle Heat Treaters should recirculate all cooling water (Ecology 1986c).

SPU inspected the Seattle Heat Treaters facility on December 10, 2002. The SPU inspector issued the following corrective actions (SPU 2002y):

- Implement a spill prevention plan that states how to handle spills and contaminated runoff.
- Obtain a spill kit for the loading/unloading area.
- Develop a written summary of the plan that is posted above the spill kit.
- Train employees on procedures of the spill plan.

SPU determined all corrective actions were completed during a follow-up inspection on March 24, 1002 (SPU 2003j).

SPU inspected the Seattle Heat Treaters facility on February 19, 2009. The facility was in compliance (SPU 2009d); however, the inspection found that the company was discarding oxidizer waste from a molten salt quench process to the dumpster. The inspectors stopped the disposal of potentially 100 to 200 pounds of nitrate/nitrite oxidizer to the dumpster (Jeffers 2009a).

5.9.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Seattle Heat Treaters completed the corrective actions required by SPU in 2009 (SPU 2009d). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

There is no information available that indicates soil or groundwater contamination is present at this property.

5.9.5 Data Gaps

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

Stormwater and Spills

- Additional information is needed to determine if Seattle Heat Treaters installed a recirculating cooling system.

5.10 Manufacturing Technologies Inc.

Facility Summary: Manufacturing Technology Inc.	
Tax Parcel No.	7327904470
Address	7709 5th Avenue S
Property Owner	Swift S & L LLC
Parcel Size	0.46 acre (20,000 sq ft)
Facility/Site ID	15761
Alternate Name(s)	Swift Tools, Pretzel Logic
SIC Code(s)	3599: Industrial and Commercial Machinery and Equipment
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Manufacturing Technology Inc. (MTI) operates at parcel 4470 (Figure 5a), which is bordered by Swift Tools to the south, Coach Maintenance to the west, S Holden Street to the north, and 5th Avenue S to the east.

According to King County tax assessor records, a 3,725 sq ft light manufacturing building, built in 1955, is present on parcel 4470.

5.10.1 Current Operations

MTI is a small machine shop that uses lathes and computer numerical control (CNC) machines to debur and grind metal. The company has operated at this location since 2002. MTI uses a drum belt evaporator to concentrate spent coolant and waste oil. The operation generates approximately two to three 55-gallon drums of waste per year. Scrap metal is disposed of by a metal recycler. During 2009 inspection, SPU did not identify any drains at the facility. SPU observed metal chips in the dirt lot on the eastern portion of the property (SPU 2009v).

Swift Tools and **Pretzel Logic** also operate at this location. Ecology has not assigned Facility/Site IDs to these companies. Information regarding the operations performed by these companies was not available for review.

5.10.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.10.3 Regulatory History

On April 18, 2007, SPU received a complaint that an oily substance was dumped on public property in the area around MTI. During a facility inspection, SPU directed MTI to clean up the oily substance. SPU also noticed used fluorescent light bulbs that needed to be disposed of properly. A follow-up drive by on May 1, 2007, determined the area was cleaned up (SPU 2007a).

SPU conducted an inspection on August 26, 2009, and a follow-up inspection on October 21, 2009. During the August inspection, SPU identified the following corrective actions (SPU 2009y):

- Provide secondary containment for storage areas for fuels, oils, and hazardous materials to contain spills and leaks from tipped, overfilled, or ruptured containers.
- Properly label all waste containers.

SPU determined the facility was in compliance during the follow-up inspection in October 2009 (SPU 2009au).

5.10.4 Potential for Sediment Recontamination

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

Stormwater and Spills

MTI has complied with corrective actions identified by SPU in 2007 and 2009. The potential for sediment recontamination associated with this facility is low provided that MTI maintains appropriate source control BMPs.

No information regarding the current operations performed by Swift Tools and Pretzel Logic was available for review. The potential for sediment recontamination related to stormwater and spills from these facilities is unknown.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property. There is potential for soil and groundwater contamination given MTI's operations as a machine shop; however, the company appears to follow appropriate waste management practices, thereby minimizing the potential for environmental contamination.

5.10.5 Data Gaps

- Additional information regarding the current operations performed by Swift Tools and Pretzel Logic is needed to determine the potential for sediment recontamination.

5.11 Coach Maintenance

Facility Summary: Coach Maintenance	
Tax Parcel No.	7327904510
Address	255 S Holden Street
Property Owner	Edward & Joyce Arneson
Parcel Size	0.23 acre (10,000 sq ft)
Facility/Site ID	4612472: Royal Hyway Tours
Alternate Name(s)	Royal Hyway Tours
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 7524 (active) LUST 5552 (inactive)

Coach Maintenance, also known as Royal Hyway Tours, is located at parcel 4510 (Figure 5a), which is bordered by a parking lot to the south, Northwest Laboratories to the west, S Holden Street to the north, and MTI to the east. According to King County tax assessor records, a 2,080 sq ft light manufacturing building, built in 1971, is present on parcel 4510.

5.11.1 Current Operations

A coach bus maintenance shop operates at this property since 1985. The facility has a dirt and gravel lot used to store old busses. Bus parts are stored under cover that drains to the sanitary sewer. Stormwater at the facility drains to a catch basin that is connected to an oil water separator. The oil/water separator discharges to the sanitary sewer (SPU 2009bb).

5.11.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.11.3 Regulatory History

SPU conducted an inspection at Coach Maintenance on May 19, 2003. The facility was well maintained and had spill kits in place. The SPU inspector determined no action was needed (SPU 2003p).

SPU inspected the Coach Maintenance facility on December 11, 2009. The facility was in compliance and no corrective actions were identified (SPU 2009bf).

5.11.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are shown on Figure 17 and a summary of chemicals that exceeded soil screening levels is presented in Table 15. A summary of all chemicals in soil detected at the facility is included in Table D-9.

UST Closure (1994)

A 1,000-gallon gasoline UST and a 10,000-gallon diesel UST were decommissioned and removed from the property in September 1994. The USTs and a pump island were located on the north side of the maintenance shop and used for fueling equipment. The final excavation depth was 8 feet in the area of the gasoline UST and 9 feet in the area of the diesel UST. Fourteen samples were collected from below the tanks, the sidewalls of the excavation, and stockpiled excavation material. The samples were analyzed for TPHs and BTEX. Diesel-range hydrocarbons exceeded the MTCA Method A cleanup level in two soil samples. Groundwater was not encountered during the excavation. Contamination at the facility was relatively localized and was caused by a leaking pump connected to the diesel tank (Bison Environmental 1994b). The volume of excavated soil was not presented in the closure report.

5.11.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Coach Maintenance was in compliance during a SPU inspection in 2009 (SPU 2009bf). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

Diesel-range hydrocarbons have been detected in soil at concentrations above MTCA Method A cleanup levels. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.11.6 Data Gaps

Coach Maintenance appears to maintain appropriate source control BMPs and was in compliance during SPU inspections. Therefore, no data gaps were identified for this property.

5.12 Custom Crating

Facility Summary: Custom Crating	
Tax Parcel No.	7327904570
Address	233 S Holden Street
Property Owner	Stephen and Maureen Walum
Parcel Size	0.57 acre (25,000 sq ft)
Facility/Site ID	82818857: BESCO Roofing
Alternate Name(s)	BESCO Roofing
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 100876 (inactive)

Custom Crating operates at parcel 4570 (Figure 5a), which is bordered by Titan Case Inc. to the south, a warehouse to the west, S Holden Street to the north, and Northwest Laboratories to the east. According to King County tax assessor records, a 4,500 sq ft material storage building, built in 1965, and a 2,144 sq ft office building, built in 1984, are present on parcel 4570.

5.12.1 Current Operations

Custom Crating provides a variety of custom designed wood crates, pallets, and boxes. The company also provides lumber cutting and remanufacturing of wood parts. Materials used at the facility include auto batteries, fluorescent light tubes, paints/coatings, and polyurethane resin. A forklift is used in day-to-day operations. The company has operated at this location since 1994 (SPU 2009ai).

There are two catch basins located on the property. Stormwater is conveyed to S Holden Street by sumps located at the catch basins. Catch basins are cleaned annually and the lot is swept as needed (SPU 2009ai).

5.12.2 Historical Operations

BESCO Roofing, a roof coating manufacturing facility, historically operated at 233 S Holden Street (Geotech 1994b). King County tax assessor records indicate that the property was purchased by Custom Crating in October 1994. No additional information regarding historical operations at the property was available for review.

5.12.3 Regulatory History

SPU conducted an inspection on December 3, 2002, and a follow-up inspection on January 30, 2003. During the December inspection, SPU identified the following corrective actions (SPU 2002s):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.

SPU determined the facility was in compliance during the follow-up inspection in January 2003 (SPU 2003d).

SPU inspected Custom Crating on October 1, 2009, and conducted a follow-up inspection on November 9, 2009. During the October 2009 inspection, SPU found storage areas for fuels, paints, resins, lead/acid batteries, and hazardous materials did not have secondary containment. SPU identified a corrective action to provide secondary containment for the storage of hazardous materials and wastes (SPU 2009an). Custom Crating was in compliance during the follow-up inspection in November 2009 (SPU 2009aw).

5.12.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are shown on Figure 18. A summary of chemicals detected in soil at the facility is included in Table D-10.

In August 1990, a 1,500-gallon gasoline UST and a 1,500-gallon diesel UST were removed from the property (Meridian 1990). No additional information regarding the UST removal was available for review.

UST Removal (1994)

On October 24, 1994, a 600-gallon diesel UST and a 2,000-gallon gasoline UST were excavated and removed from the property. Both of the tanks were in good condition without noticeable defects or significant rust penetration. Soil samples were collected from the excavation and stockpiled and analyzed for TPH and metals. Concentrations of TPH and zinc were detected at levels below the MTCA Method A Cleanup Level (Geotech 1994b).

5.12.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Custom Crating completed the corrective actions required by SPU in 2009 (SPU 2009aw). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

Petroleum hydrocarbons and zinc were detected in soil at concentrations below the MTCA Method A cleanup level. Petroleum hydrocarbons are not considered to be LDW sediment

COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. The concentration of zinc did not exceed the draft soil-to-sediment screening level. Therefore, the potential for sediment recontamination via this pathway is low.

5.12.6 Data Gaps

Custom Crating appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.13 Interstate Coatings, Inc.

Facility Summary: Interstate Coatings, Inc.	
Tax Parcel No.	7327903330, 7327903331
Address	3330: 758 S Chicago Street 3331: 754 S Chicago Street
Property Owner	Ream Family Limited Partner
Parcel Size	3330: 0.11 acre (5,000 sq ft) 3331: 0.11 acre (5,000 sq ft)
Facility/Site ID	2335: Interstate Coatings 25623222: Interstate Coatings Inc. UST 9194
SIC Code(s)	1721: Painting, Paperhanging, Decorating
EPA ID No.	WAD988507430 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	UST 9194

Interstate Coatings, Inc. (Interstate Coatings) operates at parcels 3330 and 3331(Figure 5a), which are bordered by S Chicago Street to the south, a residential property to the west, a warehouse to the north, and a vacant lot to the east.

According to King County tax assessor records, a 2,138 sq ft office building, built in 1950, is present on parcel 3331. Parcel 3330 is a vacant lot.

5.13.1 Current Operations

Interstate Coatings is a commercial painting firm that works predominantly on bridges, electrical towers, and other large structures. The majority of work is performed at customer locations. The facility is used as a business office, an area for truck/equipment repair, and storage. A 1999 Department of Health report indicated a sump pump is used to pump stormwater from the facility to the sanitary sewer (Department of Health 1999). King County did not have updated information regarding stormwater drainage at this facility (Tiffany 2012b). It is not understood if stormwater continues to be pumped to the sanitary sewer or if it is currently conveyed to the storm drain system.

5.13.2 Historical Operations

Information regarding historical operations at this property was not available for review.

5.13.3 Regulatory History

On March 28, 1990, Ecology received an anonymous complaint that Interstate Coatings dumped oil, MEK, and paint thinners behind the building on the property. Ecology inspected the facility on February 22, 1991. Ecology found a leaking diesel AST and collected a composite soil sample from the yard, which was analyzed for TPH and metals (Ecology 1991a). Sample results were not available for review.

Ecology sent Early Notice Letters to Interstate Coatings in March 1991 and July 1992, stating that Interstate Coatings had been listed on Ecology's CSCSL (Ecology 1991b, 1992d). According to the ISIS database, the property was listed on the CSCSL from February 12, 1998 to August 7, 1998.

On April 9, 1998, Ecology inspected the 1,000-gallon gasoline UST at Interstate Coatings and determined it was out of service (Ecology 1998a). Interstate Coatings removed the UST on September 25, 1998 (Section 5.13.4) (EMR 1998).

Ecology conducted a dangerous waste compliance inspection at Interstate Coatings on December 7, 1998. The following issues were identified (Ecology 1998b):

- An open bucket of dangerous waste solvent located in the accumulation area was not properly labeled or identified as hazardous waste.
- Adequate secondary containment was not provided for the open bucket of dangerous waste.
- Two drums of hazardous waste solvent were inappropriately shipped on April 28, 1998, using a non-hazardous waste manifest that identified Interstate Coatings as an exempt small quantity generator (SQG).

The following corrective actions were identified:

- Adequately label all drums and containers containing dangerous waste to identifying the contents as hazardous waste and the risks associated with contents.
- Ensure that all drums or containers of dangerous waste are closed.
- Move all drums and containers of liquid dangerous waste to an area that has provisions to prevent a release to the environment of any spilled or leaked material.
- Send a copy of the revised hazardous waste manifest for the two drums shipped on April 28, 1998 and a copy of the land disposal certification.

Interstate Coatings returned a completed compliance checklist to Ecology in January 1999 (Interstate Coatings 1999).

On August 5, 2002, Ecology determined that all the soil with gasoline and BTEX concentrations above cleanup levels had not been removed during a UST removal on September 25, 1998. Ecology requested updated information regarding cleanup activities at the facility (Ecology 2002b). No additional information regarding cleanup activities was available for review.

5.13.4 Environmental Investigations and Cleanups

Two environmental investigations have been performed at this property. Sample locations are shown on Figure 19 and a summary of chemicals that exceeded soil screening levels is provided in Table 16. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-11 and D-12.

Site Hazard Assessment (1998)

In March 1998, the SKCDPH completed a site hazard assessment (SHA) of Interstate Coatings. SKCDPH collected three soil samples at a depth of approximately 6 to 7 inches bgs. All samples were analyzed for petroleum hydrocarbons, metals, and VOCs. VOCs were not detected in any of the samples. Concentrations of arsenic and lead were detected above MTCA Method A cleanup levels (Department of Health 1999). The SHA ranked Interstate Coatings as a 3, where 1 represents the highest and 5 the lowest relative risks to human health (SKCDPH 1998).

UST Decommissioning and Site Characterization Report (1998)

A 1,000-gallon gasoline UST was installed at Interstate Coatings in April 1975. The UST was located on the west side of the facility. Interstate Coatings decommissioned and removed the 1,000-gallon UST on September 25, 1998. Groundwater was not encountered during the excavation. Three soil samples were collected from the north sidewall, bottom, and south sidewall of the excavation (Figure 16). All of the samples were analyzed for petroleum hydrocarbons and BTEX. Gasoline-range hydrocarbons, ethylbenzene, toluene, and benzene concentrations exceeded MTCA Method A cleanup levels.

On October 2, 1998, additional soil was excavated from the UST pit due to the elevated levels of gasoline-range hydrocarbons and BTEX constituents. Near the UST, soils were excavated and removed to a depth of 10 feet. An area approximately 4 to 6 feet beyond the north, west, and east sidewalls was excavated and removed. Approximately 30 cubic yards (36 tons) of soil was removed.

On October 7, 1998, twelve direct push borings were advanced to depths of 7 to 16 feet in order to characterize the extent of contamination. Eight soil samples contained benzene concentrations above MTCA Method A cleanup levels. Groundwater was encountered at approximately 15 feet bgs. One groundwater sample was collected and analyzed for petroleum hydrocarbons and BTEX. Xylenes were detected below the MTCA Method A cleanup level. No other analytes were detected in groundwater.

The UST pit was backfilled with clean fill and compacted to grade. Approximately 340 cubic yards of contaminated soil was estimated to remain north of the former UST (EMR 1998).

5.13.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Interstate Coatings has not been inspected since 1998. It is not known if the facility currently employs appropriate source control and spill prevention BMPs to prevent stormwater contamination. The potential for sediment recontamination via the stormwater and spills pathway is unknown.

Groundwater

Approximately 340 cubic yards of petroleum-contaminated soil was left in place after the removal of the 1,000-gallon gasoline UST. Groundwater was not encountered during the UST excavation. Ecology has requested information regarding cleanup activities; however, petroleum hydrocarbons are not sediment COCs for the LDW. Concentrations of lead and arsenic in soil did not exceed the draft soil-to-sediment screening levels. The potential for sediment recontamination via groundwater discharge is low.

5.13.6 Data Gaps

- Interstate Coatings has not been inspected since 1998. A facility inspection is needed to determine current operations, whether stormwater drains to the storm drain or sanitary sewer, and compliance with applicable regulations and BMPs.

5.14 AIC International

Facility Summary: AIC International	
Tax Parcel No.	7327903372
Address	736 S Chicago Street
Property Owner	Ream Family Limited Partner
Parcel Size	0.46 acre (20,000 sq ft)
Facility/Site ID	6060
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

AIC International operates at parcel 3372 (Figure 5a). The facility is bordered by S Chicago Street to the south, a residential property to the east, S Portland Street to the north, and Graham Trucking to the west.

According to King County tax assessor records, the AIC International facility consists of two buildings:

- a 4,000 sq ft office and warehouse built in 1966, and
- a 1,568 sq ft vehicle storage shed built in 1970.

5.14.1 Current Operations

AIC International is a construction company that specializes in projects in remote locations (AIC 2011). Additional information regarding this facility was not available for review.

5.14.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.14.3 Regulatory History

SPU performed an initial inspection of the facility on February 6, 2009. SPU identified five corrective actions: two related to proper storage and disposal of hazardous waste and three related to spill prevention. A follow-up inspection was performed on March 18, 2009. AIC International had achieved compliance with the corrective actions (Ecology 2009e).

EPA sent CERCLA Section 104(e) Request for Information Letters to Ream Family LP (land owner of AIC International) in October 2011 (EPA 2011a). Responses to the requests were not available for review at the time this report was prepared.

5.14.4 Potential for Sediment Recontamination

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

Stormwater and Spills

AIC International completed the corrective actions required by SPU in 2009 (Ecology 2009e). Potential for sediment recontamination due to current facility operations is low provided that the improvements and source control BMPs are maintained.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.14.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- A review of the responses from Ream Family LP to the CERCLA Section 104(e) Request for Information letters is needed to identify potential sources of sediment recontamination that may be associated with current and historical operations at the property.

5.15 Graham Trucking, Inc.

Facility Summary: Graham Trucking	
Tax Parcel No.	7327902670, 7327902700, 7327903375, 7327903380
Address	2670: 733 S Chicago Street 2700: 721 S Chicago Street 3375: 722 S Chicago Street 3380: 730 S Chicago Street
Property Owner	Graham Real Ventures LLC

Facility Summary: Graham Trucking	
Parcel Size	2670: 0.23 acre (10,000 sq ft) 2700: 0.23 acre (10,000 sq ft) 3375: 0.46 acre (20,000 sq ft) 3380: 0.23 acre (10,000 sq ft)
Facility/Site ID	62275925: Northern Freight Lines Inc. 73412486: Graham Trucking Inc.
Alternate Name(s)	Northern Freight Lines, South Park Truck and Trailer Repair
SIC Code(s)	Graham Trucking 7538: General Automotive Repair Shops 7549: Automotive Services 7699: Repair Services Northern Freight Lines None listed
EPA ID No.	WA0000360198: Graham Trucking (active)
NPDES Permit No.	None
UST/LUST ID No.	UST 905: Northern Freight Lines Inc. (inactive)

Graham Trucking, Inc. (Graham Trucking) currently operates on parcels 2670, 2700, 3375, and 3380 (Figure 5a). Graham Trucking is bordered by residential properties to the south, AIC International to the east, S Portland Street to the north, and Washington Liftruck to the south.

According to King County tax assessor records, a 4,300 sq ft service garage, built 1971, is on parcel 3375. Parcels 2670, 2700, and 3380 are used as storage yards. No buildings are present on these parcels.

5.15.1 Current Operations

Graham Trucking operates an office and maintenance garage, and it uses 722 S Chicago Street as its operating address. Graham Trucking operates 80 trucks, servicing industries such as Alaska barge trade, international freight, construction trade, retail supply, and distribution (Graham Trucking 2011). It is not known when Graham Trucking began operating at this location. No additional information regarding current operations at the facility was available for review.

5.15.2 Historical Operations

Northern Freight Lines operated at 730 S Chicago Street, on parcel 3380. The dates of Northern Freight Lines operations at this property are not known. The ISIS databases indicate Northern Freight Lines was operating at the property in August 1996 when a UST was removed from the property. No additional information regarding historical operations at the property was available for review.

5.15.3 Regulatory History

Graham Trucking reports as a transporter of dangerous waste for commercial purposes (Ecology 2011o). It is assumed that Graham Trucking transports customers dangerous waste between job locations and does not transport dangerous waste to its facility on S Chicago Street.

SPU inspected Graham Trucking on August 25, 2009. SPU did not identify any corrective actions (SPU 2010n).

5.15.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Graham Trucking was inspected by SPU in 2009 and found to be in compliance. It appears that the company is maintaining appropriate source control BMPs; therefore, the potential for sediment recontamination is low.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.15.5 Data Gaps

Based on the August 2009 inspection performed by SPU, Graham Trucking appears to maintain appropriate source control BMPs. Therefore, no data gaps were identified for this property.

5.16 West Coast Wire Rope & Rigging

Facility Summary: West Coast Wire Rope & Rigging	
Tax Parcel No.	7327903120
Address	7777 7th Avenue S
Property Owner	Carl Cole
Parcel Size	1.26 acres (55,000 sq ft)
Facility/Site ID	18137296
SIC Code(s)	2298: Cordage and Twine 3496: Miscellaneous Fabricated Wire Products 5051: Metals Service Centers and Offices 5072: Hardware
EPA ID No.	WAD027483775 (inactive)
NPDES Permit No.	WAR002111 (active)
UST/LUST ID No.	None

West Coast Wire Rope & Rigging (West Coast Wire) operates at parcel 3120 (Figure 5a), which is bordered by S Chicago Street to the south, 7th Avenue S to the east, S Portland Street to the north, and Gear Works and Fabrications Specialties Ltd. to the west.

According to King County tax assessor records, a 42,420 sq ft distribution warehouse, built in 1953, is present on the parcel.

5.16.1 Current Operations

West Coast Wire is a rigging fabrication facility. West Coast Wire supplies logging, construction, and marine industries with wire rope, chain, hardware, cordage, hoists, web slings, fall protection, and architectural railing and barrier systems (West Coast Wire 2011).

The facility has three catch basins and a bilge pump located on the West Yard. A facility map indicates that the catch basins are connected to the 7th Avenue S SD line that runs along S Portland Street (West Coast Wire 2001). Equipment at the facility is fueled using a hand carried container. Equipment and vehicle maintenance is performed indoors (Ecology 2007d).

5.16.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.16.3 Regulatory History

West Coast Wire reported to Ecology as a small quantity dangerous waste generator between October 30, 1986, and December 31, 2003 (Ecology 2011t).

Ecology granted West Coast Wire coverage under the ISGP on December 19, 1994 (Ecology 1994c). Coverage under the new ISGP was granted on January 10, 1996 (Ecology 1996c).

Ecology conducted a stormwater compliance inspection on May 31, 2007. Ecology identified the following corrective actions (Ecology 2007d):

- Inspect and clean all catch basins that are under control of the facility.
- Resume stormwater sampling and reporting.
- Submit all DMRs for the facility dating back to December 13, 2004.
- Develop a spill prevention and emergency cleanup plan to be included in the facility's SWPPP.
- Prevent wash water from equipment and/or vehicle washing to enter the facility's stormwater drains.

No additional information regarding compliance with the May 2007 inspection was available for review.

On March 27, 2009, SPU collected a storm drain solids samples from a right-of-way catch basin (RCB165) to assess the extent of the leaching of metals from the storage of uncovered treated lumber at Marine Lumber Service's South Yard (Section 5.19). Catch basin RCB165 is south of the West Coast Wire facility. Zinc, BEHP, butyl benzyl phthalate, and heavy oil-range hydrocarbons were detected above storm drain screening values in catch basin RCB165 (SPU 2009h, 2010n). Chemicals detected above screening levels are presented in Table 6a.

West Coast Wire did not submit DMRs for the second and fourth quarter of 2010 (Ecology 2010i, Ecology 2011d).

5.16.4 Potential for Sediment Recontamination

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

Stormwater and Spills

No information was available to determine if West Coast Wire has complied with the corrective actions identified by Ecology during the May 2007 stormwater compliance inspection. During the inspection, Ecology determined that wash water appeared to have been discharged to the storm drain (Ecology 2007d). The potential for sediment recontamination via this pathway is moderate.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.16.5 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- A follow-up inspection is needed to determine if West Coast Wire is in compliance with corrective actions identified during the May 2007 inspection.
- A review of DMRs is needed to assess the water quality of stormwater being conveyed to the 7th Avenue S SD system from West Coast Wire.

5.17 Fabrication Specialties Ltd Art

Facility Summary: Fabrication Specialties Ltd Art	
Tax Parcel No.	7327903160
Address	527 S Portland Street (Fabrication Specialties Ltd Art) 531 S Portland Street (Pipe Specialties Inc.)
Property Owner	Headman Holdings LLC
Parcel Size	0.23 acre (10,000 sq ft)
Facility/Site ID	11942: Fabrication Specialties Ltd Art 6661875: Pipe Specialties Inc.
Alternate Name(s)	Pipe Specialities Inc.
SIC Code(s)	9999: Nonclassifiable Establishments
EPA ID No.	WAD081489551: Pipe Specialties Inc. (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Fabrication Specialties Ltd Art (Fabrication Specialties) operates at parcel 3160 (Figure 5a), which is bordered by Gear Works to the south and west, West Coast Wire Rope & Rigging to the south and east, and S Portland Street to the north.

According to King County tax assessor records, a 4,500 sq ft manufacturing shop, built in 1964, is present on the parcel.

5.17.1 Current Operations

Fabrication Specialties Ltd Art is a small shop that fabricates wood, glass, bronze, and other metals. Painting is not conducted at the facility. Dirty rags are sent to a laundry service. Waste oil used to service equipment and trucks is removed by Waste Management. There is one catch basin on the street to the northwest of the facility (SPU 2009m).

5.17.2 Historical Operations

Pipe Specialties Inc. (Pipe Specialties) began operation at this property in 1974 and used 531 S Portland Street as its operating address (METRO 1984b). The company specialized in pickling of pipe and miscellaneous steel for hydraulic and oxygen service. The process generated ten 55-gallon drums of caustic soda sludge per year. Approximately 20,000 gallons of spent hydrochloric acid was generated in the pickling process per year (Ecology 1983b). No additional information regarding historical operations at the property was available for review.

5.17.3 Regulatory History

Pipe Specialties

Pipe Specialties reported to Ecology as a hazardous waste generator between June 4, 1984, and July 7, 1992.

On April 6, 1984, Ecology inspected Pipe Specialties. Inspectors found one and a half 55-gallon drums filled with spent caustic soda sludge. Ecology directed Pipe Specialties to analyze the sludge for dangerous waste characteristics and dispose of it in an appropriate manner. Ecology requested results for the laboratory analysis of the sludge and a manifest for the transport of the sludge. Compliance information from Pipe Specialties was not available for review.

On October 1, 1984, METRO received an anonymous report of noxious fumes and the possible discharge of acids and solvents to the storm or sewer system by Pipe Specialties. METRO investigated the complaint and determined the noxious fumes may have been caused by Pipe Specialties transferring tank sludge earlier in the day. METRO did not find obvious signs of liquid discharges on the ground outside of the building. METRO recommended a waste discharge inspection and permit (METRO 1984b).

METRO inspected Pipe Specialties on January 10, 1985. The company was not operating during the inspection. The owner of Pipe Specialties informed METRO that the company was being evicted from the property because of non-payment of debt. The inspector informed Pipe Specialties of their obligation to notify METRO and Ecology when operations resume (METRO 1985b). No information regarding ceased operations was available for review.

On January 25, 1985, METRO received an anonymous complaint describing waste PCB oils and metal cleaning wastes that were dumped on the ground around the property on a regular basis. The complaint claimed Pipe Specialties poured concrete slabs over some of the disposal areas and created a hidden waste storage pond for the PCB-oil and metal processing wastes (METRO 1985b). No information regarding follow up on this complaint was available for review.

Fabrication Specialties

SPU conducted an inspection on March 10, 2003, and a follow-up inspection on June 2, 2003. During the March inspection, SPU identified the following corrective actions (SPU 2003k):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.

SPU determined the facility was in compliance during the follow-up inspection in June 2003 (SPU 2003u).

SPU performed an initial inspection at Fabrication Specialties on May 6, 2009. No corrective actions were identified (SPU 2009n).

5.17.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Fabrication Specialties was inspected by SPU in May 2009. No corrective actions were identified during the inspection. It appears that Fabrication Specialties is maintaining appropriate source control BMPs; therefore, the potential for sediment recontamination associated with the current operations at the facility is low.

There is potential that the groundwater beneath this property may be contaminated by PCBs and metals. Contaminants in groundwater, if any, may infiltrate the storm drain system and be conveyed to LDW sediments via the 7th Avenue S SD outfall (Outfall 2112). PCB concentrations exceeded the SQS in a sediment sample LDW-SS530, which was collected near Outfall 2112 in December 2009.

Groundwater Discharge

Soil and groundwater contamination may exist from improper disposal of PCB-oil and metal shavings. The property is approximately 500 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown.

5.17.5 Data Gaps

- Additional information regarding the possible improper disposal of PCB-oil and metal shavings is needed to determine the potential for sediment recontamination via the groundwater discharge pathway.
- Due to the potential for PCB-contaminated groundwater beneath this property, additional information is needed to determine if PCBs are present in groundwater at concentrations exceeding the storm drain screening values (Section 3.1).

5.18 Olympic Steel Door

Facility Summary: Olympic Steel Door	
Tax Parcel No.	7327902710
Address	7800 7th Avenue S
Property Owner	Gregory Linscott
Parcel Size	0.46 acre (20,000 sq ft)
Facility/Site ID	45787437
Alternate Name(s)	All Metal Arts, OB Williams, Redox
SIC Code(s)	3442: Metal Doors, Sash, Frames, Molding, and Trim Manufacturing
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 516774 (inactive) LUST 516776 (inactive)

Olympic Steel Door operates at parcel 2710 (Figure 5a), which is bordered by residential properties to the south, Graham Trucking storage lots to the east, S Chicago Street to the north, and 7th Avenue S to the west.

According to King County tax assessor records, an 11,880 sq ft open office/distribution warehouse, built in 1959, is present on parcel 2710.

5.18.1 Current Operations

Olympic Steel Door distributes steel doors and door frames. A limited amount of repair work is done at the facility. Three other companies operate at the address (SPU 2009ab):

- **Redox** – a supplier of piping cleaning and fittings for hydraulic systems;
- **OB Williams** – a millwork storage warehouse; and
- **All Metal Arts** – a small metal fabrication shop.

Olympic Steel Door is the only facility that has been assigned a Facility/Site ID.

Redox has operated at the property since 2005 (SPU 2009ad). **All Metal Arts** has operated at the property since 2008 (SPU 2009ag).

There are two catch basins located on the eastern portion of the facility. The catch basins are equipped with elbow traps. Stormwater is conveyed to the 7th Avenue SD system (SPU 2002n).

No additional information regarding current operations at the facility was available for review.

5.18.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.18.3 Regulatory History

In November 2009, SPU collected a storm drain solids sample from a catch basin (CB154) on the property. Concentrations of PCBs, BEHP, butyl benzyl phthalate, dimethylphthalate, 2-methylphenol, and benzyl alcohol exceeded the storm drain screening values (Table 6a) (SPU 2010n).

Olympic Steel Door

On November 26, 2002, SPU conducted an inspection at Olympic Steel Door. The following corrective actions were identified (SPU 2002p):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Clean and maintain all catch basins on the property.

SPU conducted a follow-up inspection on April 4, 2003. Olympic Steel Door had a spill kit in place and cleaned the catch basins. No further action was required (SPU 2003m).

SPU conducted an initial inspection on September 14, 2009, and a follow-up inspection on October 19, 2009. Inspectors found three old drums of soil boring spoils from a UST removal. Both of the catch basins were full of material. SPU identified the following corrective actions (SPU 2009af):

- Apply for coverage under the ISGP or obtain a CNE.
- Clean and maintain all catch basins on the property.
- Properly label and dispose of the three drums.

During the follow-up inspection in October 2009, the catch basins had been cleaned. Olympic Steel Door was still working to get the soil investigation drums removed and resolve coverage under an ISGP or CNE (SPU 2009ap).

Redox

SPU inspected Redox on September 14, 2009. The pipe cleaning process generates metal sludge. The inspector noted that the sludge disposal methods were unclear. SPU identified the following corrective actions (SPU 2009ad):

- Apply for coverage under the ISGP or obtain a CNE.
- Designate and properly dispose of any sludge generated from the pipe manufacturing process, waste oils, and spent machine coolant.
- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.

On October 20, 2009, SPU sent Redox information regarding the ISGP and King County Waste Characterization Program (SPU 2009aq).

All Metal Arts

SPU inspected All Metal Arts on October 1, 2009. The facility has a portable sink that discharges outside to the ground. The shop owner indicated that the sink is only used for hand washing. SPU identified the following corrective actions (SPU 2009ag):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Ensure that all cleaning and washing activities comply with requirements for prevention, minimization, and management of pollutants.

SPU conducted a follow-up inspection on November 9, 2009, and January 5, 2010. The sink was disconnected during the inspection. Outdoors, the inspector observed an oil spill from a leaking vehicle, uncovered metal, and old gas cans outside. SPU recommended the facility apply for ISGP if outdoor housekeeping conditions did not improve (SPU 2010b).

5.18.4 Environmental Investigations and Cleanups

Several environmental investigations have been performed at this property. Sample locations are shown on Figure 20 and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Tables 17 and 18. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-13 and D-14.

An investigation was performed in 1988 to remove a 3,000-gallon UST (Global Environmental 2000). No additional information regarding the UST removal was available for review.

UST Investigation (1999)

In 1999, a survey of subsurface conditions was performed that focused on the suspected location of the former UST. Eight vapor probe borings were advanced to various depths in and around the suspected former UST. Elevated readings for combustible vapors were recorded at each of the borings. One soil sample was collected from the boring with the highest vapor reading. Gasoline-range hydrocarbons were detected at a concentration of 1,900 mg/kg, exceeding the MTCA Method A cleanup level (Global Environmental 2000). The original UST investigation report was not available for review.

Soil and Groundwater Remediation (2000)

On October 17, 2000, 245 tons of petroleum-contaminated soil was excavated from the former UST location. One bottom and four sidewall soil samples were collected from the excavation. The samples were analyzed for gasoline-range hydrocarbons and BTEX. Analytical results indicated that some gasoline-contaminated soil remained along the southern sidewall of the excavation. Gasoline-range hydrocarbons and BTEX concentrations in an additional sample collected from the south sidewall were not detected or were below MTCA Method A cleanup levels. The excavation was backfilled with clean recycled concrete rubble and smaller gravel.

Groundwater was encountered at approximately 10 feet bgs. One groundwater sample was collected approximately 3 feet north of the northeast corner of the excavation. Gasoline-range hydrocarbons were detected in the groundwater sample at a concentration that exceeded the MTCA Method A cleanup level (Global Environmental 2000).

Limited Subsurface Sampling & Testing (2002)

In February 2002, two push probe soil borings were collected from beneath the Olympic Steel Door building and the asphalt parking lot on the northwest portion of the property. Each boring was advanced to a total depth of approximately 10 feet. Groundwater samples were collected from each location. A groundwater sample was collected from a previously installed monitoring well, MW-3. Soil and groundwater samples were analyzed for gasoline-range hydrocarbons and BTEX. Gasoline-range hydrocarbons and BTEX were not detected in soil samples and were not detected or were below MTCA Method A cleanup levels in groundwater samples (Environmental Associates 2002).

Initial Investigation (2011)

According to the ISIS database, an initial investigation was completed on August 8, 2011. No information regarding this investigation was available for review.

5.18.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Concentrations of PCBs, BEHP, butyl benzyl phthalate, dimethylphthalate, 2-methylphenol, and benzyl alcohol exceeded the storm drain screening values in a catch basin located on the property. SPU has directed three of the four companies operating at this facility: Olympic Steel Door, Redox, and All Metal Arts to apply for coverage under the ISGP or obtain a CNE. The potential for sediment recontamination via the stormwater pathway is low, if the facilities are eligible for a CNE. If the facilities are required to obtain coverage under the ISGP, the potential for sediment recontamination via the stormwater discharge pathway is high.

Groundwater Discharge

Subsurface testing in February 2002 indicated that concentrations of gasoline-range hydrocarbons and BTEX constituents were detected below MTCA Method A cleanup levels. Further monitoring of groundwater was not conducted. Petroleum hydrocarbons are not considered to be LDW sediment COCs. While the presence of petroleum hydrocarbons in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.18.6 Data Gaps

Information needed to assess the potential for sediment recontamination associated with current operations at this location is listed below.

- In 2009, inspections of the facility recommended coverage under ISGP or CNE. Additional information regarding permit coverage of Olympic Steel Door, Redox Inc., and All Metal Arts is needed to assess potential for sediment recontamination via stormwater.

- Follow-up business inspections are needed to verify compliance with SPU's recommendations, applicable regulations, and BMPs, to prevent the release of contaminants to the LDW.
- Additional information regarding the initial investigation conducted on August 8, 2011, is needed to determine the potential for sediment recontamination via groundwater discharge.

5.19 Marine Lumber Service Inc.

Facility Summary: Marine Lumber Service Inc.	
Tax Parcel No.	7327901925, 7327902850, 7327902895, 7327902900, 7327902920
Address	1925: 7915 5th Avenue S 2850: 558 S Kenyon Street 2895: 546 S Kenyon Street 2900: 525 S Chicago Street 2920: 525 S Chicago Street
Property Owner	Marine Lumber Service Inc.
Parcel Size	1925: 0.46 acre (20,000 sq ft) 2850: 0.57 acre (25,000 sq ft) 2895: 0.29 acre (12,500 sq ft) 2900: 0.29 acre (12,500 sq ft) 2920: 1.03 acres (45,000 sq ft)
Facility/Site ID	38921541: Marine Lumber Service Inc. 73969348: Marine Lumber Service Shop
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	WAR011741: Marine Lumber Service Inc.
UST/LUST ID No.	UST 5286: Marine Lumber Service Inc. (inactive) LUST 11329: Marine Lumber Service Inc. UST 102380: Marine Lumber Service Shop LUST 5481: Marine Lumber Service Shop

Marine Lumber Service Inc. (Marine Lumber Service) operates five lumberyards in the LDW basin, four of which are located within the Riverside Drive source control area. These yards are known as the South Yard, Plant Yard, Shipping Yard, and East Yard (Figures 21a and 21b). The East Yard, Shipping Yard, and Plant Yard comprise contiguous parcels 2920, 2900, 2895, and 2850 (Figure 5a). This portion of the facility is bordered by S Kenyon Street to the south, 7th Avenue S to the east, S Chicago Street to the north, and Rogers Machinery to the west.

According to King County tax assessor records, the facility has the following buildings:

- a 2,375 sq ft open office/storage warehouse, built in 1920, on parcel 2895;
- a 3,280 sq ft lumber storage shed, built in 1957, and a 4,008 sq ft lumber storage shed, built in 1983, on parcel 2850; and

- a 4,800 sq ft industrial light manufacturing building constructed in 1964 and a 3,800 sq ft lumber storage shed, built in 1964, on parcel 2920.

The South Yard is located across the street on parcel 1925 (Figure 5a). The South Yard is bordered by S Monroe Street to the south, a storage yard to the east, S Kenyon Street to the north, and 5th Avenue S to the west. The parcel is a 20,000 sq ft storage yard.

The fifth yard operated by Marine Lumber Service is the West Yard. The West Yard is located one and a half blocks to the west of the rest of the facility and is located within the 1st Avenue S SD basin. Operations at the West Yard will be discussed in the 1st Avenue S SD Data Gaps Report (SAIC 2012, in preparation).

5.19.1 Current Operations

Marine Lumber Service has operated at the 525 S Chicago Street facility (parcels 2900 and 2920) for the past 65 years. The facility supplies the marine shipping industry with lumber products such as custom wedges, wheel-chocks, and special dimensional lumber, timbers, beams, and planks.

The South Yard is used to store Ammoniacal Copper Zinc Arsenate (ACZA) treated lumber on an asphalt pad. There is no cover provided for any of the wood products stored on the South Yard. Leaching of ACZA has caused green staining on the pavement, which may lead to offsite contamination (Ecology 2009a). Stormwater runoff flows from northwest to southeast and is conveyed to S Monroe Street. S Monroe Street is gravel covered. Stormwater most likely infiltrates into the gravel surface or flows into low areas of surrounding properties (EPI 2010). The adjacent property (American Plastics) located east of the South Yard historically pumped stormwater that ran toward its facility from the South Yard into the American Plastics stormwater system, which is connected to the 7th Avenue S SD system (Schmoyer 2012).

The Plant Yard is a mill area with covered and uncovered storage of lumber. A main sawdust vacuum system is located at the Plant Yard and a network of ducts connects individual wood cutting saws to the central collection/recycle container. Most of the stormwater runoff from the Plant Yard sheet flows toward a right-of-way catch basin on S Chicago Street to the north (EPI 2010).

The Shipping Yard is used to stage outbound shipments and is located directly east of the Plant Yard. Stormwater runoff flows from south to north and enters three storm drains located in the yard. All three catch basins discharge to the sanitary sewer (EPI 2010).

Marine Lumber Service stores five company-owned flatbed delivery trucks and one box van on the East Yard, located east of the Shipping Yard. The East Yard is also used for lumber storage and processing. Stormwater runoff flows from south to north and enters one of the storm drains located at the intersection of S Chicago Street and 7th Avenue S (EPI 2010).

5.19.2 Historical Operations

Marine Lumber Service has been in operation for over 65 years (Marine Lumber Service 2011b). It is assumed Marine Lumber Service began operations at its current location. No additional information regarding historical operations at the facility was available for review.

5.19.3 Regulatory History

On May 4, 1992, Ecology inspected the facility in response to a complaint alleging that the company was treating wood in a chlorine dioxide dip tank. The tank reportedly leaked and the wood treatment solution was being discharged to the storm drain. During the inspection, the facility owner indicated that a dip tank filled with a ferric chloride solution was used twice a year. The tank was half-filled with the solution and located outdoors on a paved lot with no secondary containment. The solution splashed or leaked out of the tank and washed into the storm drain located in the street adjacent to the lumberyard. At the time of the inspection, the area around the dip tank was wet from tank leakage. Ferric chloride is highly toxic to aquatic life in low concentrations, and it is a regulated pollutant under the Federal Clean Water Act (Ecology 1992a).

After the inspection, Ecology directed Marine Lumber Service to comply with the following corrective actions to prevent water quality violations (Ecology 1992b):

- Construct an impervious berm around the dip tank.
- Place the dip tank and secondary containment under a roof or overhang to prevent rainwater from collecting in the berm.
- Treated wood should be allowed to dry sufficiently in order to prevent dripping while stored.
- If wood is rinsed after treatment, rinse water should be discharged to the sanitary sewer.
- Contact METRO for treatment options prior to discharge to the sanitary sewer.

Marine Lumber Service removed the dip tank from service (Marine Lumber Service 1992).

SPU conducted an initial inspection on February 6, 2003, and a follow-up inspection on April 29, 2003. During the February 2003 inspection, SPU identified the following corrective actions (SPU 2003g):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Clean and maintain all catch basins on the property.
- Conduct drainage basin housekeeping at the South Yard.
- Stop all and any further washing of vehicles in the Shipping Yard.

During the follow-up inspection in April 2003, SPU determined Marine Lumber Service was in compliance and no action was required (SPU 2003q).

On November 11, 2008, Ecology conducted a source control inspection at the facility. Issues identified during the inspection include cleaning catch basins, the need for the facility to obtain coverage under the ISGP, and concern about the storage of ACZA-treated lumber outside. On January 8, 2009, Ecology received an ISGP application from Marine Lumber Service (Ecology 2009a). Coverage was granted on July 13, 2009 (Ecology 2010b). Marine Lumber Service monitors stormwater for turbidity, pH, oil sheen, copper, zinc, arsenic, TSS, and chemical oxygen demand (EPI 2010).

In December 2008, SPU collected a storm drain solids sample from a right-of-way catch basin (RCB159) to the south of the South Storage Yard. Concentrations of PCBs, arsenic, copper, zinc, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6c). On March 27, 2009, SPU collected two storm drain solids samples from catch basins to assess the extent of the leaching of metals from the storage of uncovered treated lumber at the South Yard. Sample CB137 was collected from the southeastern portion of the South Yard. Sample RCB165 was collected immediately north of the Plant Yard, which represents street runoff and a portion of runoff from the Plant Yard for non-treated lumber. Arsenic, copper, zinc, BEHP, butyl benzyl phthalate, and benzoic acid were detected at concentrations above the storm drain screening values in catch basin CB137. Zinc, BEHP, butyl benzyl phthalate, and heavy oil-range hydrocarbons were detected above storm drain screening values in catch basin RCB165 (SPU 2009h, 2010n). Chemicals detected above screening levels are presented in Table 6c.

On March 24, 2009, Ecology and SPU conducted a stormwater compliance inspection at Marine Lumber Service. Inspectors recommended installation of storm drain catch basin filter inserts for areas of the facility with chronic sources of dust and dirt. Inspectors determined that the West Yard, which drains to the 1st Avenue S SD basin, did not need to be included under the ISGP coverage for the facility. The East Yard, Shipping Yard, Plant Yard, and South Yard should be considered contiguous and covered by one ISGP permit. Inspectors observed green staining on the pavement in the South Yard, which is indicative of ACZA dripping off or leaching out of treated wood. Data from SPU sampling of surface dirt in the city right-of-way (RCB159) and dirt on the pavement at the southeast corner of the South Yard (CB137) showed extremely high levels of copper (4,520-4,930 mg/kg) and arsenic (710-750 mg/kg). However, a storm drain solids sample collected from a right-of-way catch basin on the north side of the main office building at 525 S Chicago Street contained much lower concentrations of arsenic (21 mg/kg) and copper (99.6 mg/kg). Ecology and SPU determined Marine Lumber Service should submit a plan to clean up the green ACZA staining on the pavement at the South Yard and a plan to prevent stormwater from carrying ACZA off property (Ecology 2009a).

On May 18, 2009, Ecology sent a Warning Letter to Marine Lumber Service, which required the facility to submit a plan for cleaning up the green ACZA staining on the pavement at the South Yard (Ecology 2009c).

As a result of Marine Lumber Service's failure to submit a source control plan, SWPPP, or stormwater sample results as required by the ISGP, Ecology issued an Immediate Action Order No. 7247 on January 25, 2010. The Immediate Action Order required compliance with the following corrective actions (Ecology 2010b):

- Submit a source control plan for preventing the discharge of copper, arsenic, zinc, and other associated pollutants from the outside treated lumber storage area of the South Yard.
- Submit an updated SWPPP for the facility.
- Effective the first quarter of 2010, add arsenic to the permit-required sampling parameters.

On February 17, 2010, SPU sent a Second and Final Notice letter requesting the same corrective actions from Marine Lumber Service (SPU 2010g).

On March 8, 2010, SPU and Marine Lumber Service conducted a dye test to determine the discharge location of the facility storm drains located in the Shipping Yard. All drains are connected and discharge to the sanitary sewer system in Kenyon Street. KCIW confirmed Marine lumber service could discharge stormwater from the Shipping Yard to the sanitary sewer without treatment if the stormwater met KCIW discharge limits.

Marine Lumber Service submitted a source control plan for the South Yard and a SWPPP for the entire facility to Ecology on March 19, 2010 (EPI 2010). The company has also worked with their supplier to obtain a drier product that is less susceptible to leaching, and it has moved the ACZA treated lumber to an adjacent property that is located in the combined sewer service area (SPU 2010n). Overstock of the treated lumber is still stored in the South Yard. Marine Lumber Service power washed pavement in the South Yard and collected wash water in order to remove the green staining caused by the treated lumber (SPU 2010l). The SWPPP also included the following source control actions to be completed by July 31, 2010:

- Install drains in driveways to divert oncoming stormwater away from the yard.
- Conduct a feasibility study and possible installation of an onsite treatment system.
- Evaluate the effectiveness and cost for roof installation over the South Yard.

Ecology and SPU conducted dye testing and inspections in July, September, and November 2010. Photographs from the November 2010 inspection indicate that ACZA leaching is still a problem at the facility (SPU 2010m). On November 12, 2010, SPU warned of an NOV and/or Voluntary Compliance Agreement if progress on source control was not made (Robinson 2010). A follow-up inspection was conducted on September 7, 2011. Details from the September 2011 inspection were not available for review.

Marine Lumber Service submitted an ISGP Annual Report on May 17, 2011. High turbidity was reported during the 2nd quarter at the South Yard and 4th quarter at the Plant Yard. The facility purchased a vacuum sweeper to sweep the yards and constructed berms to prevent off-property stormwater from draining to the facility (Marine Lumber Service 2011a).

SPU collected samples of soil on the right-of-way surfaces around the Marine Lumber Service facility in May 2011. Samples were collected from three locations: near catch basin RCB159, near catch basin RCB273, and catch basin RCB275. Concentrations of arsenic and copper were detected above storm drain screening values in seven of the nine samples. Concentrations of arsenic and copper remain elevated in the sample collected directly off the Marine Lumber Service's driveway entrance on S Monroe Street. Zinc concentrations exceeded the storm drain screening value in six of the nine samples. Concentrations of PCBs, benzo(g,h,i)perylene, BEHP, butyl benzyl phthalate, dimethylphthalate, benzoic acid, benzyl alcohol, and heavy oil-range hydrocarbons exceeded the storm drain screening values in some samples (Table 6c) (Schmoyer 2011).

Marine Lumber Service has taken the following steps to address source control concerns (Schmoyer 2012):

- Applied for and received a grant from King County to install covering over storage areas.
- Pressure washed the South Yard area and moved material to the Shipping Yard, which drains to the combined sewer system.
- Purchased different material with less leaching potential.

SPU indicated that Marine Lumber Service and SDOT were working on a cleanup plan for removal of arsenic-contaminated soil from the right-of-way associated with the South Yard (Schmoyer 2012). Additional information regarding the cleanup plan will be included in the Riverside Drive SCAP or a Source Control Status Report.

5.19.4 Environmental Investigations and Cleanups

Two environmental investigations and cleanups have been performed at this property. Sample locations are shown on Figures 22 and 23 and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Tables 19 and 20. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-15 and D-16.

UST Removal and Site Assessment Report (1994)

On June 1, 1994, four USTs were removed from the Marine Lumber Service facility. A 500-gallon leaded gasoline UST and a 2,000-gallon unleaded gasoline UST were removed from the Plant Yard. Two 2,000-gallon unleaded gasoline USTs were removed from the East Yard. The 500-gallon leaded gasoline UST and associated product line were in poor condition.

Five soil samples were collected from the sidewalls and bottom of the excavation at the Plant Yard location. Four soil samples were collected from the sidewalls and bottom of the excavation at the East Yard location. Additionally, three soil samples were collected from each stockpile of excavated soil at each location. One water sample was collected from seepage at the Plant Yard location. All samples were analyzed for gasoline-range hydrocarbons and BTEX. Two soil samples collected near the leaded gasoline UST were analyzed for lead. Gasoline-range hydrocarbon concentrations exceeded the MTCA Method A cleanup level in all but one sample. BTEX constituents in the soil samples also exceeded MTCA Method A cleanup levels. Lead was not detected at concentrations that exceeded MTCA Method A cleanup levels. Gasoline, benzene, toluene, and xylene concentrations in the water sample collected from the Plant Yard excavation exceeded MTCA Method A cleanup levels for groundwater (Bison Environmental 1994a).

Soil and Groundwater Cleanup (1995–2001)

In March 2003, Ecology received a letter from Marine Lumber Service describing soil and groundwater remediation that had been conducted at the property since April 1995. According to the letter, over 90 percent of the remediation work deemed necessary to meet state regulatory requirements at the facility had been performed. The only area of the facility that still contained soil and groundwater with petroleum hydrocarbon concentrations exceeding regulatory requirements was located in front of the Marine Lumber Service office located at the Plant Yard.

An in-situ soil vapor extraction system (VES) was installed near the office building and Oxygen Release Compound (ORC) was injected into the subsurface. This process was implemented from 1996 through 1998. In August 1998, groundwater samples collected from a monitoring well at the front of the office building showed TPH and BTEX exceeded the MTCA Method A groundwater cleanup level. In September 2000, groundwater samples collected from the monitoring well indicated that BTEX concentrations had declined but TPH concentrations had increased slightly. Based on these results, an additional injection of ORC was recommended to complete groundwater cleanup (Marine Lumber Service 2003).

No additional information regarding groundwater cleanup was available for review.

5.19.5 Potential for Sediment Recontamination

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

Stormwater and Spills

According to a SWPPP published in 2010, stormwater associated with the Plant Yard, East Yard, and South Yard is conveyed to the sediments adjacent to the Riverside Drive source control area through the 7th Avenue S SD System. If spills occur at these yards, the spilled materials may flow directly to storm drain catch basins on or adjacent to the property or become commingled with stormwater and be conveyed to the catch basins. Stormwater associated with the Shipping Yard is conveyed to the sanitary sewer; therefore, the stormwater/spills pathway is incomplete for the Shipping Yard.

Leaching of ACZA-treated lumber has resulted in elevated concentrations of copper, zinc, and arsenic in catch basin samples collected near the South Yard. Metals suspended in stormwater associated with this property may be conveyed to the LDW. SDOT inspectors will work with Ecology and Marine Lumber Service to remove arsenic-contaminated soil from the city right-of-way associated with the South Yard during 2011–2012 (SPU 2010n).

There is potential that groundwater beneath the property may be contaminated with ACZA constituents. Contaminants in groundwater, if any, may infiltrate the storm drain system and be discharged to the LDW via the 7th Avenue S SD outfall (Outfall 2112). The individual ACZA constituents are not sediment COCs for the Riverside Drive source control area; therefore, the potential for sediment recontamination via this pathway is low.

Groundwater Discharge

Groundwater monitoring in September 2000 indicated that concentrations of gasoline-range hydrocarbons, benzene, toluene, and xylene were detected above MTCA Method A cleanup levels. Further groundwater monitoring data were not available for review. It appears that soil and groundwater have not been tested for ACZA constituents. If these constituents are present in soil and groundwater, they may represent a potential source of sediment recontamination. However, the individual ACZA constituents are not sediment COCs for the Riverside Drive source control area; therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.19.6 Data Gaps

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

- A review of the September 2011 inspection report is needed to evaluate the Marine Lumber Service's progress with regard to implementing source control BMPs and preventing ACZA leachate from entering the storm drain system.

5.20 Rogers Machinery Co Inc.

Facility Summary: Rogers Machinery Co Inc.	
Tax Parcel No.	7327902960
Address	7800 5th Avenue S
Property Owner	Novak Family Trust
Parcel Size	0.57 acre (25,000 sq ft)
Facility/Site ID	59283333
SIC Code(s)	5084: Industrial Machinery and Equipment
EPA ID No.	WAD988509386 (active)
NPDES Permit No.	NA
UST/LUST ID No.	NA

Rogers Machinery Co Inc. (Rogers Machinery) occupies Parcel 2960 (Figure 5a). The facility is bordered by 5th Avenue S on the west, S Kenyon Street to the south, Marine Lumber Service to the east, and S Chicago Street to the north.

King County tax assessor records show that there are two buildings located on the property, a 6,870 sq ft industrial light manufacturing/open office building constructed in 1970 and a 6,952 sq ft industrial light manufacturing/open office building constructed in 1989.

5.20.1 Current Operations

Rogers Machinery is an industrial equipment and service supplier for compressed air systems, process and house vacuum systems, and blower and pump systems. Sales and parts and service have been performed at this location since 1968 (Rogers Machinery 2011; SPU 2008e).

Rogers Machinery uses antifreeze, batteries, and petroleum/oils for servicing equipment. The waste is temporarily stored in a covered area equipped with secondary containment and later shipped off property for disposal. Rogers Machinery disposes of antifreeze, petroleum/oils, and batteries through third-party vendors. Wash water is generated through pressure washing of equipment (SPU 2008e).

The Rogers Machinery facility has one catch basin on the south side of the main office building (Rogers Machine 2008). The facility has a stormwater detention system with flow control pumps. Stormwater from the detention system is not treated before it discharges to the LDW via the 7th Avenue S SD system (SPU 2002q).

5.20.2 Historical Operations

Information regarding the historical operations at this property was not available for review.

5.20.3 Regulatory History

Rogers Machinery reported to Ecology as a hazardous waste generator from July 1992 to August 2003. From 1995 to 1997, the facility reported as a SQG. The facility reported as a no quantity generator (XQG) from 1998 to 2011 (Ecology 2011r).

SPU conducted an initial inspection at Rogers Machinery on December 2, 2002. SPU identified the following corrective actions as a result of the initial inspection (SPU 2002r):

- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.

During a follow-up inspection on July 28, 2003, SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2003h).

SPU conducted another inspection on February 12, 2008. SPU identified the following corrective actions (SPU 2008j).

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Label waste containers.
- Discontinue onsite vehicle washing.
- Perform required maintenance on equipment wash pad and comply with discharge limits.

During the follow-up inspection on May 9, 2008, SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2008r).

On February 21, 2008, SPU performed a dye test at the catch basin that receives wash water from the pressure washing of equipment to determine if the catch basin ultimately discharges to the 7th Avenue S SD. The test was inconclusive (Jeffers 2008b).

5.20.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Rogers Machinery has complied with corrective actions identified by SPU in 2003 and 2008. SPU performed a dye test to determine if wash water is conveyed to the storm drain system; however, the results were inconclusive. If the wash water is discharged to the storm drain system, it may represent a potential source of contaminants to sediment. The potential for sediment recontamination associated with this facility is low provided that Rogers Machinery maintains appropriate source control BMPs.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and historical machine shop operations, there is a potential for soil and groundwater contamination. The facility is approximately 1,000 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.20.5 Data Gaps

- Additional information regarding the potential contaminants in the wash water generated by the pressure washer is needed to determine if it is a potential source of sediment recontamination.

5.21 African Northwest, Inc.

Facility Summary: African Northwest, Inc.	
Tax Parcel No.	7328401005, 7328401010, 7328401020, 7328401030
Address	470 S Kenyon Street
Property Owner	Portentosa LLC
Parcel Size	1005: 1.26 acres (55,000 sq ft) 1010: 0.05 acre (1,996 sq ft) 1020: 0.53 acre (23,261 sq ft) 1030: 0.40 acre (14,516 sq ft)
Facility/Site ID	72668839
Alternate Name(s)	Elliot Bay Industries, Elliot Bay Industries Construction
SIC Code(s)	5999: Pet Supply Stores (African Northwest) 9999: Nonclassifiable Establishments
EPA ID No.	WAD988473310 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	UST 1883 (inactive)

Parcels 1005, 1010, 1020, and 1030 (Figure 5a) are contiguous parcels owned by Portentosa LLC bordered to the east by 5th Avenue S, to the south by S Kenyon Street, to the north by S Chicago Street, and to the west by Marine Lumber Services and SR 99. According to King County tax assessor records, the following buildings are present on the parcels:

- a 10,500 sq ft distribution warehouse, built in 2001, on parcel 1005;
- a 1,116 sq ft office building, built in 1969, on parcel 1010;
- a 5,980 sq ft open office building, built in 1969, on parcel 1020; and
- a 13,400 sq ft industrial light manufacturing building, built in 2001, on parcel 1030.

5.21.1 Current Operations

African Northwest is a wholesale pet and pet supply warehouse. The company sells freshwater tropical fish, tropical aquarium and terrarium plants, ornamental goldfish, birds, small mammals, and live and frozen feeder items (African Northwest 2011). The company has been in operation at 470 S Kenyon since 1997 (Dept of Revenue 2011h).

Storm drain catch basins are present on the facility and are plumbed to the public storm drain on 5th Avenue S, which is part of the 7th Avenue S SD system (SPU 2009z).

Materials and Waste Handling

African Northwest uses fluorescent light tubes and pesticides/herbicides/fertilizers, which are stored indefinitely at the facility. The company disposes of dead animals and animal wastes as solid waste to an onsite dumpster. High-risk, pollution-generating activities include:

- Vehicle, equipment, or building washing or cleaning;
- Truck or rail loading or unloading of liquid or solid materials;
- Outside portable container storage of liquids, food wastes, or dangerous wastes;
- Outside storage of non-containerized materials, by-products, or finished products;
- Parking or storage of vehicles and equipment; and
- Commercial animal handling.

African Northwest drains and cleans more than two hundred 20-gallon fish tanks two to three times a week resulting in 2,000 to 5,000 gallons of industrial wastewater generated weekly. Tank water contains chemicals such as methylene blue, formalin, furazone, and benzalkonium chloride. Wastewater drains from four to five interior trench drains to a sanitary sewer (SPU 2009z).

5.21.2 Historical Operations

Elliott Bay Industries produces and markets equipment, software, and technical support for the plywood industry. The company operated at 470 S Kenyon Street from 1941 to 2000 before moving to its current location at 7500 West Marginal Way South, Seattle (Elliott Bay Industries 2011). The current location is in the 2nd Avenue S SD basin.

5.21.3 Regulatory History

Elliott Bay Industries reported to Ecology as a hazardous waste generator from April 1990 to December 1993. Documentation available for the facility indicates that a UST was removed in 1985 and had previously been used to store petroleum (Ecology 1986a).

SPU conducted an initial inspection at African Northwest on September 11, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009ae):

- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Designate and properly dispose of all waste.
- Identify and properly manage all waste chemicals in outside storage area.
- Provide secondary containment for hazardous materials storage areas.

A follow-up inspection was conducted on October 23, 2009, and SPU determined the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2009as).

5.21.4 Potential for Sediment Recontamination

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

Stormwater and Spills

African Northwest has complied with corrective actions identified by SPU in 2009. The potential for sediment recontamination associated with this facility is low provided that African Northwest maintains appropriate source control BMPs.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.21.5 Data Gaps

African Northwest, Inc. appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.22 Tierney Electrical Manufacturing Company

Facility Summary: Tierney Electrical Manufacturing Company	
Tax Parcel No.	7327901825
Address	7901 7th Avenue S
Property Owner	South Park 7901 LLC
Parcel Size	0.52 acre (22,500 sq ft)
Facility/Site ID	12333317
SIC Code(s)	3612: Transformers Except Electronic
EPA ID No.	WAD009249350 (inactive)
NPDES Permit No.	SO3000253 (inactive)
UST/LUST ID No.	None

Tierney Electrical Manufacturing Company (Tierney Electrical Manufacturing) operates at parcel 1825 (Figure 5a), which is bordered by Brown Engineering to the south, 7th Avenue S to the east, S Kenyon Street to the north, and American Plastic Manufacturing to the west. According to King County tax assessor records, a 17,082 sq ft open office/industrial warehouse, built in 1961, is present on the parcel.

5.22.1 Current Operations

Tierney Electrical Manufacturing produces copper wound, dry-type electrical transformers. The company has built transformers at this location since 1938 (Tierney Electrical Manufacturing 2011). The facility has a loading/unloading bay that is fully covered. The facility does not conduct industrial activities or store any materials outside. There is one storm drain catch basin at the facility (Ecology 2007a). No additional information regarding current operations at the facility was available for review.

5.22.2 Historical Operations

Tierney Electrical Manufacturing has operated at this location since 1938. No additional information regarding historical operations at the property was available for review.

5.22.3 Regulatory History

Tierney Electrical Manufacturing reported to Ecology as an SQG hazardous waste generator from December 7, 1982, until December 31, 2004. Records indicate that waste generated during manufacturing in the mid-1980s include waste solvents and varnish (Ecology 1983a).

On December 28, 1992, Ecology granted Tierney Electrical Manufacturing coverage under the ISGP (Ecology 1992i). Tierney Electrical Manufacturing completed a SWPPP in February 1993. Ecology renewed the facility’s ISGP on December 18, 1995, and again on November 18, 2000 (Ecology 1996b, 2000c). There were no substantive changes made to the permit. Ecology issued a modified ISGP to Tierney Electrical Manufacturing on December 1, 2004 (Ecology 2004b).

Ecology conducted a stormwater compliance inspection at the facility on March 22, 2007. A representative of Tierney Electrical Manufacturing questioned the requirement for coverage under the ISGP because the only outdoor activity is employee parking. Ecology requested Tierney Electrical Manufacturing submit a no exposure form to Ecology to determine if the facility qualified for a CNE (Ecology 2007a). On December 10, 2007, Ecology granted the facility a CNE (Ecology 2007g). ISGP coverage was terminated on December 19, 2007, as a result of coverage under the CNE (Ecology 2008a).

5.22.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Tierney Electrical Manufacturing was granted a CNE in December 2007; therefore, the potential for sediment recontamination via this pathway is low.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the historical transformer fabrication operations, there is a potential for soil and groundwater contamination. The facility is approximately 900 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.22.5 Data Gaps

Tierney Electrical Manufacturing was granted a CNE. Therefore, no data gaps were identified for this property.

5.23 American Plastic Manufacturing Incorporated

Facility Summary: American Plastic Manufacturing Incorporated	
Tax Parcel No.	7327901990
Address	526 S Monroe Street
Property Owner	Vuong Quang and Ha Tu Huynh
Parcel Size	0.92 acre (40,000 sq ft)
Facility/Site ID	77734273
Alternate Name(s)	Victory Auto Bumpers
SIC Code(s)	3741: Plating and Polishing
EPA ID No.	WAD051236685: Victory Auto Bumpers (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

American Plastic Manufacturing Incorporated (American Plastic) operates at parcel 1990 (Figure 5a), which is bordered by S Monroe Street to the south, Tierney Electrical Manufacturing to the east, S Kenyon Street to the north, and a storage yard to the west.

The American Plastic facility consists of two buildings:

- a 4,500 sq ft industrial light manufacturing warehouse built in 1958, and
- a 4,880 sq ft industrial light manufacturing/open office building constructed in 1958.

5.23.1 Current Operations

American Plastic has operated at the 526 S Monroe Street location since 1992. The company produces plastic and biodegradable bags for trade shows, retailers, and food packaging (American Plastic 2011). No additional information regarding current operations at the facility was available for review.

5.23.2 Historical Operations

American Plastics historically pumped stormwater that ran toward its facility from the South Yard at Marine Lumber Service (Section 5.19) into the stormwater system at American Plastics, which is connected to the 7th Avenue S SD system (Schmoyer 2012).

Victory Auto Bumpers historically operated at the property (Ecology 2011s). No additional information regarding historical operations at the facility was available for a review.

5.23.3 Regulatory History

Victory Auto Bumpers was assigned EPA ID WAD051236685. The EPA ID has been inactive since March 18, 1985 (Ecology 2011s).

On June 10, 2009, Ecology and SPU inspected the American Plastic facility. The inspectors determined there may be a need for coverage under the ISGP. The facility denied the inspectors access to the production area (Jeffers 2009c). On June 18, 2009, Ecology notified American Plastic an additional inspection would be necessary to assess compliance with codes, regulations, and permits (Ecology 2009d). No information regarding follow-up inspections was available for review.

5.23.4 Potential for Sediment Recontamination

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

Stormwater and Spills

During a 2009 inspection, Ecology and SPU determined that American Plastics may require coverage under the ISGP. The potential for sediment recontamination via this pathway may be high.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.23.5 Data Gaps

- A follow-up business inspection is needed to verify compliance with applicable regulations and BMPs, to prevent the release of contaminants to the LDW.
- Additional information is needed to determine if American Plastic is covered under the ISGP for discharge to surface water or if it is eligible for a CNE.

5.24 Former Glitsa American

Facility Summary: Former Glitsa American	
Tax Parcel No.	7328400740
Address	327 S Kenyon Street
Property Owner	Tenor Company LLC
Parcel Size	1.17 acres (51,000 sq ft)
Facility/Site ID	63168342
Alternate Name(s)	Farwest Paint Manufacturing Company
SIC Code(s)	2851: Paints and Allied Products 3996: Hard Surface Floor Coverings
EPA ID No.	WAD097821862 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	UST 6178 (inactive) LUST 3910 (active)

The former Glitsa American Inc. (Glitsa American) facility historically operated at parcel 0740 (Figure 5a), which is bordered by Custom Roofing to the south, 5th Avenue S to the east, S Kenyon Street to the north, and West Marginal Way S to the west. A 6,500 sq ft storage warehouse, built in 1959, exists on parcel 0740.

5.24.1 Current Operations

The property is currently vacant. Environmental investigations and cleanups have been ongoing at the property since 2009. There is one catch basin present on the northeast corner of the property (SPU 2008g).

5.24.2 Historical Operations

The Farwest Paint Manufacturing Company operated at the facility from 1965 to 1977. The company manufactured paint products for companies in the Seattle area. The facility operated a 7,500-gallon mineral spirit (Stoddard solvent) UST on the eastern portion of the facility. The company moved to Tukwila in 1977 (Farwest Paint 2011).

Glitsa American operated at this facility from 1978 until 2008. The company was a wholesale distributor of hardwood floor finishes. Water-based finishes were manufactured at the facility. The facility had a KCIW discharge permit for a cleaning/rinsing process in the building. Approximately 5 to 10 gallons of wash water were discharged to the sanitary sewer daily. The manufacturing area had a baghouse for silica dust that was reused in the manufacturing process (SPU 2008g).

5.24.3 Regulatory History

Glitsa American notified Ecology of its intent to close the 7,500-gallon UST at the property in July 1992. In September 1992, Glitsa American notified Ecology of a confirmed release of mineral spirits from the UST (Ecology 1992e) and stated that the tank had not been used since the company purchased the facility in 1978 (Glitsa 2002). The UST was removed in 2009 (Section 5.24.4)

SPU conducted an initial inspection on February 20, 2008, and a follow-up inspection on April 7, 2008. During the February 2008 inspection, SPU identified the following corrective actions (SPU 2008i):

- Complete a written spill plan and post at appropriate locations at the facility.
- Educate employees about the spill plan and spill kit.
- Clean the catch basin located in the northeast portion of the property and cleanup the sediment accumulated on the ground surrounding the catch basin.
- Label all waste containers properly.

During the follow-up inspection in April 2008, SPU determined Glitsa American was in compliance and no further action was required (SPU 2008n).

5.24.4 Environmental Investigations and Cleanups

Several environmental investigations and cleanups have been performed at this property. Sample locations are shown on Figures 24a and 24b and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Tables 21 and 22. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-17 and D-18.

UST Closure (1992)

In 1992, the 7,500-gallon mineral spirit UST was reportedly pumped and cleaned in order to close the tank in place. Three holes were drilled through the tank to assess the quality of the surrounding soil. A release occurred during the closure process. Three soil samples were collected from below the tank. One sample collected near the west end of the UST had mineral spirit concentrations of 3,700 parts per million (ppm), which exceeded MTCA cleanup levels (Bison Environmental 1992b).

Site Exploration (2008)

Four groundwater monitoring wells, MW-1 through MW-4, were installed at the property in December 2008. The presence of groundwater contaminated with Stoddard solvent was detected immediately west of the UST at MW-1 and south of the UST at MW-4. The extent of the contaminated groundwater was not defined during the exploration (Environmental Associates 2009a).

UST Removal (2009)

In March 2009, approximately 1,500 gallons of water were pumped from the UST prior to the UST excavation. Strong mineral spirit odor and groundwater seeps were observed in the soil exposed by the tank excavation. Approximately 120 tons of soil were excavated and removed from the property. Five soil samples were collected from the excavation: one from each side wall and one from the base of the excavation. A field composite sample was collected from the excavated soil. The samples were analyzed for Stoddard solvent and BTEX. Stoddard solvent, ethylbenzene, and xylene concentrations exceeded MTCA Method A cleanup levels.

On March 5, 2009, an additional 58 tons of contaminated soil was excavated from the west end of the excavation. Three additional soil samples were collected from the northwest corner of the west sidewall, and southwest corner of the excavation. The soil samples were analyzed for Stoddard solvent and BTEX. Concentrations of Stoddard solvent, ethylbenzene, and xylene exceeded MTCA Method A cleanup levels.

The excavation was backfilled with clean quarry spalls and gravel. A polyvinyl chloride (PVC) pipe was installed to apply remediation-enhancing compounds to stimulate remediation of groundwater (Environmental Associates 2009a).

Soil and Groundwater Investigation (2009)

In April and May 2009, eight soil borings and six monitoring wells were completed at the property. Seven of the soil borings were advanced inside the warehouse. Soil samples were analyzed for metals, chlorinated VOCs, PCBs, Stoddard solvent, and BTEX. Groundwater samples were analyzed for chlorinated VOCs, Stoddard solvent, and BTEX.

Metals, PCBs, and chlorinated VOCs concentrations in soil samples were either not detected or were below MTCA Method A cleanup levels. Concentrations of Stoddard solvent, ethylbenzene, and total xylenes in soil samples exceeded MTCA Method A cleanup levels. Concentrations of VOCs, Stoddard solvent, and benzene in groundwater were detected above MTCA Method A cleanup levels.

Results indicated that a “hot spot” of Stoddard solvent impacted soil and groundwater appeared to be present directly west of the former UST location. Based on groundwater sample results, it appeared that a source of chlorinated solvents may exist on the property and/or up-gradient from the property (Environmental Associates 2009b).

The feasibility study estimated that approximately 345 tons of Stoddard solvent impacted soil may exist above the water table. A tentative remediation plan proposed to install and operate a VES and perform groundwater treatment (Environmental Associates 2009b).

Independent Cleanup Action (2009–2010)

In July 2009, a VES was installed. The VES was connected to existing perforated lines (installed during the former tank excavation) and three of the monitoring wells. Between October 2009 and February 2010, 16 peristaltic pumps were installed to increase recovery of solvent-laden groundwater, and 16 wells were added for vapor extraction and groundwater monitoring.

In December 2009 during the system expansion, the concentration of Stoddard solvent present in the study area soil ranged from 318 ppm to 9,800 ppm. In April 2010, the average concentration of Stoddard solvent in groundwater was 8,818 parts per billion (ppb), one order of magnitude decline from the average pretreatment concentration of 94,500 ppb Stoddard solvent. The continued operation of the VES and groundwater pumps at wells where groundwater concentrations remained greater than 10,000 ppb Stoddard solvent was recommended (Environmental Associates 2010).

5.24.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Environmental investigations and cleanups have been ongoing at the property since 2009. It is not known if appropriate source control BMPs have been implemented to prevent impacts to surface water during the environmental remediation of the property.

Groundwater Discharge

Contaminated groundwater associated with the former Glitsa American facility may infiltrate the 7th Avenue S SD system. Sediment COCs have not been detected in groundwater at Glitsa American. Therefore, the potential that contaminants from this property will impact sediments adjacent to the Riverside Drive source control area is very low, and given the distance between the property and the LDW (2,100 feet), the groundwater discharge pathway may be incomplete.

5.24.6 Data Gaps

- Additional information is needed to determine if appropriate source control BMPs have been implemented to prevent impacts to surface water during the environmental remediation of the property.

5.25 Former Brown Engineering

Facility Summary: Former Brown Engineering	
Tax Parcel No.	7327901805
Address	550 S Monroe Street
Property Owner	Mechland Properties LLC
Parcel Size	0.34 acre (15,000 sq ft)
Facility/Site ID	29149762
Alternate Name(s)	Mechanical Agents, Inc.
SIC Code(s)	3585: Refrigeration and Heating Equipment
EPA ID No.	WAH000007120 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel number 1805 (Figure 5a) is surrounded by other industrial properties to the west, industrial properties and S Kenyon Street to the north, 7th Avenue S to the east, and S Monroe Street to the south.

There are two building located on this property: a 7,840 sq ft industrial light manufacturing building constructed in 1967 and a 1,440 sq ft open office building constructed in 1967.

5.25.1 Current Operations

Mechanical Agents, Inc. (Mech Agents), a commercial plumbing, waterworks, irrigation, mechanical support systems, and fire protection products company, is the current operator at this facility (Mech Agents 2011).

No additional information regarding the current use of this property was available for review.

5.25.2 Historical Operations

Brown Engineering operated at this property from 1998 to 2000. The company manufactured air-conditioning and warm air heating equipment and industrial refrigeration equipment.

No additional information regarding historical operations was available for review.

5.25.3 Regulatory History

Brown Engineering reported to Ecology as a LQG of hazardous waste in December 1998 and as a XQG on August 3, 2000 (Ecology 2010d). The EPA ID number for this facility was inactive as of December 31, 1998.

SPU inspected the Mechanical Agents facility on October 1, 2009. No corrective actions were identified and the facility was in compliance (Stewart 2010).

SPU has collected several storm drain solids samples from the storm drain structures located at 7th Avenue S and S Monroe Street. These structures include manholes MH21B, MH228, and MH229 and right-of-way catch basins RCB170, RCB213, and RCB227 (Figures 7a and 7b). Samples were collected in April 2005, May 2009, and March 2011. Concentrations of PCBs, lead, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons have exceeded the storm drain screening values (Table 6a) (SPU 2010n; Schmoyer 2011).

5.25.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Mech Agents was inspected by SPU in October 2009. No corrective actions were identified during the inspection. It appears that Mech Agents is maintaining appropriate source control BMPs; therefore, the potential for sediment recontamination is low. However, concentrations of PCBs, copper, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons exceeded the storm drain screening values in a storm drain solids sample collected near the facility in March 2011.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.25.5 Data Gaps

Based on the October 2009 inspection performed by SPU, Mech Agents appears to maintain appropriate source control BMPs. However, in March 2011, concentrations of PCBs, metals, PAHs, phthalates, other SVOCs, and petroleum hydrocarbons exceeded the storm drain screening values in a storm drain structure near the facility.

- A re-inspection of Mech Agents is needed to verify that the facility is maintaining appropriate source control BMPs.

5.26 Westeel Company

Facility Summary: Westeel Company	
Tax Parcel No.	7327901590
Address	8001 7th Avenue S
Property Owner	A G Gelvin & L A McMillan
Parcel Size	0.17 acre (7,500 sq ft)

Facility Summary: Westeel Company	
Facility/Site ID	19739
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Westeel Company operates at parcel 1590 (Figure 5a). The facility is bordered by Seidelhuber Iron & Bronze Works to the south, 7th Avenue S to the east, S Monroe Street to the north, and the former King Auto & Truck Wrecking to the west. A 2,800 sq ft steel manufacturing building, built in 1957, is present on parcel 1590.

5.26.1 Current and Historical Operations

Information regarding current and historical operations at this facility was not available for review.

5.26.2 Regulatory History

SPU and Ecology conducted an initial inspection at the facility on June 10, 2009. Inspectors identified outside storage of paint products as a source control issue (Jeffers 2009c); however, no corrective actions were identified (Ecology 2009e).

No additional information regarding regulatory history was available for review.

5.26.3 Potential for Sediment Recontamination

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

Stormwater and Spills

Westeel Company was inspected by SPU and Ecology in 2009. No corrective actions related to stormwater pollution prevention or spill prevention were identified during the inspection. It appears that Westeel Company is maintaining appropriate source control BMPs; therefore, the potential for sediment recontamination is low. However, concentrations of PCBs, copper, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons exceeded the storm drain screening values in a storm drain solids sample collected near the facility in March 2011.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.26.4 Data Gaps

Westeel Company appears to maintain appropriate source control BMPs. However, in March 2011, concentrations of PCBs, metals, PAHs, phthalates, other SVOCs, and petroleum hydrocarbons exceeded the storm drain screening values in a storm drain structure near the facility.

- A re-inspection of Westeel Company is needed to verify that the facility is maintaining appropriate source control BMPs.

5.27 King Auto & Truck Wrecking, Inc.

Facility Summary: King Auto & Truck Wrecking, Inc.	
Tax Parcel No.	7327901605
Address	543 S Monroe Street
Property Owner	Timothy Pennington
Parcel Size	0.34 acre (15,000 sq ft)
Facility/Site ID	2278
SIC Code(s)	5093: Scrap and waste materials 5015: Motor vehicle parts, used, merchant wholesalers
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 1605 is bordered by S Monroe Street to the north, Westeel Company to the east, Seidelhuber Iron Works to the south, and the former KJM Electrical and Modern Machine to the west.

There are two buildings located on parcel 1605 (Figure 5a), a 544 sq ft office warehouse built in 1989 and a 2,880 sq ft storage warehouse built in 1983. The property is unpaved.

5.27.1 Current and Historical Operations

Since 1998, several used automotive parts and automobile wrecking companies have operated at this facility under variations of the name King Auto & Truck Wrecking.

The original King Auto & Truck Wrecking, owned by Rick King, operated from 1988 to 2009 collecting crashed cars, removing usable automotive parts for resale, and crushing and selling the resulting scrap metal to a metal recycler. James Bang purchased King Auto & Truck Wrecking in 2009 and operated under the name King Auto and Truck Parts, Inc. (King Auto and Truck Parts) until 2010 (SPU 2009ax). This facility was sold in April 2011 and is currently operated as King Auto Wrecking.

Material and Waste Handling

King Auto and Truck Parts collected petroleum/oils, antifreeze, and car batteries as part of its operations at the time of the February 2003 inspection (SPU 2003e). In the outdoor storage areas, antifreeze and petroleum/oils were stored and covered without secondary containment. Automotive parts were stored uncovered on the unpaved lot, and batteries were covered and stored in secondary containment. Batteries and used oil were temporarily stored at the property and later shipped off property for disposal. Antifreeze was given to a friend of the company.

High-risk, pollution-generating activities included liquid storage in stationary, aboveground tanks; outside storage of non-containerized materials, by-products, or finished products; outside portable container storage of liquids, food wastes; or dangerous wastes, vehicle and equipment maintenance and repair; and parking or storage of vehicles and equipment (SPU 2009ax).

Other waste streams identified by Ecology in a 2010 inspection included mercury, universal waste lamps, and oily/greasy shop towels. Mercury was disposed of through Ecology's mercury vehicle switch recycling program. Universal waste lamps were stored on the property indefinitely, and the company intended to wash the shop towels at a Laundromat (Ecology 2010e).

Stormwater and Wastewater Discharges

These companies lease the bathroom at the vacant lot across the street (542 S Monroe Street, parcel 7327902025) for running water and sewer since parcel 1605 does not have running water or sewer facilities (Ecology 2010e).

This facility has one 4 ft by 4 ft catch basin located in the southern storage yard and one trench drain located in the facility entrance.

The catch basin and trench drain, both equipped with sump pumps at this facility, were not regularly inspected and cleaned. During a 2009 inspection, oil/grease contamination and sediment accumulation was observed in the catch basin and trench drain, and the outdoor gravel storage areas had oil staining or a visible sheen. The catch basin discharged along the south property line, and the trench drain discharged along the west property line next to the KJM Electric building (SPU 2009ax). An inspection in 2003 observed small amounts of oil and/or motor fluid stains in the parking areas and access roads (SPU 2003e).

5.27.2 Regulatory History

SPU conducted an initial inspection at King Auto & Truck Wrecking on February 5, 2003. SPU identified the following corrective actions as a result of the initial inspection (SPU 2003f).

- Complete a written spill plan and post at appropriate locations at the facility.
- Train employees on spill plan procedures.

A follow-up inspection was conducted on April 24, 2003. SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2003m).

SPU conducted another inspection at King Auto & Truck Parts on November 16, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009ax).

- Complete a written spill plan and post at appropriate locations at the facility.
- Train employees on spill plan procedures.
- Properly dispose of spent antifreeze.

A re-inspection was conducted on December 21, 2009. SPU determined that the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2009bg).

Ecology conducted a compliance inspection at King Auto Wrecking on May 6, 2010. Ecology identified the following corrective actions as a result of the initial inspection (Ecology 2010e):

- Designate materials used to absorb spilled antifreeze and identify the contents of a 55-gallon drum of unknown material and provide documentation that the designation of the solid wastes has occurred.
- Properly label, date, and dispose of universal waste bulbs.
- Accumulate antifreeze in a manner to prevent releases to the environment and keep containers closed.
- Do not launder oily shop towels at a Laundromat.

As a result of a compliance inspection in May 2010, Ecology determined that King Auto Wrecking was a SQG (Ecology 2010e). A Compliance Certificate was submitted to Ecology by King Auto Wrecking on May 18, 2010 (Ecology 2010f).

SPU has collected several storm drain solids samples from right-of-way catch basins located at 7th Avenue S and S Monroe Street. These structures include right-of-way catch basins RCB170, RCB213, and RCB227 (Figures 7a and 7b). Samples were collected in April 2005, May 2009, and March 2011. Concentrations of PCBs, lead, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons have exceeded the storm drain screening values (Table 6a) (SPU 2010n; Schmoyer 2011).

5.27.3 Potential for Sediment Recontamination

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

Stormwater and Spills

King Auto Wrecking appears to have complied with corrective actions identified by SPU in 2007 and 2009. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs. However, concentrations of PCBs, copper, mercury, zinc, benzo(g,h,i)perylene, chrysene, BEHP, butyl benzyl phthalate, dimethylphthalate, 4-methylphenol, and diesel- and heavy oil-range hydrocarbons exceeded the storm drain screening values in a storm drain solids sample collected near the facility in March 2011.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and historical auto wrecking operations, there is a potential for soil and groundwater contamination. The facility is approximately 1,200 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.27.4 Data Gaps

King Auto Wrecking appears to have implemented appropriate source control BMPs and has complied with corrective actions identified by SPU and Ecology. However, in March 2011, concentrations of PCBs, metals, PAHs, phthalates, other SVOCs, and petroleum hydrocarbons exceeded the storm drain screening values in a storm drain structure near the facility.

- A re-inspection of King Auto Wrecking is needed to verify that the facility is maintaining appropriate source control BMPs.

5.28 Former KJM Electric Co/Former Chemithon Surface Finishing Inc.

Facility Summary: Former KJM Electric Co/ Former Chemithon Surface Finishing Inc.	
Tax Parcel No.	7327901660
Address	521 S Monroe Street
Property Owner	Bank of America
Parcel Size	0.40 acre (17,500 sq ft)
Facility/Site ID	1370584: KJM Electric 88237831: Chemithon Surface Finishing Inc.
SIC Code(s)	7694: Electric motor repair and maintenance services, commercial or industrial (KJM Electric) 5999: Miscellaneous Retail Stores, NEC (Chemithon)
EPA ID No.	CRK000043240: Chemithon (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 1660 (Figure 5a) is bordered by Seidelhuber Iron & Bronze Works to the south, King Auto & Truck Wrecking to the east, S Monroe Street to the north, and the 8000 5th Avenue S location of Modern Machine to the west.

There is one building located on this property, an 11,970 sq ft storage warehouse built in 1979.

5.28.1 Current Operations

This industrial property is currently listed for lease (Loop Net 2011).

5.28.2 Historical Operations

KJM Electric

KJM Electric Co (KJM Electric) was an electric motor repair and maintenance services company that operated at 521 S Monroe Street from at least 2008 to 2010. No additional information regarding the operations and activities performed by KJM Electric was available for review.

Chemithon Surface Finishing

Chemithon Surface Finishing (Chemithon) is part of the Chemithon Corporation, which was established in 1954. Chemithon Surface Finishing provides equipment, processes, and supplies for the surface finishing and the printed circuit board industries. It fabricates plastic, steel or lined tanks, ventilation plenums and hoods, new or retrofit aqueous degreasing systems, drying ovens, conveyor systems, filtering systems, pump stations, and other custom engineered products (Chemithon 2011). The company operated at 521 S Monroe Street from at least 1996 to 2004. The company also has a facility at 5430 West Marginal Way SW (Glacier Bay source control area). No additional information regarding historical operations at the property was available for review.

5.28.3 Regulatory History

KJM Electric

Ecology conducted a compliance inspection at KJM Electric on October 29, 2008. Ecology identified the following corrective actions as a result of the initial inspection (Ecology 2008u).

- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Provide secondary containment for hazardous materials storage areas.
- Label all waste containers.
- Store waste in compliance with fire code.

Follow-up inspections were conducted on January 26, 2009 (Jeffers 2009a), March 10, 2009 (Jeffers 2009c), and April 7, 2009. Ecology determined that the facility had satisfactorily completed the corrective actions following the April 2009 inspection (Ecology 2009b).

Chemithon Surface Finishing

From January 1996 to February 2004, Chemithon was listed as an Emergency Hazardous Chemical Reporting Tier 2 company. No additional regulatory interactions for Chemithon were available for review.

5.28.4 Potential for Sediment Recontamination

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

Stormwater and Spills

The facility at this property is currently vacant; therefore, there are presumably no operations or activities performed that have the potential to contaminate stormwater or result in spills. At this time, the stormwater and spills pathway is incomplete.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the historical operations, there is a potential for soil and groundwater contamination. The facility is approximately 1,300 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.28.5 Data Gaps

- Information regarding any future industrial operations/activities will be needed to verify that the performance of these operations/activities is in compliance with all applicable regulations and BMPs.

5.29 Seidelhuber Iron & Bronze Works Inc.

Facility Summary: Seidelhuber Iron & Bronze Works Inc.	
Tax Parcel No.	7327901775
Address	8009 7th Avenue S
Property Owner	Henry R Seidelhuber
Parcel Size	1.03 acres (45,000 sq ft)
Facility/Site ID	59692187
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 687 (active)

Seidelhuber Iron & Bronze Works Inc. (Seidelhuber Iron & Bronze Works) is located on parcel 1775 (Figure 5a). The facility is bordered by S Elmgrove Street to the south, 7th Avenue S to the east, King Auto Wrecking and Westeel Company to the north, and Modern Machine Company to the west.

The Seidelhuber Iron & Bronze Works facility has the following buildings:

- a 15,350 sq ft industrial manufacturing building built in 1964,
- a 12,700 sq ft industrial manufacturing building built in 1970,
- a 6,250 sq ft industrial manufacturing building built in 1970, and
- a 2,600 sq ft office building built in 1950.

5.29.1 Current Operations

Seidelhuber Iron & Bronze Works is a steel and metal fabricator. As recently as 2008, the facility constructed aluminum docks for installation in South Lake Union (Seattle Industry 2008).

The Seidelhuber Iron & Bronze Works was founded in 1906 on Sturgis Avenue in the Beacon Hill area of Seattle. The company specialized in lobby entrances, staircases, fire escapes, as well as marquees. It appears the facility moved to the current location sometime in the 1960s. The facility made highly specialized wind tunnels for Boeing. During the 1970s, Seidelhuber Iron & Bronze Works supplied steel for marinas and ferryboat landings in Alaska (Seattle Industry 2008).

No additional information regarding current operations at the facility was available for review.

5.29.2 Historical Operations

Seidelhuber Iron & Bronze Works has operated at this location since the 1960s (Seattle Industry 2008). No additional information regarding historical operations at the property was available for review.

5.29.3 Regulatory History

On February 27, 2007, EPA conducted a UST inspection at the facility. EPA issued a Compliance Order WA-00101 to Seidelhuber Iron & Bronze Works for inadequate UST release detection records. Seidelhuber Iron & Bronze Works took corrective actions and were in compliance as of March 16, 2007 (EPA 2008c).

Ecology conducted a UST inspection on January 26, 2010. The facility was in compliance with all UST inspection criteria (Ecology 2010c).

In March 2011, SPU collected a storm drain solids sample from right-of-way catch basin RCB228, located at 5th Avenue S and S Elmgrove Street. Concentrations of butyl benzyl phthalate and benzyl alcohol exceeded the storm drain screening values (Schmoyer 2011).

5.29.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are shown on Figure 25. A summary of all chemicals in soil detected at the facility is included in Table D-19.

UST Removal (1991)

On September 11, 1991, a 1,000-gallon gasoline UST was removed from the facility. The UST was originally installed in approximately 1961 on the southern portion of the property along S Elmgrove Street. One sample was collected from beneath the tank and two samples were collected from the north and south sidewalls. Soil samples were analyzed for TPH and BTEX constituents. Visual observations of the removal revealed no signs of contamination. TPH and benzene were not detected and the remaining BTEX constituent concentrations were detected below MTCA Method A cleanup levels (B&C Equipment 1991). On October 1, 1991, a 1,100-gallon fiberglass reinforced plastic gasoline UST was installed in the same location (Ecology 2010c).

5.29.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Concentrations of butyl benzyl phthalate and benzyl alcohol exceeded the storm drain screening values in a storm drain solids sample collected from a right-of-way catch basin located near the facility.

The industrial operations performed at Seidelhuber Iron & Bronze Works may represent a source of contaminants to stormwater, particularly if any outdoor operations are performed. No records of source control inspections were found for the facility. The potential for sediment recontamination via the stormwater and spills pathway is low to moderate.

Groundwater Discharge

During a UST removal performed in 1991, toluene, ethylbenzene, and xylenes were detected in soil below MTCA Method A cleanup levels. VOCs are not considered to be LDW sediment COCs. However, given the current and historical operations, there is a potential for soil and groundwater contamination. The facility is approximately 1,300 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.29.6 Data Gaps

- Information regarding any ongoing industrial activities is needed to verify that this facility is in compliance with all applicable regulations and BMPs.

5.30 Westec Industries, Inc. and McFabco Steel Corporation

Facility Summary: Westec Industries, Inc. and McFabco Steel Corporation	
Tax Parcel No.	7327900430, 7327900470
Address	0430: 8101 7th Avenue S 0470: 540 S Elmgrove Street (formerly 8111 7th Avenue S)
Property Owner	Henry Seidelhuber
Parcel Size	0430: 0.80 acre (35,000 sq ft) 0470: 0.69 acre (30,000 sq ft)
Facility/Site ID	45558857: Yale Materials Handling NW Inc. 89886819: Westec Industries
Alternate Name(s)	Yale Materials Handling NW Inc., Blue Chip Steel Fabrication
SIC Code(s)	3537: Industrial Trucks and Tractors (Yale Materials Handling NW Inc.) 5082: Construction and Mining (Except Petroleum) Machinery and Equipment
EPA ID No.	WAD988476271: Westec Industries (inactive) WA0000866947: Yale Materials Handling NW Inc. (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcels 0430 and 0470 (Figure 5a) are adjacent parcels that are bordered by 7th Avenue S to the east, S Elmgrove Street to the north, S Southern Street to the south and SR 99 to the west. Westec Industries occupies parcel 0430 and the eastern portion of parcel 0470. McFabco Steel Corporation (McFabco Steel) occupies the western portion of parcel 0470.

King County tax assessor records indicate there are two buildings located on parcel 0430:

- a 14,000 sq ft industrial light manufacturing building constructed in 1977, and

- a 10,000 sq ft industrial light manufacturing building constructed in 1986.

King County tax assessor records indicate there are two buildings located on parcel 0470:

- a 12,700 sq ft industrial light manufacturing building constructed in 1986, and
- a 10,000 sq ft prefabricated steel building constructed in 1988, apparently occupied by McFabco Steel.

5.30.1 Current Operations

Westec Industries

Westec Industries is a metal fabricating shop involved in welding and painting of steel products from 30 to 60 feet long. The company began operations at this facility in 1990. Westec Industries currently uses 540 S Elmgrove Street as its operating address. The company historically used 8111 7th Avenue S as its address for the facility (Ecology 1990a).

Westec Industries accumulates solvent-based waste paint, waste oil, and paint spray gun filters as part of their operations. The waste is temporarily stored at the facility and later shipped off property for disposal (Ecology 2001).

McFabco Steel

McFabco Steel fabricates steel for construction, retail, commercial, and industrial projects. The facility produces columns, beams, stairs, and railings (McFabco Steel 2011). The facility uses a metalworking compound that contains chlorinated paraffin. Used oil drums are also present on the facility (Jeffers 2009c).

McFabco Steel was formerly known as Blue Chip Steel Fabrication. The company has been in operation since 1998 (McFabco Steel 2011).

5.30.2 Historical Operations

Yale Materials was an industrial truck and tractor manufacturing company that operated at 8101 7th Avenue S from the mid-1990s to approximately 2000 (Dept of Revenue 2011d). No additional information regarding historical operations at the property was available for review.

5.30.3 Regulatory History

In March 2011, SPU collected a storm drain solids sample from right-of-way catch basin RCB228, located at 5th Avenue S and S Elmgrove Street. Concentrations of butyl benzyl phthalate and benzyl alcohol exceeded the storm drain screening values (Schmoyer 2011).

Westec Industries

Ecology conducted an initial inspection at Westec Industries on December 13, 2001. Ecology identified the following corrective actions as a result of the initial inspection (Ecology 2001):

- Determine if filters from paint spray filter bank and remaining unused materials are hazardous waste.

- Cover and provide containment for the scrap metal bin to assure contaminants cannot enter the stormwater runoff.
- Appropriately label and date waste paint containers.
- Provide secondary containment for waste paint related material.
- Inspect dangerous waste accumulation areas weekly and maintain an inspection log.
- Keep containers of used oil closed.
- Appropriately label used oil containers.

Westec Industries submitted a compliance report to Ecology on June 12, 2002, notifying them that all corrective actions had been implemented (Westec Industries 2002).

Ecology conducted a facility visit with regard to a delinquent Dangerous Waste Annual Report for 2006 on September 18, 2007 (Ecology 2007f). The report was not available for review.

Ecology conducted an inspection at Westec Industries on September 16, 2008. Ecology identified the following corrective actions as a result of the inspection (Ecology 2008r).

- Properly store, label, and dispose of used fluorescent tubes.
- Determine if coverage under the ISGP is required.
- Determine if paint booth filters are still considered hazardous waste since switch to waterborne coating.
- Put wastewater from cleaning latex equipment into the sanitary sewer.
- Employ BMPs to allow reuse of paint rags, and do not accumulate used towels for more than 180 days before sending them to be recycled.
- Clean the storm drain trench located inside the parts warehouse.

Ecology conducted a re-inspection on October 29, 2008, and determined that the facility had satisfactorily completed the corrective actions and was in compliance (Ecology 2008t).

McFabco Steel

Ecology inspected McFabco Steel on March 3, 2009. The following corrective actions were identified (Jeffers 2009c):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Close and label all containers of used oil.

Additional issues identified include the use of alternative metalworking compound that contained chlorinated paraffin and possible need for coverage under the ISGP.

McFabco Steel took the following actions to address compliance issues (McFabco 2009):

- Posted instructions for handling spills.
- Obtained a spill kit and educated employees on handling spills.
- Designated a specific container storage area and obtained EPA approved containers.

- Changed metalworking fluid and cutting fluid to a non-chlorinated fluid.
- The facility no longer stores materials outside and planned to apply for a CNE. The facility achieved compliance on May 7, 2009 (Jeffers 2009).

5.30.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Westec Industries has complied with corrective actions identified by Ecology in 2008. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

McFabco Steel has complied with corrective actions identified by SPU in 2009. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

Concentrations of butyl benzyl phthalate and benzyl alcohol exceeded the storm drain screening values in a storm drain solids sample collected from a right-of-way catch basin located near the facility.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and potentially historical metal fabrication operations, there is a potential for soil and groundwater contamination. The facility is approximately 1,300 feet southwest of the LDW. The potential for sediment recontamination via the groundwater discharge pathway is unknown, but is likely to be low due to the distance between the facility and the LDW.

5.30.5 Data Gaps

Westec Industries and McFabco Steel appear to maintain appropriate source control BMPs and have complied with corrective actions identified by Ecology. However, concentrations of butyl benzyl phthalate and benzyl alcohol exceeded the storm drain screening values in March 2011.

- A re-inspection of Westec Industries and McFabco Steel is needed to verify that the facilities are maintaining appropriate source control BMPs.

5.31 Modern Machine Company & Olsson Manufacturing Co.

Facility Summary: Modern Machine Company & Olsson Manufacturing Co.	
Tax Parcel No.	7327900600, 7327901685
Address	0600: 524 S Southern Street 1685: 8000 5th Avenue S
Property Owner	0600: James A. Nye 1685: Bank of America

Facility Summary: Modern Machine Company & Olsson Manufacturing Co.	
Parcel Size	0600: 0.34 acre (15,000 sq ft) 1685: 0.80 acre (35,000 sq ft)
Facility/Site ID	7969: Olsson Manufacturing Co. 25678771: Modern Machine Company 81861618: Former Snyder Industries Inc. 92291647: Former Resource Recycling Technologies
Alternate Name(s)	Snyder Industries Inc. Resource Recycling Technologies, Federal Marine & Defense Services, Fraser Boiler & Ship Repair LLC, A.I.E.M. Industrial, Inc., Chemithon
SIC Code(s)	<u>Modern Machine Company</u> 8711: Engineering Services 3599: Industrial and Commercial Machinery and Equipment (Machine Shops) <u>Olsson Manufacturing Co.</u> 3559: Balancing equipment, motor vehicle, manufacturing
EPA ID No.	WAH000018861: Modern Machine WAH000000125: Former Snyder Industries (inactive) WAH000017434: Former Resource Recycling Technologies (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Modern Machine operates on parcels 0600 and 1685. Olsson Manufacturing also operates on parcel 0600 (Figure 5a). These parcels are located on the south and north sides on S Elmgrove Street, respectively, to the east of 5th Avenue S.

Parcel 0600 is bordered by a storage warehouse and SR 99 to the west, S Elmgrove Street to the north, Westec Industries to the east, and S Southern Street to the south. There is one aggregate building located on this property, a 10,200 sq ft industrial light manufacturing building constructed in 1973 that has been divided into three sections.

Parcel 1685 is bordered by S Elmgrove Street to the south, 5th Avenue S to the west, S Monroe Street to the north, and Seidelhuber Iron Works and King Auto & Truck Wrecking to the east. There is one 24,024 sq ft storage warehouse, built in 1977, located on the parcel.

5.31.1 Current Operations

Modern Machine

Modern Machine Company (Modern Machine) is a CNC milling, fabrication, and welding shop established in 1990. It manufactures parts from castings, forgings, bar extrusion, and plate as well as aerospace alloys (Modern Machine 2011).

The company began operating on parcel 0600 in 1993. In 2008, the company expanded its operations to parcel 1685 (SPU 2008h). Modern Machine uses 519 S Elmgrove Street as its operating address.

Modern Machine uses petroleum/oils and scrap metal and produces waste machine coolant as a byproduct. Fluorescent light tubes are at the facility. The fluorescent light tubes and scrap metal are temporarily stored at the facility and later shipped off property for disposal. High-risk, pollution-generating activities include truck or rail loading or unloading of liquid or solid materials, outside portable container storage of liquids, food wastes, or dangerous wastes, and outside storage of non-containerized materials, by-products, or finished products (SPU 2011a).

The company uses a metalworking fluid that contains chlorinated paraffin that is designated as a persistent dangerous waste (SPU 2011b).

There is one storm drain catch basin, which is located in the southeast corner of the south storage yard of the parcel. According to an SPU inspection in May 2011, the storm drain is connected to the 7th Avenue South SD system (SPU 2011b).

Olsson Manufacturing

Olsson Manufacturing Co. (Olsson Manufacturing) is a boat transom davit and crane davit manufacturing company that has operated at parcel 0600 since 1992. Olsson Manufacturing uses 525 S Southern Street as its operating address (Olsson Manufacturing). No additional information regarding the current operations at this facility was available for review.

5.31.2 Historical Operations

Limited information was available for review for three historical operators at this property and is summarized below. In addition, Chemithon historically operated at parcel 1685 (Harding 2002). No additional information regarding historical operations at the property was available for review.

Former Resource Recycling Technologies

Resource Recycling Technologies (RRT), also known as Federal Marine & Defense Services, and Fraser Boiler & Ship Repair LLC, was a metals recovery and recycling company. The company operated on parcel 1685 at 8000 5th Avenue S from 2002 to 2010 before moving to Bellevue.

Former Snyder Industries Inc.

Snyder Industries Inc. (Snyder Industries) was an ornamental and architectural metalwork manufacturing company that operated between 1974 and 1996. It is not known if Snyder Industries operated at parcel 0600 for this entire length of time. However, Snyder Industries was operating at parcel 0600 from 1984 (Snyder Industries 1989) to 1996 (KCIW 1996a).

Former A.I.E.M. Industrial, Inc.

A.I.E.M. Industrial, Inc. (AIEM) was a commercial and industrial machinery and equipment repair and maintenance company that operated between 1989 and 2001. The business address listed by the Washington Secretary of State was 524 S Southern Street. The dates when this company operated at this facility were not able to be determined.

5.31.3 Regulatory History

Modern Machine

Modern Machine reported to Ecology as a SQG hazardous waste generator from August 2002 to January 2004, in December 2004, and as a LQG since August 2011. From December 2003 to December 2004, the facility reported hazardous waste management activity.

SPU conducted an initial inspection at Modern Machine at 519 S Elmgrove Street (parcel 0600) on March 24, 2003. SPU identified the following corrective actions as a result of the initial inspection (SPU 2003l):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain two sets of spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Clean and maintain the catch basin on the property.
- Cover or remove all unwanted scrap metal pieces from the property and the end of S Southern Street.
- Remove all barrels and dispose of them properly.

SPU re-inspected Modern Machine on June 2, 2003. SPU determined the facility had satisfactorily completed the corrective actions and was in compliance (SPU 2003t).

SPU conducted an initial inspection at Modern Machine at 519 S Elmgrove Street (parcel 0600) on February 20, 2008. SPU identified the following corrective actions as a result of the initial inspection (SPU 2008l):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Properly store waste oil drums.
- Provide cover and secondary containment for outside waste storage areas.
- Correctly label all waste containers.
- Cover scrap metal bins and eliminate leaks.

As a result of the initial inspection on February 20, 2008, SPU recommended sampling of the catch basins associated with this facility. The catch basin located adjacent to the facility in the right-of-way on S Southern Street was sampled on March 12, 2008 (RCB132). Concentrations of copper, zinc, BEHP, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a).

SPU conducted a follow-up inspection at Modern Machine at parcel 0600 on May 9, 2008, and found that the company had expanded its operations to parcel 1685. SPU conducted an initial inspection at parcel 1685 on May 9, 2008 (SPU 2008q). On May 12, 2008, SPU determined the Modern Machine facility at parcel 1685 was in compliance (SPU 2008s).

SPU conducted an initial inspection at the Modern Machine facility at parcel 0600 on May 27, 2011. During the inspection, petroleum, oils, and coolant were observed to be improperly accumulated and stored. The inspection determined that the drainage system was not regularly inspected or cleaned, did not have a detention or treatment system, and was more than 60 percent full of accumulated sediment. Inspectors also observed evidence of leaking from outdoor storage areas and an oil stain or visible sheen on the pavement. SPU identified the following corrective actions as a result of the initial inspection (SPU 2011b):

- Develop a spill prevention plan and train employees on spill plan procedures.
- Apply the following BMPs to all portable storage containers:
  - Store containers on a paved surface under a roof or other appropriate cover or in a building.
  - Store materials in a leak-proof container with a tight-fitting lid.
  - All containers must have labels identifying their contents.
  - Place drip pans beneath all taps on mounted containers and at all potential drip and spill locations during the filling and unloading of containers.
  - Properly inspect and maintain containers and container storage areas.
  - Secure drums in a manner that prevents accidental spillage, pilferage, or any unauthorized use.
  - Place containers mounted for direct removal of liquid chemicals inside containment area.
- For all hazardous or dangerous material containers:
  - Properly store and label hazardous and dangerous waste containers and provide secondary containment.
- Additional items:
  - Comply with conditional exclusions for SQG or manage waste in full compliance with the Dangerous Waste Regulations.
  - Determine if coverage under the ISGP is required for the facility.

During this inspection, SPU found that Modern Machine had accumulated approximately 3,200 pounds of used machine coolant, a persistent dangerous waste, elevating the company to a LQG status (SPU 2011b). As a result of this waste accumulation, SPU referred the property to Ecology (Ecology 2011i).

Ecology inspected Modern Machine on July 26, 2011, and identified the following corrective actions (Ecology 2011w):

- Submit a Site ID Form and obtain a RCRA Site Identification number.
- Provide a containment system for container accumulation areas that is capable of holding spills and leaks.
- Label all containers of dangerous waste.
- Write the accumulation start date on all containers holding dangerous waste.

SPU conducted another inspection on August 2, 2011. Modern Machine was still in the process of addressing the waste management corrective actions (SPU 2011d). On August 5, 2011, SPU issued a Second and Final Notice to Modern Machine that identified outstanding corrective actions (SPU 2011c).

SPU re-inspected Modern Machine on August 22, 2011. Modern Machine's RCRA identification number was reactivated and waste drums were stored outside in order to be picked up by a waste management company (SPU 2011d). Modern Machine sent SPU a completed hazardous waste manifest for the removal of 55-gallon drums on August 26, 2011. SPU confirmed the removal of chemical drums and waste during a re-inspection on August 30, 2011 (SPU 2011e).

Olsson Manufacturing

Ecology conducted an inspection at Olsson Manufacturing on January 6, 2009. Ecology identified the following corrective actions as a result of the inspection (Jeffers 2009a):

- Apply for coverage under the ISGP or obtain a CNE.

No further information regarding Olsson Manufacturing was available for review during the preparation of this Data Gaps Report.

Resource Recycling Technologies

RRT reported to Ecology as a hazardous waste generator from 2002 to 2009 and reported hazardous waste activity from 2003 to 2010.

On February 21, 2008, Ecology conducted an informal visit at RRT. The facility was on the "to inspect" list as a former location of Fraser Boiler. At the time of the inspection, Modern Machine was scheduled to expand onto the property from across the street. According to the inspection, RRT was relocating and taking their business to Portland, Oregon, and was in the process of cleaning up lead contamination at the 8000 5th Avenue location (parcel 1685). Ecology observed twelve 55-gallon drums marked as dangerous waste and labeled DOT class 9. RRT said the source of the waste was recycling of lead-shielded telephone cables (Jeffers 2008b). No records of the environmental cleanup activities performed to remove lead contamination at parcel 1685 were available for review.

Snyder Industries

Snyder Industries was permitted to discharge waste water to the sanitary sewer under Discharge Permit Nos. 7227 and 7528 from at least 1984 until 1996 (Snyder Industries 1989; METRO KCIW 1996a). Snyder Industries reported to Ecology as a hazardous waste generator from January 1997 to December 1997. No further information regarding Snyder Industries was available for review during the preparation of this Data Gaps Report.

5.31.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Modern Machine has complied with corrective actions identified by SPU in 2009 and 2011. SPU directed Modern Machine to determine if they required coverage under an ISGP or CNE for discharge to surface water. If the facility is eligible for a CNE, the potential for sediment recontamination is likely to be low. However, if the facility requires coverage under the ISGP, the potential for sediment recontamination may be high.

In 2009, Ecology directed Olsson Manufacturing to apply for coverage under the ISGP or to obtain a CNE. If the facility is eligible for a CNE, the potential for sediment recontamination is likely to be low. However, if the facility requires coverage under the ISGP, the potential for sediment recontamination may be high.

Groundwater Discharge

Lead contamination is present at parcel 1685. RRT was in the process of removing the contaminated media before vacating the property. The media affected by the contamination was not indicated in the information available for review. Lead has not been identified as a COC for the sediments near the Riverside Drive source control area; therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.31.5 Data Gaps

- Additional information is needed to determine if Modern Machine obtained coverage under the ISGP or a CNE.
- Additional information is needed to determine if Olsson Manufacturing obtained coverage under the ISGP or a CNE.

5.32 Machinists Inc. Tooling Division

Facility Summary: Machinists Inc. Tooling Division	
Tax Parcel No.	7327900310
Address	8201 7th Avenue S
Property Owner	HTL Properties LLC
Parcel Size	0.40 acre (17,418 sq ft)
Facility/Site ID	5885095
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Machinists Inc. Tooling Division operates on parcel 0310 (Figure 5a), which is bordered by an industrial facility to the south, 7th Avenue S to the east, S Southern Street to the north, and a storage lot to the west.

The Machinists Inc. Tooling Division facility on parcel 0310 consists of the following buildings:

- a 1,500 sq ft industrial light manufacturing building constructed in 1970,

- a 8,260 sq ft industrial light manufacturing building constructed in 1972, and
- a 740 sq ft office building constructed in 1917.

Machinists Inc. also has a facility on the southeast corner of 5th Avenue S and S Austin Street, and it is discussed in Section 5.3. This section of the report will refer to Machinists Inc. on parcel 0310 as the Tooling Division.

5.32.1 Current Operations

Machinists Inc. describes its operations at this property as the Tooling Division (Jeffers 2008f). The facility has storm drain catch basins located in the outside storage yard that connect to the 7th Avenue South SD basin (Ecology 2008q). No additional information regarding the current operations performed by Machinists Inc. Tooling Division was available for review.

5.32.2 Historical Operations

Information regarding historical operations at this facility was not available for review.

5.32.3 Regulatory History

Ecology inspected the Machinists Inc. Tooling Division facility on September 17, 2008. The following corrective actions were identified (Ecology 2008q):

- Inspect the catch basins in the outside storage yard yearly.
- Implement proper housekeeping to reduce the potential for leaks and spills.
- Evaluate the need for coverage under the ISGP.

Machinists Inc. 7th Avenue S returned a completed compliance certificate to Ecology on October 8, 2008 (Ecology 2008p). Ecology did not re-inspect the facility.

5.32.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Machinists Inc. Tooling Division apparently completed the corrective actions required by Ecology in 2008. Ecology has directed the facility to evaluate the need for coverage under the ISGP; it is not clear if operations at the facility require coverage under the ISGP. Potential for sediment recontamination due to current facility operations is moderate to high.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and potentially historical machine shop operations, there is a potential for soil and groundwater contamination.

5.32.5 Data Gaps

- Additional information is needed to determine if Machinists Inc. Tooling Division is required to obtain coverage under the ISGP.

5.33 Tours Northwest

Facility Summary: Tours Northwest	
Tax Parcel No.	7883600054
Address	8221 7th Avenue S
Property Owner	Eagle Eye Enterprises Corp
Parcel Size	0.35 acre (15,360 sq ft)
Facility/Site ID	9457
Alternate Name(s)	Scenic Band Tours Co.
SIC Code(s)	4119: Local Passenger Transportation, Not Elsewhere Classified
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Tours Northwest operates at parcel 0054 (Figure 5a), which is bordered by SR 99 to the west, 7th Avenue S to the east, by the former Mike's Truck Repair and S Southern Street to the north, and Schubert Floor Coverings to the south.

There is one building located on the property 2,880 sq ft industrial light manufacturing building that was built in 1999.

5.33.1 Current Operations

Tours Northwest has operated at this location since 2006. Tours Northwest uses the facility for parking, washing, and maintenance for 10 tour buses (SPU 2009aj).

Tours Northwest uses antifreeze and petroleum/oils for repair and maintenance of their tour buses. The waste is temporarily stored at the facility and later shipped off property for disposal. High-risk, pollution-generating activities include vehicle, equipment, or building washing or cleaning; and parking or storage of vehicles and equipment (SPU 2009aj).

Stormwater associated with this property is conveyed to the sanitary sewer on S Southern Street.

Tours Northwest has one catch basin connected to an onsite bus wash pad. The bus wash pad was installed in 2006 and measures 25 feet by 50 feet. Wash water is discharged into a vault on the property and later pumped into the detention tank on the immediately adjacent property (former Mike's Truck Repair, parcel 0360) where it is pumped to a sanitary connection that drains to the combined sewer line (SPU 2009aj). King County determined no control document was required to discharge wastewater to the sanitary sewer (Tiffany 2012b).

5.33.2 Historical Operations

Information regarding historical operations at the property was not available for review.

5.33.3 Regulatory History

SPU conducted an initial inspection at Tours Northwest on October 1, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009ar):

- Acquire coverage under the ISGP for stormwater discharge to surface water.
- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Conduct all cleaning and washing activities to comply with requirements for prevention, minimization, and management of pollutants.
- Acquire a side sewer permit to connect to the sanitary sewer.

During a follow-up inspection on December 7, 2009, SPU determined that the facility had not achieved compliance (SPU 2009bc). A follow-up letter sent by SPU on December 28, 2009, stated that the necessary corrections had been made at the facility actions (SPU 2009bh).

A dye test was conducted at the Tours Northwest wash bay on October 6, 2009. No dye was observed in the sanitary line and no flow increase was observed after an hour of running water. No drainage was visible to the ditch along West Marginal Way S (SPU 2009aj). Further investigation found that a pump that drains the vault on the Tours Northwest property into the detention tank on parcel 0360 was broken. Following the investigation, the pump was fixed and wash water and stormwater now drain to the sanitary system on S Southern Street (Jeffers 2009d).

On February 16, 2012, King County determined Tours Northwest did not need a permit or other written authorization to discharge wastewater to the sanitary sewer (Tiffany 2012b).

5.33.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Stormwater from this property is pumped to the sanitary sewer and does not enter the 7th Avenue S SD system. Therefore, the potential for sediment recontamination via the stormwater/spills pathway is incomplete.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.33.5 Data Gaps

Tours Northwest appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property

5.34 Former Mike's Truck Repair & Fabrication

Facility Summary: Former Mike's Truck Repair & Fabrication	
Tax Parcel No.	7327900360
Address	515 S Southern Street
Property Owner	Eagle Eye Enterprises Corp
Parcel Size	0.45 acre (19,536 sq ft)
Facility/Site ID	11457
SIC Code(s)	7538: General Automotive Repair Shops
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 0360 (Figure 5a) is bordered by SR 99 to the west, several industrial properties and 7th Avenue South to the east, S Southern Street to the north, and Tours Northwest to the south.

One building is located on the property a 2,592 sq ft industrial light manufacturing building that was built in 2006.

5.34.1 Current Operations

As of September 2011, Mike's Truck Repair does not appear to operate at 515 S Southern Street. Current operations at this facility are unknown. Information regarding the current use of this property was not available for review during the preparation of this Data Gaps Report.

Wash water from Tours Northwest, located on the adjacent property is discharged into the detention tank located at this facility. From the detention tank, it is pumped to a sanitary connection on the property, which drains to the combined sewer line. Stormwater from the facility is conveyed to a right-of-way catch basin that is not connected to the 7th Avenue S SD system. A portion of the property is a gravel lot, stormwater may infiltrate the groundwater in this area (SPU 2009aa, aj).

5.34.2 Historical Operations

Mike's Truck Repair was a mobile truck repair facility that operated at this facility from 2007 to at least 2009 (SPU 2009aj). As of September 2011, the company's current address is at 4941 317th Avenue NE, Carnation, Washington.

The facility used antifreeze, batteries, petroleum/oils, and oil filters for vehicle repair. The waste was temporarily stored at the facility and later shipped off property for disposal. High-risk, pollution-generating activities included outside portable container storage of liquids, dangerous wastes, vehicle equipment maintenance and repair, and parking or storage of vehicles and equipment (SPU 2009aa).

5.34.3 Regulatory History

SPU conducted an initial inspection at Mike's Truck Repair on September 11, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009aa, ac):

- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Provide secondary containment for hazardous materials storage areas.
- Label all waste containers.

A follow-up inspection was conducted on October 20, 2009, none of the corrective actions identified during the initial inspection had been completed (SPU 2009at). SPU re-inspected the facility on November 9, 2009 and determined that the facility had satisfactorily completed the corrective actions (SPU 2009ay).

5.34.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Stormwater from this property is pumped to the sanitary sewer and does not enter the 7th Avenue S SD system. Therefore, the potential for sediment recontamination via the stormwater/spills pathway is incomplete.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.34.5 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

5.35 Hudson Bay Insulation

Facility Summary: Hudson Bay Insulation	
Tax Parcel No.	7883600005
Address	8230 5th Avenue S
Property Owner	Tytanic LLC
Parcel Size	1.33 acres (57,774 sq ft)
Facility/Site ID	76764554
Alternate Names(s)	Former Long Painting Co 5th Avenue
SIC Code(s)	1742: Plastering, Drywall, Acoustical, and Insulation Work

Facility Summary: Hudson Bay Insulation	
EPA ID No.	WAD988510731: Former Long Painting Co (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 0005 (Figure 5a) is bordered by 5th Avenue S to the west, SR 99 to the east, West Marginal Frontage Way to the northwest, and Coast Crane to the south.

There is one building located on this property, built in 1990, which contains one 6,028 sq ft open office (Suite A) and one 23, 591 sq ft warehouse (Suite B).

5.35.1 Current Operations

Hudson Bay Insulation

Hudson Bay Insulation has operated in Suite B of this facility since 2008 (SPU 2009az). Hudson Bay Insulation is a heat trace, insulation, and fire stopping contractor for commercial, manufacturing, and industrial projects (Hudson Bay Insulation 2011). No additional information regarding current operations performed by this company was available for review.

Timberwolf Ventures, Inc.

Timberwolf Ventures, Inc. is a gift novelty and souvenir store that has operated in Suite A of this facility since 2005. This location at 8230 5th Avenue S is an office supporting the main retail location at 506 2nd Avenue (Pier 55 Shirt Company). No additional information regarding current operations performed by Timberwolf Ventures, Inc. was available for review.

There are two catch basins on the property. The catch basins are fitted with filter socks. There is no detention or treatment system at the facility (SPU 2009az).

5.35.2 Historical Operations

Long Painting operated at this facility from 1996 to 2001. No additional information regarding historical operations at this property was available for review.

5.35.3 Regulatory History

Hudson Bay Insulation

SPU conducted an initial inspection at Hudson Bay Insulation on December 4, 2009. SPU identified the following corrective actions as a result of the inspection (SPU 2009az):

- Regularly inspect catch basins and clean filter socks.
- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill kit materials.
- Educate employees concerning spill plan and spill kit.

SPU conducted a follow-up inspection on February 1, 2010, and determined that Hudson Bay Insulation had satisfactorily completed the corrective actions and was in compliance (SPU 2010e).

Long Painting

Long Painting reported to Ecology as a hazardous waste generator from 1992 to 2001. Records show the company reported as a SQG from 1995 to 1996 and as a XQG from 1997 to 2001 (Ecology 2011v).

5.35.4 Potential for Sediment Recontamination

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

Stormwater and Spills

Hudson Bay Insulation has complied with corrective actions identified by SPU in 2009. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.35.5 Data Gaps

Hudson Bay Insulation appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

5.36 Coast Crane Company

Facility Summary: Coast Crane Company	
Tax Parcel No.	7883600350
Address	8250 5th Avenue S
Property Owner	Ness Manitowoc Property LLC
Parcel Size	2.38 acres (103,621 sq ft)
Facility/Site ID	2430
Alternate Name(s)	Manitowak Western, Manitowoc Western, Manitowoc Western Company, Inc.
SIC Code(s)	7353: Heavy Construction Equipment Rental
EPA ID No.	WAR000006940 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Coast Crane Company (Coast Crane) is the current operator on parcel 0350 (Figure 5a), which is bordered by Ness Crane to the south, West Marginal Way S to the east, Hudson Bay Insulation to the north, and 5th Avenue S to the west.

According to King County tax assessor records, there are two buildings on this parcel:

- a 9,200 sq ft service garage built in 1973, and
- a 3,000 sq ft office built in 1973.

5.36.1 Current Operations

Coast Crane has operated at this facility since 1999. The company is a boom truck, lift, and crane distributor. The facility has been expanded with mobile offices north of the permanent structures. Immediately adjacent to the east of the maintenance/repair building is a concrete wash pad. The wash pad was expanded in 2006 or 2007. No additional information regarding current operations at the facility was available for review.

5.36.2 Historical Operations

Manitowoc Western began to develop the facility around 1971. Manitowoc Western indicated the facility is the location of a former landfill. Approximately 15,800 cubic yards of fill material of unknown origin was added to the facility during development.

Manitowoc Western was a large equipment repair and sales office; its operations were consistent with the current operations of Coast Crane. Gasoline/diesel engines and hydraulic systems were repaired in the service garage. A paint stall with a sand blaster was installed at the facility. Wastes generated at the facility included solvents, waste oils, antifreeze, sludge, and used oil filters contaminated with chromium and zinc. A wash pad was located adjacent to the repair garage. A drain conveyed wash water to an oil/water separator located beneath the wash pad. The oil/water separator was connected to a perforated pipe that discharged the wash water and groundwater to the 7th Avenue S SD system. Two 500-gallon USTs, used for the storage of gasoline and diesel, and an AST, used for the storage of used oil generated at the facility, were present near the wash pad. The USTs, drain, and oil/water separator were removed in 1995 (PNG 1995, Environ 2008a), Manitowoc Western 1995). Manitowoc Western was sold to Ness Cranes in approximately 1995.

Variations of the Manitowoc Western facility name include Manitowak Western and Manitowoc Western Company Inc. In this report, the company is referred to as Manitowoc Western.

5.36.3 Regulatory History

Manitowoc Western

Ecology conducted an inspection of the facility on May 29, 1992. At the time the wash pad discharged to a 200-foot perforated pipe, which leached into the soil. The company had been washing greasy equipment at the location for many years. Inspectors also observed two piles of black sludge and a considerable amount of oil staining on the soil (Ecology 1992f). The following corrective actions were identified (Ecology 1993a):

- Determine if solid waste is a dangerous waste or extremely hazardous waste and manage appropriately.
- Clearly and properly label each waste container as "dangerous waste" or "hazardous waste".
- Do not discharge waste materials from any commercial or industrial operation into groundwater.

On November 17, 1992, Ecology added Manitowoc Western to the CSCSL due to the environmental conditions that were observed during the May 1992 inspection (Ecology 1992h).

Coast Crane Company

On August 8, 2008, Ecology conducted a source control inspection at Coast Crane. The following corrective actions were identified (Jeffers 2008e):

- Implement proper washing practices for outdoor vehicle and equipment washing.
- Properly store product/waste with secondary containment to contain spills and leaks from tipped, overfilled, or ruptured containers.

On September 5, 2008, Coast Crane submitted a letter to Ecology detailing steps taken to minimize waste generated during equipment cleanup and implement proper storage of products/waste (Coast Crane 2008). Ecology determined the facility was in compliance on September 10, 2008 (Ecology 2008o).

Coast Crane submitted a VCP application on August 11, 2008 for the cleanup of TPH and VOCs. The agreement was signed on October 1, 2008. Ecology assigned VCP ID NW1984 to Coast Crane (Environ 2008b).

Coast Crane withdrew from the RCRA ID program on June 19, 2009 (Ecology 2009f).

5.36.4 Environmental Investigations and Cleanups

Several environmental investigations and cleanups have been performed at this property. Sample locations are shown on Figure 26, and a summary of chemicals that exceeded soil screening levels is provided in Table 23. A summary of all chemicals in soil detected at the facility is included in Tables D-20.

UST Removal (1995)

In September 1995, one 500-gallon gasoline UST, one 500-gallon diesel UST, and approximately 50 tons of petroleum-contaminated soil were removed from beneath the wash pad adjacent to the east side of the main building. The gasoline UST and oil/water separator connected to the perforated pipe on the wash pad were determined to be the sources of contamination. Five soil samples collected from the limits of the investigation indicated the presence of gasoline-range hydrocarbon concentrations above MTCA cleanup levels for soil. An additional 200 tons of petroleum-contaminated soil was excavated and removed from the property. Analytical results from the limits of the excavation were below MTCA Method A cleanup levels (PNG 1995).

Limited Phase II ESA (1995)

In September 1995, six soil borings were drilled in the vicinity of the former septic drain field and near the former catch basin drain pipe. Samples were analyzed for TPH and VOCs. TPH was not detected at concentrations greater than the detection limits used by the laboratory. Concentrations of VOCs identified at the facility were below MTCA cleanup levels. No remedial action was recommended (PNG 1995).

Investigation of Wash Pad Area (2007)

In June 2007, five soil borings were advanced at the wash pad area (Figure 20). Two soil samples were collected from each boring and were analyzed for diesel-range and heavy oil-range hydrocarbons and lead. Groundwater was encountered between 11 and 12 feet bgs. Groundwater samples were not collected because field screening indicated that contaminants were not present in soil within 1 foot of the water table.

Diesel- and heavy oil-range hydrocarbons were detected at concentrations that exceeded the MTCA cleanup levels. Some soil samples were analyzed for BTEX, PAHs, and PCBs due to the detection of heavy oil-range hydrocarbons. PCBs were not detected. PAHs and BTEX constituents were detected at concentrations below MTCA cleanup levels with the exception of xylene in one sample. Lead was detected in all ten soil samples, where concentrations in samples collected at depths between 3 to 5 feet bgs were detected at levels that exceeded the MTCA cleanup level. Benzo(a)pyrene exceeded the MTCA Method B cleanup level in one sample. Dibenzo(a,h)anthracene and naphthalene were detected at concentrations below MTCA cleanup levels (Environ 2007a, b). Lead, benzo(a)pyrene, dibenzo(a,h)anthracene and naphthalene concentrations exceeded the draft soil-to-sediment screening levels.

In October 2007, 16 subsurface and four surface soil samples were collected in the vicinity of the wash pad area. Soil samples were analyzed to determine the lateral and vertical extent of TPH, xylene, and PCE contamination near the wash pad area. TPH concentrations above the MTCA cleanup level for soil were limited to the south central portion of the wash pad. Xylene concentrations above the MTCA cleanup level for soil were limited to the northeast side of the wash pad. PCE and or TCE concentrations above MTCA cleanup levels for soil were limited to along the eastern portion and southern portion of the wash pad (Environ 2007b).

Remedial Action (2008)

Field activities conducted in May 2008 resulted in the removal, transport, and disposal of a total of 222 tons of contaminated soil from the facility. Confirmation soil samples were collected and analyzed at a mobile laboratory. Areas where samples contained TPH and VOC concentrations above applicable cleanup levels were over-excavated and re-sampled until sample results were below MTCA Method A cleanup levels for unrestricted land use. Results were sent to Ecology for review in August 2008 (Environ 2008a).

On December 4, 2008, Ecology determined further remedial action was necessary because the vertical and horizontal extent of hazardous substances such as lead, arsenic, and cadmium associated with industrial waste fill material used at the facility had not been defined (Ecology 2008v).

5.36.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Coast Crane has complied with corrective actions identified by Ecology in 2008. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

There is potential that the groundwater beneath this property may be contaminated by arsenic, cadmium, lead and PAHs. Groundwater samples have not been collected at this property. Contaminants in groundwater, if any, may infiltrate the storm drain system and be conveyed to LDW sediments via the 7th Avenue S SD outfall (Outfall 2112). Benzo(a)pyrene and dibenzo(a,h)anthracene concentrations exceeded the SQS and CSL in a sediment sample LDW-SS530, which was collected near Outfall 2112 in December 2009.

Groundwater Discharge

Concentrations of benzo(a)pyrene, lead, petroleum hydrocarbons and VOCs in soil exceed MTCA cleanup levels. In addition, benzo(a)pyrene, dibenzo(a,h)anthracene, naphthalene, and lead concentrations in soil exceeded the draft soil-to-sediment screening levels. The vertical and horizontal extent of arsenic, cadmium, and lead contaminations in fill material and soil is unknown. Groundwater samples have not been collected at this property. Benzo(a)pyrene and dibenzo(a,h)anthracene concentrations in a sediment sample collected near Outfall 2112 exceeded the SQS and CSL. However, the property is approximately 2,000 feet southwest of the LDW; therefore, sediment recontamination via the groundwater pathway is low.

5.36.6 Data Gaps

Coast Crane appears to maintain appropriate source control BMPs and has complied with corrective actions identified by Ecology. No data gaps were identified related to the operations performed by Coast Crane.

- Additional information is needed to determine groundwater beneath the property is contaminated by metals and PAHs. Contaminated groundwater may infiltrate the storm drain system and be conveyed to LDW sediment.

5.37 Ness Cranes, Inc.

Facility Summary: Ness Cranes, Inc.	
Tax Parcel No.	7883600600
Address	500 S Sullivan Street
Property Owner	White Sands LLC
Parcel Size	1.90 acres (82,754 sq ft)
Facility/Site ID	4203517: Ness Cranes, Inc. 38576231: Emerald Services Group

Facility Summary: Ness Cranes, Inc.	
Alternate Name(s)	Emerald Services Group, Razore Enterprises, United Sphere Disposal
SIC Code(s)	4212: Local Trucking, Without Storage (Emerald Services Group) 4953: Refuse Systems (Emerald Services Group)
EPA ID No.	WAD988472510: Emerald Services Group (inactive)
NPDES Permit No.	None
UST/LUST ID No.	LUST 7426 (inactive)

Ness Cranes, Inc. (Ness Cranes) operates at parcel 7883600600 (Figure 5a), which is bordered by S Sullivan Street to the south, West Marginal Way S to the east, Coast Crane Company to the north, and 5th Avenue S to the east. King County tax assessor records indicate there is one 4,770 sq ft garage/office, built in 1974, located on the parcel.

5.37.1 Current Operations

Ness Cranes operates at 500 S Sullivan Street. Based on a reconnaissance visit in July 2011, it appears that the facility is a combined storage yard and maintenance facility for a large crane operating business.

SPU drainage maps indicate that there are two catch basins located at the facility. It appears stormwater on the eastern portion of the property is conveyed to the sanitary sewer. The western portion of the yard drains to the 7th Avenue S SD system.

No additional information regarding current operations at the facility was available for review.

5.37.2 Historical Operations

Emerald Services Group, Razore Enterprises, and United Sphere Disposal (US Disposal) are also listed at the 500 S Sullivan Street location under a single Facility/Site ID number. UST removal reports from 1991 and 1992 indicate that Razore Enterprises owned the facility. Four USTs were historically used at the property: a 500-gallon waste oil UST, two 8,000-gallon diesel USTs, and a 4,000-gallon motor oil UST. The USTs were installed between 1971 and 1974 and were located near the southwest corner of the shop building. The USTs were removed in 1991 and 1992 (Enviros 1991; Razore 1992).

No additional information regarding historical operations at the property was available for review.

5.37.3 Regulatory History

US Disposal operated at the facility as a SQG from at least 1995 until 1998. It appears Emerald Services Group began operation at the facility in 1998. Emerald Service withdrew from the RCRA Site ID program in 2001. Razore Enterprises was a Tier 2 operator between January 1, 1994 and August 8, 2002.

On August 8, 2008, Ecology conducted source control inspection at **Ness Cranes**. The following corrective actions were identified (Ness Cranes 2008):

- Complete a written spill plan and post near the diesel fueling area.
- Clean two catch basins located on the property.
- Obtain proper permit for facility discharge.
- Implement proper washing practices.

During a follow-up inspection on October 8, 2008, Ecology determined the facility was in compliance. The inspector instructed the facility to continue to work with KCIW to finalize the permit to discharge from the oil/water separator to the sanitary sewer (Ecology 2008s).

5.37.4 Environmental Investigations and Cleanup

Two environmental investigations have been performed at this property. Sample locations are shown on Figure 27 and a summary of chemicals that exceeded soil screening levels is provided in Table 24. A summary of all chemicals in soil detected at the facility are included in Table D-21.

UST Removals (1991 and 1992)

In August 1991, the 500-gallon waste oil UST was removed from the northeast corner of the truck maintenance facility. A soil sample collected from the pit floor exceeded the 1991 cleanup standard of 200 ppm for TPH. Excavation continued until field instruments indicated that no contamination remained in the north, east, and south walls. Four additional samples were collected from the excavation walls and pit floor. TPH exceeded 1991 cleanup levels at the pit bottom and west wall. Arsenic was detected in one sample at a concentration exceeding the MTCA Method B cleanup level. Metals and chlorinated solvents were not detected in the samples. Razore Enterprises consulted with Ecology, and both entities agreed that no further remedial action would be taken. The excavation was backfilled with clean sand (Enviros 1991).

In November 1992, the two 8,000-gallon diesel USTs and the 4,000-gallon motor oil UST were removed from the facility. Soil samples were analyzed for diesel-range hydrocarbons, metals, SVOCs and VOCs. There were no signs of contamination in the tank area. Diesel-range hydrocarbon concentrations in soil exceeded MTCA Method A cleanup levels in the area between the tank excavation and the dispensing area. Excavation continued to the east, west, and south until analytical results indicated that chemical concentrations in soil around the tank and dispensing areas were below cleanup levels (O'Sullivan 1993). Concentrations of fluorene, naphthalene, phenanthrene and pyrene exceeded the draft soil-to-sediment screening levels.

5.37.5 Potential for Sediment Recontamination

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

Stormwater and Spills

Ness Cranes has complied with corrective actions identified by Ecology in 2008. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

Groundwater Discharge

Concentrations of PAHs in soil have exceeded the draft soil-to-sediment screening levels. This property is approximately 2,000 feet southwest of the LDW; therefore, the potential for sediment recontamination via the groundwater discharge pathway is very low.

5.37.6 Data Gaps

Ness Cranes appears to maintain appropriate source control BMPs and has complied with corrective actions identified by Ecology. Therefore, no data gaps were identified for this property.

5.38 MEECO Manufacturing Co.

Facility Summary: MEECO Manufacturing Co.	
Tax Parcel No.	3224049045
Address	432 S Cloverdale Street Historical: 426 S Cloverdale Street
Property Owner	Lenci Frank Corp
Parcel Size	2.77 acres (120,863 sq ft)
Facility/Site ID	71378133: MEECO/Tri Emerald 56755158: Cascade Diesel/Frontier Door/Emerson Power Products
Alternate Name(s)	Tri Emerald, Cascade Diesel, Frontier Door, Emerson Power Products, Pacific Logistics, Warehouse Management Services
SIC Code(s)	5199: Nondurable Goods
EPA ID No.	WAD988484382: Emerson Power Products/Cascade Diesel/Frontier Door (inactive) CRK000024600: MEECO/Tri Emerald
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 9045 (Figure 5a) is bordered by the former Airport Towing to the west, S Sullivan Street to the north, 5th Avenue S to the east, and S Cloverdale Street to the south. There is one building located on this property, a 50,417 sq ft distribution warehouse built in 1980.

5.38.1 Current Operations

MEECO Manufacturing Co (MEECO) began operations at 432 S Cloverdale in 2009. The facility used to operate on S Idaho Street on the eastern side of the LDW (SPU 2011f). MEECO develops products for the removal of soot from wood-burning, stand-by generators and power plants. In addition, MEECO manufactures safety and maintenance products for the solid fuel industry (wood stoves, pellet stoves, coal stoves, corn stoves, and fireplaces), the fuel oil industry, and the gas appliance industry (MEECO 2011).

The facility has an internal wash station to clean mixing vats, shovels, buckets, scoops, and other tools. There is a internal tank of soot remover at the loading dock. During a recent SPU inspection, chemicals were stored outside under a trailer. There are two catch basins at the facility and a floor drain that all connect to the sanitary sewer (SPU 2011f).

MEECO appears to share parcel 9045 with Pacific Logistics. Information regarding the industrial operations performed by Pacific Logistics was not available for review.

5.38.2 Historical Operations

The facility was historically occupied by Emerson Power Products, Cascade Diesel Engine Co LLC, and Frontier Door and Cabinet, LLC. The companies used 426 S Cloverdale as an operating address. The following information regarding the historical operations performed by these companies was available for review.

Emerson Power Products was an electrical equipment wholesaler that operated at the facility from 1989 to 1995 (Dept of Revenue 2011e).

Cascade Diesel Engine Co LLC (Cascade Diesel) was an electrical apparatus and equipment, wiring supplies, and related equipment merchant wholesaler that operated at the facility from 1995 to 2001.

Frontier Door and Cabinet, LLC (Frontier Door) was a distributor of door, hardware, cabinet and finish carpentry solutions for multi-family dwellings, commercial buildings, and single family homes (Frontier Door 2011). Frontier Door operated at the facility from 1998 to 2010 before relocating to Kirkland (SPU 2008v).

Tri Emerald, legally known as Warehouse Management Services, Inc., operated from 1990 to 1993 (Dept of Revenue 2011g).

5.38.3 Regulatory History

On February 15, 2008, SPU collected right-of-way catch basin sample RCB131, located on S Cloverdale Street, directly south of MEECO. Concentrations of PCBs, lead, zinc, PAHs, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n).

Emerson Power Products

Emerson Power Products reported to Ecology as a hazardous waste generator from March 1991 to December 1994 and as a hazardous waste planner from January 1993 to December 1993. No additional information regarding regulatory interactions was available for review.

Cascade Diesel

Cascade Diesel reported to Ecology as a SQG from October 1995 to October 2001 (Ecology 2011m). No additional information regarding regulatory interactions was available for review.

Frontier Door

SPU conducted an initial inspection at Frontier Door on June 20, 2008. SPU determined that the facility was in compliance and no corrective actions were identified (SPU 2008x).

MEECO

In 2008, concentrations of PCBs, lead, zinc, PAHs, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values in a right-of-way catch basin located immediately south of the MEECO facility.

Ecology performed an inspection in July 2009. The Ecology inspector determined that MEECO required coverage under the ISGP for its operations (Ecology 2011x).

SPU conducted an initial inspection at MEECO Manufacturing on September 28, 2011, and identified the following corrective actions (SPU 2011f):

- Obtain a NPDES permit for discharge.
- Develop and implement spill response procedures.
- Improve or purchase adequate spill response materials.
- Properly educate employees on spill response procedures.
- Implement proper housekeeping.
- Properly store containerized materials.

A follow-up inspection was conducted in November 2011. Spill response and material storage corrective actions identified during the initial inspection had not been completed. SPU re-inspected the facility on December 23, 2011, and determined that the facility had satisfactorily completed the corrective actions (SPU 2011f).

5.38.4 Potential for Sediment Recontamination

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

Stormwater and Spills

In 2009, Ecology determined that MEECO required coverage under the ISGP for its operations. According to the PARIS database, the facility has not obtained a permit. The potential for sediment recontamination via this pathway may be high.

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

5.38.5 Data Gaps

- Additional information is needed to determine if the facility still requires coverage under the ISGP.

5.39 Former Airport Towing

Facility Summary: Former Airport Towing	
Tax Parcel No.	3224049084
Address	301 S Sullivan Street
Property Owner	Gordian Development
Parcel Size	0.62 acre (27,155 sq ft)
Facility/Site ID	14644
SIC Code(s)	7549: Automotive Services
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel number 9084 (Figure 5a) is bordered by MEECO to the east, S Sullivan Street to the north, and S Cloverdale Street to the south. According to King County tax assessor records, parcel 9084 is a vacant, industrial lot.

5.39.1 Current Operations

As of September 2011, Airport Towing does not appear to be operating at 301 South Sullivan Street. The company lists the last usage of the property in October 2010 for a car auction (Airport Towing 2011). Information regarding the current use of this property was not available for review.

The facility has three catch basins. The facility does not have a detention or treatment system (SPU 2009ba).

5.39.2 Historical Operations

Airport Towing was a towing company and impound lot operated at the property from 2000 to 2010 (SPU 2009ba). The company currently operates at 817 SW 149th Street, Seattle, Washington. Airport Towing is one of four towing companies operated by Storer Enterprises Inc. that provides 24-hour emergency roadside and towing services.

No additional information regarding historical operations at the property was available for review.

5.39.3 Regulatory History

On February 15, 2008, SPU collected right-of-way catch basin sample RCB131, located on S Cloverdale Street, directly southeast of the property. Concentrations of PCBs, lead, zinc, PAHs, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n). SPU conducted an initial inspection at Airport Towing on December 7, 2009. SPU found parking and storage of over 100 vehicles and equipment at the property. The gravel lot showed evidence of leaking vehicles. SPU also found that the catch basins were more than 60 percent filled with sediment (SPU 2009ba).

On December 14, 2009, SPU identified the following corrective actions as a result of the initial inspection (SPU 2009bd):

- Complete a written spill plan and post at appropriate locations at the facility.
- Label and obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Perform routine maintenance for stormwater drainage systems.
- Install an outlet trap in the storm drain.

During a follow-up inspection on January 20, 2010, SPU determined that the facility had satisfactorily completed the corrective actions (SPU 2010a).

5.39.4 Potential for Sediment Recontamination

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

Stormwater and Spills

This property is currently vacant. Therefore, the stormwater and spills pathways are currently incomplete.

Groundwater Discharge

Fluids leaked from vehicles parked at the former impound lot. The lot was gravel-covered; therefore, leaked fluids may have infiltrated the ground. There is a potential for petroleum- and solvent-related soil and groundwater contamination at this property; however, these COCs have not been identified as sediment COCs for the LDW.

5.39.5 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

5.40 Rasmussen Equipment Company

Facility Summary: Rasmussen Equipment Company	
Tax Parcel No.	3224049014, 3224049061
Address	9014: 8727 5th Avenue S (Rasmussen Equipment Co) 9061: 416 S Cloverdale Street (Rasmussen Equipment Co, Inc.)
Property Owner	South Park Properties LLC
Parcel Size	9014: 3.32 acres (144,637 sq ft) 9061: 0.33 acre (14,500 sq ft)
Facility/Site ID	81158515: Rasmussen Equip Co, Inc. 22497475: Rasmussen Equip Co
SIC Code(s)	5082: Construction and Mining Machinery and Equipment
EPA ID No.	WAR000006429: Rasmussen Equipment Co (active)

Facility Summary: Rasmussen Equipment Company	
NPDES Permit No.	None
UST/LUST ID No.	UST 721 (inactive)

Rasmussen Equipment Company (Rasmussen Equipment) operates on parcels 9014 and 9061 (Figure 5c). The facility is bordered by S Trenton Street to the south, 5th Avenue S and residential properties to the east, S Cloverdale Street to the north, and Cloverdale Business Park to the west.

According to King County tax assessor records, the facility consists of the following:

- a 12,600 sq ft industrial light manufacturing building, built in 1964, on parcel 9014;
- a 14,400 sq ft open maintenance shop, built in 1964, on parcel 9014; and
- a 14,500 sq ft vacant lot on parcel 9061.

5.40.1 Current Operations

Rasmussen Equipment is a wire rope and mooring system supplier. The company sells, leases, rents, and repairs cable, winches and mooring systems. A loading/unloading area is present on the northern portion of property along S Cloverdale Street. Miscellaneous metal parts and equipment are stored outside. Equipment and machinery maintenance occurs outside. Large diesel winches are serviced and repaired in the five bay maintenance shop. There is a scrap metal dumpster near the maintenance shop (Ecology 2008e). Forklifts are used for lifting and moving of heavy equipment. Antifreeze, petroleum oils, and solvents are all stored at the facility (Rasmussen Equipment 2002).

A “closed-loop” steam clean system is used to spray equipment on a wash pad area centrally located at the property. Overflow from the treatment system is conveyed to the sanitary sewer. The facility has 12 catch basins equipped with PVC elbows. The stormwater drainage system at the facility is classified as partially separated (Ecology 2008e). A facility plan is presented in Figure 28.

5.40.2 Historical Operations

Rasmussen Equipment was founded in the early 1930s. The business initially built and operated salmon fish traps and evolved into a wire rope and rigging company (Rasmussen Equipment 2011). Rasmussen Equipment Company registered with the state of Washington at the current location in 1978.

5.40.3 Regulatory History

A water quality source control inspection was conducted on October 7, 1994. The facility was in the process of moving the steam cleaning operation in order to recycle the wash water (SPU 1994).

SPU conducted an inspection at the Rasmussen Equipment facility on September 9, 2002. Storage of non-containerized materials, loading/unloading, fueling operations, equipment washing, and outdoor manufacturing were identified as high-risk, pollution-generating activities. The inspector identified potential for stormwater runoff from the wash pad area. Metals and used oil had the potential to be discharged to the sanitary sewer (SPU 2002d). The following corrective actions were identified (SPU 2002e):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Clean and maintain all the catch basins on the property.

SPU conducted a follow-up inspection on December 6, 2002, and determined Rasmussen Equipment was in compliance (SPU 2002t).

On February 12, 2008, Ecology and SPU conducted a joint stormwater compliance inspection at the facility. Silt socks were observed in nearly every catch basin inlet. The scrap metal dumpster near the maintenance shop was leaking a bluish liquid. Metal cuttings with cutting fluid were disposed of in the metal dumpster. Paint booth filters were disposed of as solid waste. There was evidence that some overspray from the "closed-loop" steam clean system was conveyed to the storm drain catch basin behind a treatment building on the west boundary of the parcel. A waste oil AST and antifreeze tote were located by the power wash area. The following corrective actions were identified (SPU 2008k and Ecology 2008e):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Designate and properly dispose of waste such as shop towels contaminated with solvents and filters used in the paint booth.
- Store metal cuttings in a separate closed, non-leaking container to contain the cutting fluids.
- Properly store solvents.
- Protect the storm drains from receiving process water from the washing operation.

On February 15, 2008, SPU collected right-of-way catch basin sample RCB131, located on S Cloverdale Street, directly north of Rasmussen Equipment. Concentrations of PCBs, lead, zinc, PAHs, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n).

On March 12, 2008, Rasmussen Equipment reported that laboratory results indicated that the solvents and air filters used in the paint booth could be managed as non-hazardous waste (Envirotech 2008).

SPU conducted a follow-up inspection at the facility on May 9, 2008, and determined overall compliance was achieved (SPU 2008p).

5.40.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are presented on Figure 29. A summary of all chemicals in soil detected at the facility is included in Table D-22.

UST Removal (1994)

In October 1993, one 5,000-gallon unleaded gasoline UST and one 5,000-gallon diesel UST were removed. The USTs were located immediately north of the equipment repair shop. Soil assessment was not completed at the time of the removal in October 1993.

In February 1994, two test pits were excavated at the previous location of the USTs and pump islands. Soil samples were collected from the two walls and the floor in each test pit. TPH concentrations were present in all soils. Diesel-range hydrocarbon concentrations were above MTCA Method A cleanup levels. In April 1994, approximately 300 cubic yards of contaminated soil were excavated from the former UST area. Three confirmation soil samples were collected from the three sides of the excavation, and three additional samples were collected from the floor of the excavation. TPH concentrations were below MTCA Method A cleanup levels for soil. The excavation was completed at 9.5 feet bgs; groundwater was not encountered (Geotech 1994a).

5.40.5 Potential for Sediment Recontamination

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

Stormwater and Spills

It appears that stormwater from the facility is conveyed to catch basins on the property and does not enter the structures in the rights-of-way.

Rasmussen Equipment has complied with corrective actions identified by SPU and Ecology in 2002 and 2008. The potential for sediment recontamination associated with this facility is low provided that the company maintains appropriate source control BMPs.

Groundwater Discharge

Soil and groundwater at this property may be contaminated with petroleum hydrocarbons and VOCs; however, a remedial excavation has been performed to address diesel-range hydrocarbons in soil. Petroleum hydrocarbons and VOCs are not LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

5.40.6 Data Gaps

Rasmussen Equipment appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU and Ecology. Therefore, no data gaps were identified for this property.

5.41 Cloverdale Business Park

Facility Summary: Cloverdale Business Park	
Tax Parcel No.	3224049012
Address	309 S Cloverdale Street
Property Owner	Harsch Investment Properties
Parcel Size	10.23 acres (445,618 sq ft)
Facility/Site ID	4328: Braicks Construction Inc. 7170: Phil's Custom Bindery, LLC 6253396: Former Sirius Maritime Company 12724197: Former Magnetic & Penetrant Services Co 28226866: Former Discount Drive Axle of Seattle 38246778: Christian Brothers Floor Svc Inc. 78879968: Former Superior Precision Analytical
Alternate Name(s) and Current or Former Tenants	BLB Construction, Braicks Construction Inc., Christian Brothers Floor Services Inc., Classy Mailing Service, Delgado Brothers Upholstery, Discount Drive Axle of Seattle, Elecool, Front Panel Express, Gourmondo Café & Catering, Harsch Investment Properties, Hastings Photographics, Heng Heng Supermarket, Magnetic & Penetrant Services Co, MAPSCO, O&J Sewing, Ode Gutter Product, PHI/Dictographs/Alarm Screens, Phil's Custom Bindery, LLC, Pike Place Fish Market, Red Point, Inc., Sirius Maritime Company, Superior Precision Analytical, Topline Products, Woodco Products
SIC Code(s)	1542: General Contractors – Nonresidential Buildings other than Industrial Buildings and Warehouses (Braicks Construction Inc.) 2789: Bookbinding and Related Work (Phil's Custom Bindery, LLC) 3511: Steam, Gas, and Hydraulic Turbines and Turbine Generator Set Units (Former Sirius Maritime Company) 7534: Automotive Tire Repair (Except Retreading) Shops (Former Discount Drive Axle of Seattle) 1752: Floorlaying, Scraping, Finishing, and Refinishing (Christian Brothers Floor Svc Inc.) 8734: Industrial Testing Laboratories or Services (Former Superior Precision Analytical)
EPA ID No.	WAD057211393: Magnetic & Penetrant Services (inactive) WAD988489001: Sirius Maritime Company (inactive) WA0000915454: Superior Precision Analytical (inactive) WAD988505046: Christian Brothers Floor (inactive) WA0000915306: Discount Drive Axle of Seattle (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

The Cloverdale Business Park on parcel 9012 (Figure 5c) is bordered by a vacant single family residence and Rasmussen Equipment to the east, S Cloverdale Street to the north, S Trenton Street to the south, and SR 509 to the west.

According to King County tax assessor records 5 multi-unit warehouses with office space buildings built in 1979 are present on the property.

- Building A: 15 unit, 31,360 sq ft
- Building B: 30 unit, 33,320 sq ft
- Building C: 42 unit, 48,020 sq ft
- Building D: 48 unit, 54,880 sq ft
- Building E: 24 unit, 27,420 sq ft

5.41.1 Current Operations

Cloverdale Business Park/Harsch Investment Properties

Harsch Investment Properties (Harsch Properties) has been the property owner and manager of the Cloverdale Business Park, an industrial warehouse space-rental facility since 1997. There are approximately 90 tenants at the facility (SPU 2009ak). A facility map is provided in Figure 30.

Fluorescent light tubes are used at the facility, which are temporarily stored at the facility and later shipped off property for disposal by an outside contractor. High-risk, pollution-generating activities include truck or rail loading or unloading of liquid or solid materials. Outdoor storage of materials is not allowed by the property management (SPU 2009ak).

The Cloverdale Business Park has 19 catch basins and 6 manholes on the property. The catch basins are cleaned annually, and the paved parking area is swept monthly by a hired contractor. Vehicle washing is not allowed at the property. SPU inspections indicate that all catch basins and manholes drain through a bioswale located near the facility (SPU 2002a). There appears to be a vegetated area on the west side of the property adjacent to SR 509.

Limited information regarding the companies operating at the Cloverdale Business Park was available for review.

Braicks Construction Inc.

Braicks Construction, Inc. (Braicks Construction) is a general contracting company that provides 24-hour emergency service, repair and maintenance, commercial tenant improvement, construction services, and light industrial construction services (Braicks Construction 2011). The company has operated at the Cloverdale Business Park in Unit B3 since 1998 (SPU 2008u).

Christian Brothers Floor Services

Christian Brothers Floor Services installs new hardwood floors and provides refinishing and recoating services. The company has been in business at the Cloverdale Business Park in Unit C20 since 1986 (Christian Brothers Floor Services 2011).

Gourmondo Café & Catering

Gourmondo Café & Catering prepares boxed lunches and makes deliveries to clients. The delivery vans are stored at the facility (SPU 2002f, 2010h).

Phil's Custom Bindery LLC

Phil's Custom Bindery LLC (Phil's Custom Bindery) is a bookbinding and book repair/restoration company. The company has operated at the Cloverdale Business Park in Unit A12 since 1982 (Phil's Custom Bindery 2011).

Phil's Custom Bindery accumulates hydraulic oil and glue on rags as a result of their operations. The rags are temporarily stored at the facility and later shipped off the property for disposal by an outside contractor (SPU 2009a).

Red Point, Inc.

Red Point, Inc. currently operates at Cloverdale Business Park. The type of operations performed at this facility is unknown. Ecology has not assigned a Facility/Site ID number to Red Point, Inc.

5.41.2 Historical Operations

Limited information regarding the companies operating at the Cloverdale Business Park was available for review.

Former Discount Drive Axle of Seattle

Discount Drive Axle of Seattle (Discount Drive Axle) was an automotive repair and maintenance shop that operated from 1994 to 1995.

Former Magnetic & Penetrant Services Co

Magnetic & Penetrant Services Co (MAPSCO) is a protective coating manufacturer that operated at Cloverdale Business Park, Unit B20 from 1981 to 1993. MAPSCO now operates at 8135 1st Avenue S, Seattle. The company performs the following processes (MAPSCO 2011):

- Anodizing
- Chem-Treating (Alodine Colored & Clear)
- Shot Peening
- Titanium Etching
- Phosphate Fluoride Coating Passivation of Stainless Steels
- Application of Primers & Topcoat
- Application of Dry Film Lubricants
- Magnetic Particle Inspection
- Sol-Gel of Titanium & Stainless Steels
- Liquid Penetrant Inspection
- Vapor Degreasing
- Emulsion Cleaning

MAPSCO used alkaline soap, nitric acid, chromic acid, sodium hydroxide, and sodium metasilicate pentahydrate as part of their manufacturing process (MAPSCO 1981; METRO 1988b).

MAPSCO moved to 8135 1st Avenue S (in the 1st Avenue S SD source control area) in February 1992 (MAPSCO 1996).

Former Sirius Maritime Company

Sirius Maritime Company (Sirius Maritime) was a marine transportation, distribution, and logistics service company that operated from 1991 to 2007. The company also manufactured turbine and turbine generator units for the maritime industry. In 2007, the company and their fleet of deep sea, coastal, and Great Lakes boats were purchased by K-Sea Transportation (K-Sea 2011).

Former Superior Precision Analytical

Superior Precision Analytical performed physical, chemical, and other analytical testing services. The Washington State Department of Revenue lists this company as being open from 1993 to 1995.

5.41.3 Regulatory History

On February 15, 2008, SPU collected right-of-way catch basin sample RCB131, located on S Cloverdale Street, directly northeast of the Cloverdale Business Park. Concentrations of PCBs, lead, zinc, PAHs, butyl benzyl phthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n).

Cloverdale Business Park/Harsch Investment Properties

SPU inspected Cloverdale Business Park on October 5, 2009 (SPU 2009ak). SPU directed Harsch Properties to complete a spill plan for Cloverdale Business Park and to properly identify, label, and store drums at the property (SPU 2009ao). SPU re-inspected the property on January 6, 2010, and determined that Cloverdale Business Park was in compliance (SPU 2010c).

Braicks Construction

SPU conducted a business inspection at Braicks Construction on August 29, 2002 (SPU 2002a). On September 9, 2002, SPU determined no further action was required and Braicks Construction was in compliance (SPU 2002b).

SPU conducted an initial inspection at Braicks Construction on June 19, 2008. SPU identified the following corrective actions as a result of the initial inspection (SPU 2008w):

- Complete a written spill plan and post at appropriate locations at the facility;
- Obtain spill kit materials;
- Designate all waste and dispose of all chemicals that are not being used.

SPU conducted a follow-up inspection on August 26, 2008. During the inspection, SPU determined the written spill plan was not complete and asked that additional information be added (SPU 2008ac). On October 14, 2008, SPU determined that Braicks Construction had satisfactorily completed the corrective actions and was in compliance (SPU 2008af).

Christian Brothers Flooring

Christian Brothers Flooring reported to Ecology as a SQG from March 1992 to December 2001. No additional information regarding regulatory interactions was available for review.

Gourmondo Café & Catering

SPU inspected Gourmondo Café & Catering on September 30, 2002 (SPU 2002f). SPU determined that the company was in compliance with stormwater pollution source control requirements and no corrective actions were identified (SPU 2002g).

SPU performed an initial inspection at Gourmondo Café & Catering on March 3, 2010 (SPU 2010h). The following corrective actions were identified (SPU 2010i):

- Develop a spill plan and implement spill prevention procedures.
- Obtain spill prevention containment and spill response equipment and materials.
- Train employees with regard to spill prevention and response.

SPU re-inspected Gourmondo Café & Catering in March 2010 and determined that the facility was in compliance (SPU 2010j).

Phil’s Custom Bindery

SPU conducted an initial inspection at Phil’s Custom Bindery on January 3, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009a):

- Designate and properly dispose of waste.
- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill kit materials.
- Educate employees concerning spill plan and spill kit.

SPU conducted a follow-up inspection on March 6, 2009 and determined that Phil’s Custom Bindery had satisfactorily completed the corrective actions and was in compliance (SPU 2009g).

Redpoint, Inc.

SPU performed a “drive-by” inspection of Redpoint, Inc. on December 30, 2002. No high-risk, pollution-generating activities or potential sources of stormwater pollution were observed (SPU 2002ac).

Former Discount Drive Axle of Seattle

Discount Drive Axle reported to Ecology as a XQG from November to December of 1994. No additional information regarding regulatory interactions was available for review.

Former MAPSCO

MAPSCO reported to Ecology as a hazardous waste generator from 1985 to 1992 and as a hazardous waste planner from 1992 to 1993.

In September 1981, MAPSCO applied for an Industrial Waste Discharge Permit (MAPSCO 1981).

In August 1984, MAPSCO was notified of their failure to report regarding compliance with categorical wastewater pretreatment standards (METRO 1984a).

In January 1985, METRO granted MAPSCO a Final Waste Discharge Permit (No. 7224) for discharge to the sanitary sewer (METRO 1985a).

In November 1987, METRO inspected MAPSCO in response to a spill on September 29, 1987 on West Marginal Way. The inspection found poor housekeeping practices for equipment, large amounts of chemical spilled on the floor, and unlabeled and incorrectly stored chemicals. METRO determined that MAPSCO was not responsible for the spill on West Marginal Way, but referred them to Ecology for storing too many 55-gallon drums of PCE at the facility (METRO 1987).

In August 1988, MAPSCO was issued an Informal Compliance Schedule for violation of its METRO discharge permit on July 6, 1988, for the discharge of 1.4 ppm of lead to the municipal sewer system (METRO 1988a).

In November 1988, a new Industrial Waste Discharge Permit (No. 7568) was proposed for MAPSCO due to increased water and chemical discharge levels outside the limits of the previous permit (METRO 1988c).

Former Sirius Maritime Company

Sirius Maritime reported to Ecology as a hazardous waste generator from 1991 to 1993 and reported hazardous waste management activity starting in 2004. In 2006, the company underwent formal enforcement action for spills. No end date was available for the hazardous waste activity or spills enforcement action.

Former Superior Precision Analytical

Superior Precision Analytical reported to Ecology as a hazardous waste generator from November to December of 1994. No additional information regarding regulatory interactions was available for review.

Other Historical Operators

The following companies are historical operators at this facility. SPU performed “drive-by” inspections of these facilities in 2002.

Facility	Historical Operations	Inspection Date	Reference
BLB Construction	Construction/storage	12/30/2002	SPU 2002z
Classy Mailing Service	Post office box rentals	12/19/2002	SPU 2002v
Delgado Brothers Upholstery	Upholstery	12/30/2002	SPU 2002aa
Elecool	Office for durable goods distributor	10/31/2002	SPU 2002j
Front Panel Express	Designed compute panels	10/31/2002	SPU 2002k

Facility	Historical Operations	Inspection Date	Reference
Hastings Photographics	Commercial photography, some backdrop painting	10/29/2002	SPU 2002h
Heng Heng Supermarket	Storage for wholesale grocery	12/19/2002	SPU 2002x
O&J Sewing	Small sewing shop	10/31/2002	SPU 2002l
Ode Gutter Product	Roofing, siding, and sheet metal work	10/29/2002	SPU 2002i
PHI/Dictographs/Alarm Screens	Alarm systems distributor and installer	12/30/2002	SPU 2002ab
Pike Place Fish Market	Fish market	10/31/2002	SPU 2002m
Topline Products	Office space	12/30/2002	SPU 2002ad
Woodco Products	Office and storage space	12/30/2002	SPU 2002ae

During these inspections, SPU did not identify any high-risk, pollution-generating activities or potential sources of pollution to stormwater from the operations performed by these companies. Based on these observations, “in-house” inspections were not performed. Ecology Facility/Site ID numbers have not been assigned to these companies.

5.41.4 Potential for Sediment Recontamination

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

Stormwater and Spills

SPU indicates that stormwater from this property is conveyed to a bioswale. Cloverdale Business Park and its current tenants have complied with corrective actions identified by SPU. The potential for sediment recontamination associated with this facility is low provided that the property management company and tenants maintain appropriate source control BMPs.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the historical industrial operations, there is a potential for soil and groundwater contamination.

5.41.5 Data Gaps

Cloverdale Business Park and its tenants appear to maintain appropriate source control BMPs. Therefore, no data gaps have been identified for this property.

5.42 Northwest Grating Products, Inc.

Facility Summary: Northwest Grating Products, Inc.	
Tax Parcel No.	3224049051
Address	9230 4th Ave S
Property Owner	Randall Breiwick

Facility Summary: Northwest Grating Products, Inc.	
Parcel Size	1.06 acres (46,269 sq ft)
Facility/Site ID	74745382
SIC Code(s)	3446: Architectural Metal Work 5051: Metal Service Centers & Offices
EPA ID No.	WAD988492310 (inactive)
NPDES Permit No.	WAR001918 (active)
UST/LUST ID No.	None

Northwest Grating Products, Inc. (NW Grating) operates at parcel 9051 (Figure 5c). The facility is bordered by the Revere Group to the south, Glass Plant Fibre to the east and north, and an industrial vacant lot to the west. King County tax assessor records indicate that there is one 12,400 sq ft industrial light manufacturing building, built in 1991, located on this parcel.

5.42.1 Current Operations

NW Grating fabricates unfinished steel, aluminum, and fiberglass grates, which are used for various types of projects. Fabrication of the grates occurs in the warehouse and consists of cutting, bending, grinding, and welding of steel grates to client specified dimensions. Cutting oil, motor oil, and propane gas are all stored inside the warehouse. A paint-storage shed and outdoor painting area is located to the north of the warehouse building. Raw materials consist of unassembled grate pieces. Finished product consists of steel grates that have been cut, ground, or welded to specific dimensions, and primed. These materials are stored inside the warehouse on a concrete slab (Farallon 2001).

There is a bioswale at the east end of the facility that captures water discharged from four catch basins located on the facility. Runoff from the outdoor painting area collects in an oil/water separator located adjacent to the west of the painting area. The oil/water separator is fully contained and cleaned once a year (Farallon 2001). SPU investigated the facility and determined that stormwater is discharged to the 7th Avenue S SD system (Schmoyer 2012).

5.42.2 Historical Operations

The NW Grating facility was constructed in 1991 and began operations that same year. Prior to 1991 the area was occupied by a residence and a farm (Farallon 2001).

5.42.3 Regulatory History

On August 19, 1994, NW Grating was granted coverage under the ISGP (Ecology 1994a). According to Ecology’s PARIS website, the permit was subsequently updated in December 1995, November 2000, September 2002, and October 2009.

On April 24, 2007, Ecology conducted a stormwater compliance inspection at the facility. The facility’s SWPPP was present and available for review. DMRs were available for review, but the facility had missing quarters of data. The facility also exceeded the benchmarks for zinc and turbidity. Most manufacturing appeared to be conducted indoors. Dirt piles associated with the adjacent facility to the north were encroaching onto the property. Infrequent “splash” painting was conducted outdoors, and a small quantity of dried paint splatter was observed on the ground. The following compliance issues were identified (Ecology 2007b):

- Ensure sampling is conducted every quarter as required by the NPDES permit.
- Ensure that a level one response is submitted to Ecology for the exceedance of the zinc and turbidity benchmarks.
- Consider installing a barrier on the property line adjacent to the sampling point to prevent dirt from encroaching onto the property and into the sampling location.
- Ensure that adequate containment is used around the “splash” painting operation.
- Train employees at least yearly on how to use spill prevention and conduct spill cleanup.

Ecology conducted another stormwater compliance inspection of the facility on July 20, 2010. The NPDES permit file at the location was incomplete and the current SWPPP could not be located. NW Grating failed to submit a DMR for the 1st quarter of 2010 and received a warning letter from Ecology. The discharge monitoring point was determined to be not representative of stormwater runoff from the facility. The following compliance issues were identified (Ecology 2010h):

- Update the SWPPP.
- Perform compliance sampling at one of two storm drain catch basins on the west/northwest side of the main building.
- Keep all scrap metal bins and dumpsters under cover or fit with a lid that remains closed when not in use.
- Provide proper cover and containment for liquid and chemical products and wastes stored outside.

NW Grating failed to submit DMRs for the first, second, and third quarters of 2010. Ecology mailed Noncompliance Notification letters to NW Grating on June 18, 2010 and August 14, 2010 for the failure to submit first and second quarter DMRs. On January 18, 2011, Ecology issued Administrative Order No. 8242 for these violations of the facility’s NPDES permit. The following corrective actions were identified in the Administrative Order (Ecology 2011a):

- Immediately begin monitoring all stormwater discharges, as required by the ISGP.
- Report monitoring results as required by permit conditions S4, General Sampling, S5 Benchmarks, Effluent Limitations and Specific Sampling Requirements, and S9, Reporting and Recordkeeping.
- Submit the fourth quarter 2010 DMR.
- Submit all subsequent DMRs.

A response from NW Grating was not available for review.

5.42.4 Potential for Sediment Recontamination

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

Stormwater and Spills

In January 2011, Ecology issued an Administrative Order due to NW Gratings failure to submit DMRs during 2010. In addition, it is not know if the facility complied with the corrective actions required by Ecology following a stormwater compliance inspection in July 2010.

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current and historical metal fabrication operations, there is a potential for soil and groundwater contamination. However, the property is approximately 1 mile west of the LDW; therefore, the potential for sediment recontamination via this pathway is low.

5.42.5 Data Gaps

A follow-up inspection is needed to determine if NW Grating has complied with the corrective actions identified in the January 2011 Administrative Order and the July 2010 stormwater compliance inspection.

5.43 Other Properties Within the 7th Avenue S SD Basin

Corrective actions were identified at the following facilities during recent inspections performed from 2008 to 2009 (Jeffers 2008d, Ecology 2009e). To date, the corrective actions have not been achieved or the facility has not been re-inspected to confirm compliance with the corrective actions. Follow-up inspections are needed at the following facilities in order to determine the potential for sediment recontamination associated with operations and activities at each facility.

Facility/ Site ID	Facility or Property Name	Current Operator(s)	Address & Parcels	Inspection Date(s)	Corrective Actions
8127	Modern Coach Modern Pattern	Same	7601 5th Avenue S, 7327904792 255 S Austin Street, 7327904830	4/22/2009	Stormwater: 3
77384581	Washington Liftruck	Same	700 S Chicago Street, 7327903385	7/15/2008	Sanitary sewer: 1

Facility inspections have not been performed at the following properties. No information regarding the operations at these facilities was available for review. Operations and activities performed at these properties/facilities may be potential sources of contaminants to sediments near the Riverside Drive source control area.

Facility/ Site ID	Facility or Property Name	Current Operator	Address & Parcel
36385877	Former Guinns Automotive & Electric	Unknown	245 S Austin Street, 7327904845
84435338	Former Screen Matic Arts	Unknown	9354 4th Avenue S, parcel unknown
17130	The Revere Group	Same	9310 4th Avenue S, 1646700010

In 2008, SPU collected a catch basin storm drain solids sample(RCB137) near the former Screen Matic Arts facility (Table 6a, Figure 7a). Concentrations of BEHP and butyl benzyl phthalate exceeded the storm drain screening values (SPU 2010n; Schmoyer 2011). Current operations at the property may be a source of these contaminants to the storm drain system.

In March 2009, SPU collected a storm drain solids sample from a right-of-way catch basin (RCB203) located north of the former Guinns Automotive & Electric facility. Concentrations of PCBs, lead, zinc, BEHP, butyl benzyl phthalate, dimethylphthalate, di-n-butyl phthalate, di-n-octylphthalate, benzyl alcohol, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6a) (SPU 2010n). Current operations at the property may be a source of these contaminants to the storm drain system.

6.0 Potential for Sediment Recontamination from Upland Properties in the 8th Avenue S CSO Basin within the Riverside Source Control Area

Upland properties in the 8th Avenue S CSO basin that could potentially affect Riverside Drive source control area sediments are described in the following sections. Parcel ownership for upland properties within the Riverside Drive source control area are shown in Figures 5a, 5b, and 5c. A map of facilities located within the 8th Avenue S CSO basin is provided in Appendix C.

The upland properties are not adjacent to the LDW and stormwater from these facilities is generally conveyed to the sanitary or combined sewer; therefore, stormwater, surface runoff, or spills directly to the waterway and bank erosion are not potential sediment recontamination pathways and will not be discussed in this section.

- Contaminants from upland properties could be transported to the LDW via the CSO and groundwater discharge pathways.

Groundwater Discharge

For many of the upland properties within the 8th Avenue S CSO basin, there is no available information that indicates the presence of soil and/or groundwater contamination. Soil and/or groundwater investigations have been performed at the facilities listed below. Additional information regarding the environment investigations and cleanups is included in the facility-specific sections.

Facility	Contaminated Soil	Contaminated Groundwater
Former Crosby Auto Repair	●	●
National Products Inc.	●	●
Former Scott Andrews Property		
Seattle Fire Station 26		
Sound Propeller Services, Inc.		
Former Tom Thurber Property		
Warner's Foreign Auto Repair	●	

CSO Discharges

Operations or activities at these properties may result in discharges to the sanitary sewer. Contaminants in wastewater, if any, may be transported to LDW sediment near the Riverside Drive source control area during a CSO event via the 8th Avenue S CSO. Contaminants in soil and groundwater beneath these properties, if any, may leach into groundwater and infiltrate the combined sewer system. Therefore, there is potential for sediment recontamination associated with combined sewer discharges from these properties. Combined sewer discharges are significantly diluted prior to discharge. In addition, the 8th Avenue CSO has discharged only once since 1997. In October 2010, a total of 18 gallons was discharged during one event (King County 2011a). The potential that contaminants from these properties will recontaminate the sediments near the Riverside Drive source control area is very low; therefore, this pathway is not discussed in the facility-specific sections.

6.1 Smith Berger Marine, Inc.

Facility Summary: Smith Berger Marine, Inc.	
Tax Parcel No.	7819500000
Address	7915 10th Avenue S
Property Owner	7915 10th Avenue South LLC
Parcel Size	2.51 acre (109,500 sq ft)
Facility/Site ID	12429
SIC Code(s)	3732: Boat Building and Repairing 3556: Food Products Machinery (Fish Processing Equipment)
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	None

Smith Berger Marine Inc. (Smith Berger Marine) operates on parcel 7819500000. The subdivided portions is identified as parcel 7819500010 (Figure 5b). The property is bordered by the former Long Painting facility to the south, Sound Propeller Services, to the west, a vacant lot to the north, and 10th Avenue S to the east. Smith Berger Marine operates at Unit A in a 21,045 sq ft manufacturing warehouse, built in 1959, on the east side of the property. Sound Propeller Services occupies another warehouse on the west side of the parcel and is discussed in Section 6.2.

6.1.1 Current Operations

Smith Berger Marine manufactures fish processing equipment, offshore anchors, towing equipment, standard fairlead products, and custom engineered mooring equipment for the maritime industry (Smith Berger Marine 2011). Smith Berger Marine has operated at this property since 2000 (SPU 2009e).

Smith Berger Marine uses petroleum/oils and solvents for equipment maintenance and metals as part of their manufacturing process. Wastes are temporarily stored at the facility and later shopped off property for disposal or recycling. High-risk, pollution-generating activities include truck or rail loading or unloading of liquid or solid materials; outside storage of non-containerized materials, by-products, or finished products; and painting or finishing of vehicles, boats, buildings, or equipment (SPU 2009e).

This facility has two catch basins located in the southern storage yard. During a February 2009 inspection, the catch basins were observed to contain accumulated sediment and equipped with metal elbow outlet traps. The facility does not have a detention or treatment system.

6.1.2 Historical Operations

Information regarding the historical use of this property was not available for review.

6.1.3 Regulatory History

SPU conducted an initial inspection at Smith Berger Marine on February 27, 2009. SPU identified the following corrective actions as a result of the initial inspection (SPU 2009f):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Train employees on spill plan procedures.
- Clean the two catch basins located in the southern storage lot.
- Improve level of housekeeping at the facility.
- Label waste containers.

SPU conducted a follow-up inspection at Smith Berger Marine on May 21, 2009, and found that the company had satisfactorily completed the corrective actions and was in compliance (SPU 2009o).

6.1.4 Potential for Sediment Recontamination

Groundwater Discharge

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current industrial operations, there is a potential for soil and groundwater contamination.

6.1.5 Data Gaps

Smith Berger Marine appears to maintain appropriate source control BMPs and has complied with corrective actions identified by SPU. Therefore, no data gaps were identified for this property.

6.2 Sound Propeller Services, Inc.

Facility Summary: Sound Propeller Services, Inc.	
Tax Parcel No.	7819500000
Address	7916 8th Avenue S
Property Owner	Clifford Burns
Parcel Size	2.51 (109,500 sq ft)
Facility/Site ID	6950604: Sound Propeller Services, Inc. 70748294: West Fork Nelson 56738526: Westfork Nelson Incorporated
Alternate Name(s)	West Fork Nelson
SIC Code(s)	5088: Transportation Equipment and Supplies (Sound Propeller Services, Inc.)
EPA ID No.	WAD981764467: West Fork Nelson (inactive)
NPDES Permit No.	None
UST/LUST ID No.	56738526: 101576 – UST (inactive) 70748294: 101151 – UST (inactive)

Sound Propeller Services, Inc. (Sound Propeller Services) operates at parcel 7819500000 (Figure 5b), which is bordered by the former Long Paint facility to the south, Smith Berger Marine to the east, a vacant lot to the north, and 8th Avenue S to the west. Sound Propeller occupies a 21,867 sq ft manufacturing warehouse, built in 1959, on the west side of parcel 7819500000. Smith Berger Marine occupies another warehouse on the east side of the parcel and is discussed in Section 6.1.

6.2.1 Current Operations

Sound Propeller Services designs, manufactures, and repairs propulsion systems for fishing boats, tug boats, small freighters, and yachts. No additional information regarding current operations at the facility was available for review.

6.2.2 Historical Operations

Westfork Nelson historically operated at this property. No additional information regarding historical operations at this property was available for review.

6.2.3 Regulatory History

Ecology inspected Sound Propeller Services on December 10, 2008. The inspection indicated that the facility needed waste clearance from King County for disposal of dust collection sludge and floor sweepings (Jeffers 2009a). Sound Propeller Services submitted a completed compliance certificate in March 2009. A follow-up inspection was not performed (Jeffers 2009c).

6.2.4 Environmental Investigations and Cleanups

UST Removal (1992)

On April 11, 1991, a 1,000-gallon gasoline UST was closed and removed from the property. Visual observations made during the UST removal did not indicate that any leakage from the UST had occurred. TPH and BTEX constituent concentrations were not detected in discreet excavation soil samples and one composited stockpile sample (SEACOR 1991).

6.2.5 Potential for Sediment Recontamination

Groundwater Discharge

Soil and groundwater at this property may be contaminated with petroleum hydrocarbons and VOCs. Petroleum hydrocarbons and VOCs are not LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

6.2.6 Data Gaps

Sound Propeller Services appears to maintain appropriate source control BMPs and has complied with corrective actions identified by Ecology. Therefore, no data gaps were identified for this property.

6.3 Independent Metals Plant 1

Facility Summary: Independent Metals	
Tax Parcel No.	7327901335, 7327901345, 7327901355, 7327901365, 7327901375, 7327901445, 7327901465, 7327901535, 7327901545, 7327902045
Address	1365: 747 S Monroe Street 1445: 703 S Monroe Street 1335, 1345, 1355, 1375, 1465, 1535, 1545, 2045: NA Container Storage Yard: 703 S Monroe Street
Property Owner	1355, 1365, 1465, 1545, 2045: Marty O'Farrell 1335, 1345, 1535: Martin O'Farrell and Carrie L 1375, 1445: Martin Ray O'Farrell
Parcel Size	1335, 1345, 1355, 1365, 1375, 1465, 1535, 1545: 0.11 acre (5,000 sq ft) 1445: 0.23 acre (10,000 sq ft) 2045: 0.08 acre (3,600 sq ft)
Facility/Site ID	9309618
SIC Code(s)	3399: Primary Metal Products
EPA ID No.	WAH000037574 (active)
NPDES Permit No.	None
UST/LUST ID No.	None

Independent Metals Plant 1 operates its main facility on parcels 1335, 1345, 1355, 1365, 1375, 1535, 1545, and 2045 (Figure 5b). The main facility is bordered by residential properties to the south, 8th Avenue S to the east, S Monroe Street to the north, and an auto repair shop to the west.

The Independent Metals Plant 1 facility consists of two buildings:

- a 1,800 sq ft open faced storage shed, built in 2002, on parcel 1355; and
- a 3,508 sq ft industrial light manufacturing warehouse, built in 1958, on parcel 1365.

Independent Metals Plant 1 also operates on parcels 1445 and 1465 (Figure 5b), which are located at the corner of S Monroe Street and 7th Avenue S. The facility uses these parcels as a container storage yard. Large containers are distributed to other companies for scrap metal disposal.

6.3.1 Current Operations

The current operating address for the Independent Metals Plant 1 main facility is 747 S Monroe Street, Seattle, Washington. The container storage yard is located at 703 S Monroe Street. The facility recycles copper, insulated copper wire, brass, auto radiators, aluminum, stainless steel, electric motors, and iron/steel. Additionally, the facility accepts used electrical gear, transformers, balers, and trash compactors (Independent Metals 2011). The facility has a stationary fuel tank for fueling heavy equipment. According to a 2007 Ecology inspection, all storm drains at the facility have drain inserts and are conveyed to an oil/water separator. Stormwater drains to the sanitary sewer system (Jeffers 2008a).

6.3.2 Historical Operations

Independent Metals was founded in 1984 (Independent Metals 2011). Parcels 1355, 1535, and 2045 were residential properties until purchased by Independent Metals Plant 1 in 1996, 1994, and 2001, respectively (City of Seattle 2010). The use of these three parcels was not legally established until May 2010. On May 6, 2010, Independent Metals Plant 1 received a Determination of Non-Significance to legally expand the facility to these three parcels. The expansion did not have a significant adverse impact upon the environment (City of Seattle 2010).

No additional information regarding historical operations at the remaining properties was available for review.

6.3.3 Regulatory History

On August 13, 2003, SPU conducted an initial inspection of the container storage yard at 703 S Monroe Street. The inspection found used oil drums, waste batteries, and vehicle parts covered in vehicle fluids present at the facility (SPU 2003v). A follow-up inspection on October 15, 2003, determined all materials had been removed or properly covered (SPU 2003w).

Ecology conducted a source control inspection at the Independent Metals Plant 1 main facility on December 13, 2007. The inspectors determined that an NPDES permit was not required for the facility (Jeffers 2008a).

On June 12, 2008, Ecology, SPU, King County, Seattle Code Enforcement, and Seattle Police Department conducted a Hazardous Waste Compliance Inspection at Independent Metals Plant 1. The following observations were made during the inspection (Ecology 2008k):

- Independent Metals staff do not routinely supervise unloading of customer material onto the scrap pile.
- Metal containers used to hold machine shop metal turnings leak metalworking fluids and cooling fluids to the ground.
- Spill kits were not present in strategic locations around the facility working area.
- One lead/acid battery was left outside without secondary containment.

The following corrective actions were identified (Ecology 2008k):

- Assure that releases of tramp oil (i.e. used oil) and cutting fluids from metal turnings are prevented from being released to the environment.
- Place used lead/acid batteries in a closed leak-proof storage container or on a curbed, impermeable surface with spill controls.
- Provide spill kits in outdoor areas where spills are most likely to occur.

Independent Metals completed the actions requested and was in compliance on September 2, 2008 (Ecology 2008n).

Ecology conducted a facility visit on December 9, 2009 to discuss how the shredding of appliances and metals creates residue waste streams. During the visit, Ecology saw a paint spill leaching out of one of the cement-blocked metal collection areas. Independent Metals employees quickly cleaned up the spill. Ecology requested that Independent Metals Plant 1 submit documentation showing that the accumulated paint waste was removed from the facility for proper disposal. Ecology determined a verification system was needed to ensure the facility does not receive waste materials prior to unloading into the collection area (Ecology 2010a).

EPA sent a CERCLA Section 104(e) Request for Information Letter to Independent Metals Plant 1 in February 2010. A response to the request was not available for review.

The KCIW Program conducted a special study in 2010 focusing on metal recycling industrial users of the King County sanitary sewer system. Two rounds of whole water samples were collected from Independent Metals Plant 1. PCB concentrations near 1 µg/L were reported in the samples. A solid sample was collected on November 10, 2010 from the bottom of a manhole at the facility. The sample had a total PCB concentration of 27.8 mg/kg DW (KCIW 2010).

On November 24, 2010, Independent Metals Plant 1 reported to Ecology as an LQG for hazardous waste. The facility conducted a one-time cleanup of catch basins and a detention pipe that had not been cleaned for 20 years (Ecology 2011u).

Ecology and SPU conducted an inspection of Independent Metals on February 16, 2012. The inspectors determined incoming scrap items (ballasts, transformers, electrical switches, etc.) were the sources of PCBs found at the facility (Schmoyer 2012). Additional information about the inspection was not available for review. Additional information regarding this inspection, if any, will be included the Riverside Drive SCAP or a Source Control Status Report.

6.3.4 Potential for Sediment Recontamination

CSO Events

Elevated levels of PCBs were found in a catch basin solids sample collected from a sanitary sewer catch basin and manhole at the facility. Stormwater from the facility is conveyed to an oil/water separator prior to discharge to the sanitary sewer. Combined sewer discharges are significantly diluted prior to discharge, so the potential that contaminants from this property will recontaminate sediments adjacent to the Riverside Drive source control area is very low.

Groundwater Discharges

There is no information available to determine if soil or groundwater contamination is present at this property; however, given the current metals recycling operations, there is a potential for soil and groundwater contamination.

6.3.5 Data Gaps

- Information is needed to determine if soil and groundwater beneath the property has been contaminated by the metals recycling operations.

6.4 National Products Inc.

Facility Summary: National Products Inc.	
Tax Parcel No.	2185001130, 2185001140, 2185001160, 2185001270
Address	1130: 8410 Dallas Avenue S 1140: 1205 S Orr Street 1160: 8406 Dallas Avenue S 1270: 1229 S Orr Street
Property Owner	1130: JAC Corporate LLC 1140: JAC Plastics LLC 1160 & 1270: JAC 1229 LLC
Parcel Size	1130: 0.53 acre (23,184 sq ft) 1140: 0.38 acre (16,410 sq ft) 1160: 0.23 acre (10,124 sq ft) 1270: 0.10 acre (5,000 sq ft)
Facility/Site ID	24615: National Products Inc. 13132191: Spencer Industries Inc.
Alternate Name(s)	Spencer Industries Inc., Spencer Aircraft Industries, Airtech Instruments Company, Spencer Chain Gear, Spencer Manufacturing, Spencer Fluid Power
SIC Code(s)	National Products 5088: Transportation Equipment Supplies Spencer Industries Inc. 3593: Fluid Power Cylinders & Actuators 3594: Fluid Power Pumps and Motors 5084: Industrial Machinery and Equipment
EPA ID No.	WAD009482456: Spencer Industries Inc. (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

National Products Inc. operates on parcels 1130, 1140, 1160 and 1270 (Figure 5b). The facility is bordered by Dallas Avenue S to the south, residential properties to the east, S Orr Street to the north, and 12th Avenue S to the west. The facility consists of the following:

- a 10,000 sq ft industrial light manufacturing building, built in 1981, on parcel 1140;
- a 10,124 sq ft storage lot on parcel 1160;
- a 15,960 sq ft manufacturing warehouse and office, built in 1927, on parcel 1130; and
- a 7,000 sq ft shop warehouse, built in 1964, on parcel 1270.

6.4.1 Current Operations

National Products Inc. uses 8410 Dallas Avenue S as its operating address. The company performs injection molding of plastics and rubber in support of operations at its 1025 S Elmgrove Street location discussed in Section 4.6. Waste streams at the facility include metals from grinding parts and molds. There is a non-contact cooling system at the facility. The system is shut down and drained once a week. Cooling water is dumped into a utility sink (SPU 2008aa).

Stormwater is conveyed to three catch basins equipped with PVC elbows. National Products Inc. performs a quarterly inspection and cleaning of the drainage system. Stormwater from the facility discharges to the sanitary sewer (SPU 2008aa).

6.4.2 Historical Operations

The Spencer Industries facility was originally developed in 1946 at 8410 Dallas Avenue S. Spencer Industries manufactured and distributed aircraft hydraulic components and fasteners. Spencer Industries divisions included: Spencer Aircraft Industries, Airtech Instruments Company, Spencer Chain Gear, Spencer Manufacturing, and Spencer Fluid Power. All of these divisions were located in three buildings at the 8410 Dallas Avenue S address (Hart Crowser 1999a). It appears that Spencer Industries operated on parcels 1130 and 1140. The remaining parcels were occupied by small single-family residences.

In 1991, a Phase I ESA observed several grated storm drains on the paved area around the buildings. A 200-gallon waste oil AST and a 200-gallon fuel oil AST were present on the northern portion of the property along S Orr Street. Several empty 55-gallon barrels used for hydraulic oil and degreaser solvent containers were stored outside. Holes were punctured in the drums and containers to prevent them from filling with rainwater. Two large walk-in metal storage boxes used to store solvents and paints were observed on the northwest corner of the property. The facility had a “clean lab” for cleaning and repairing flight instruments. There was a storage warehouse for rivets, fittings, wire, wire guides, and pre-packed paints and cleaners. Another portion of the facility fabricated large diesel-powered aircraft heaters. A 600 sq ft paint spray booth occupied the southeastern portion of the main building. The facility had a 5,000 sq ft machine shop used for repair, manufacturing, and testing of hydraulic motors (Hart Crowser 1999a).

6.4.3 Regulatory History

Spencer Industries

Spencer Industries reported to Ecology as a medium quantity generator for hazardous waste from 1995 until 2001 (Ecology 2011k).

On December 18, 1996, Hart Crowser notified Ecology that potentially hazardous materials were detected in groundwater at Spencer Industries during an initial subsurface investigation. Several chlorinated VOCs were measured at concentrations below 50 µg/L (Hart Crowser 1996). Ecology referred the facility to King County Department of Natural Resources — Hazardous Waste Section for investigation (Ecology 1997a). King County met with the owners of Spencer Industries and discussed the environmental investigations conducted by Hart Crowser. The facility was referred back to Ecology to track remedial progress (King County 1997).

Soil and groundwater investigations in November 1996 and February 1999 identified and delineated a PCE/TCE plume and an adjacent TCE plume at Spencer Industries. On April 2, 1999, Hart Crowser submitted an application for entry into Ecology’s VCP. The application requested review of the “Summary of Site Investigations” report. A groundwater monitoring plan was submitted on July 8, 1999. On August 12, 1999, Ecology determined that further action was needed to address elevated levels of PCE under S Orr Street. Ecology agreed MTCA Method B surface water standards be used to assess the groundwater contamination at the facility (Ecology 1999b).

On May 31, 2006, Spencer Industries was removed from the VCP because the company failed to provide information regarding active facility cleanup efforts within the previous year. Ecology determined that the independent remedial action performed at the facility were not sufficient to meet substantive requirements contained in MTCA. Further remedial action at the facility is necessary (Ecology 2006b). No additional information regarding remedial actions at the facility was available for review.

National Products Inc.

SPU conducted an initial inspection of National Products Inc. on July 11, 2008. The inspector observed outdoor activities including welding, acetone container storage, and metal shavings being tracked out of the shop area. The following corrective actions were identified (SPU 2008):

- Complete a written spill plan and post at appropriate locations at the facility.
- Obtain spill containment and cleanup materials.
- Educate employees about the spill plan and spill kit.
- Increase sweeping in the metal shaving area to reduce the potential to track out.
- Properly label and dispose of all waste.
- Make sure the outside area used for welding is free of any debris that could wash to storm drains.
- Determine if facility activities require coverage under the ISGP for discharge to surface waters.

A follow-up inspection on September 17, 2008, found that the acetone drum was still stored outside with no label. King County was assisting the facility with removal. Spill kits and spill plans were in place. Welding operations had discontinued, but the area would be swept daily when operations started up again. Overall compliance was achieved on October 10, 2008 (SPU 2008ad).

In February 2009, Ecology received a complaint that a prior owner buried PCB-bearing transformers containing PCBs at the facility. Ecology visited the facility on March 3, 2009, to investigate but found no evidence of the burial. Ecology contacted the complainant on March 27, 2009, to discuss the investigation. The complainant was unwilling to give a signed statement and Ecology took no further action (Cargill 2011).

On April 25, 2011, Ecology received a complaint about workers disposing of chemicals through a concealed drain in the floor. A previous inspection of the facility found a floor drain in the packing facility that terminated at an unknown location. There was very little liquid product or waste stored at the building. The inspector instructed National Products Inc. to seal the drain or determine where the drain terminated. The company decided to seal the drain (Ecology 2011g).

6.4.4 Environmental Investigations and Cleanups

Several environmental investigations have been performed at this property. Sample locations are shown on Figure 32 and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Tables 25 and 26. Summaries of all chemicals in soil and groundwater detected at the facility are included in Tables D-23 and D-24.

Level I Environmental Site Assessment (1991)

A Level I ESA was conducted at the facility in May 1991. The objective of the assessment was to provide Spencer Industries with information relative to the potential for existing environmental contamination from toxic materials. The assessment determined that there was a potential for contamination due to the storage of waste oil and heating oil in ASTs and disposal of used degreasing solvent barrels. The conditions around the ASTs (e.g. heavy staining on the ground beneath the ASTs) indicated leakage and overfilling may have occurred over a period of several years. The practice of puncturing degreasing solvent barrels and exposing them to weather may have contaminated near-surface soils on the central portion of the property along S Orr Street (Hart Crowser 1999a).

Phase II Site Investigation (1996)

Between 1991 and 1996 the two ASTs were removed and underlying soil was excavated. A Phase II Site Investigation was completed at Spencer Industries between November 11 and 13, 1996. Three monitoring wells were installed to determine groundwater flow direction and collect groundwater samples for chemical analysis of TPH, metals, and VOCs. TPH was not detected in the groundwater samples. Arsenic was detected at concentrations slightly above MTCA Method A cleanup levels in two of the monitoring wells. TCE and PCE concentrations were detected in two wells at levels that exceeded MTCA Method A cleanup levels. TCE and PCE concentrations in the upgradient sample were not detected (Hart Crowser 1999a).

Two subsurface soil samples were collected near the former ASTs, and one soil sample was collected from beneath the repair shop. Soil samples were analyzed for TPH and metals. The soil sample collected below the waste oil AST was also analyzed for PCBs. TPH and PCB concentrations in soil samples were not detected or detected at concentrations below MTCA Method A cleanup levels. Metal concentrations were detected at or below concentrations naturally occurring in soil (Hart Crowser 1999a).

Wipe samples were collected from oil stained areas in the repair shop to analyze for PCBs. PCBs were not detected in analysis of the wipe samples (Hart Crowser 1999a).

Summary of Site Investigations (1999)

In 1996 and 1999, Hart Crowser performed a soil and groundwater investigation at the property to determine the lateral and vertical extent of groundwater impacted by chlorinated VOCs and to identify potential VOC source areas. Ten soil samples and fifteen groundwater samples were submitted for analysis of VOCs. The report concluded there did not appear to be an upgradient VOC source. It was determined that there was a relatively limited extent of low concentration VOCs in groundwater, and no evidence of migration of VOCs. The investigation determined conditions were favorable for natural attenuation of existing PCE and TCE plumes (Hart Crowser 1999b).

6.4.5 Potential for Sediment Recontamination

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

Groundwater Discharge

Sediment COCs have not been detected at this facility with the exception of arsenic in groundwater. No exceedances of groundwater-to-sediment screening levels have been observed. In addition, no exceedances of the SMS criteria have been observed in sediment samples collected near the Riverside Drive source control area. Therefore, the potential that contaminants from this property will impact sediments adjacent to the Riverside Drive source control area is very low.

6.4.6 Data Gaps

No data gaps were identified for this property.

6.5 Seattle Fire Station 26

Facility Summary: Seattle Fire Station 26	
Tax Parcel No.	7883604285
Address	800 S Cloverdale Street
Property Owner	City of Seattle
Parcel Size	0.41 acres (18,000 sq ft)
Facility/Site ID	13152935
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 007900 (inactive)

Seattle Fire Station 26 operates at parcel 4285 (Figure 5b), which is bordered by 8th Avenue S to the west, S Cloverdale Street to the south, South Park Missionary Baptist Church to the north, and residential properties to the east.

There is one building located on this facility, a 5,345 sq ft fire station built in 1973.

6.5.1 Current Operations

Fire Station 26 is operated by the Seattle Fire Department. The fire station has been in operation since at least 1973. A 500-gallon diesel UST was installed at Fire Station 26 in 1982 to replace a previous diesel UST that had been installed in 1975 (Struthers 2000). No additional information regarding current operations at the facility was available for review.

6.5.2 Historical Operations

UST tightness testing was performed annually from 1991 to 1997 (Jensen 1991, 1992, 1993, 1994, 1995, 1996b, 1997b). No additional information regarding the historical operations was available for review.

6.5.3 Regulatory History

No information regarding regulatory interactions for this facility was available for review.

6.5.4 Environmental Investigations and Cleanup

UST Removal (2000)

The 500-gallon UST was removed on January 3, 2000. Three soil samples were collected during the UST removal for laboratory analysis. The samples were analyzed for petroleum hydrocarbon identification. Gasoline, diesel, and heavy oil range hydrocarbon concentrations in soil were not detected. There was no indication of leakage from the former UST (Struthers 2000). Sample locations are shown on Figure 31.

6.5.5 Potential for Sediment Recontamination

Groundwater Discharge

There is no information available that indicates soil or groundwater contamination is present at this property.

6.5.6 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.6 Former Scott Andrews Property

Facility Summary: Former Scott Andrews Property	
Tax Parcel No.	7883608714
Address	8520 14th Avenue S
Property Owner	John and Allison Johnson
Parcel Size	0.12 acre (5,400 sq ft)
Facility/Site ID	41287367
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	LUST 586477 (inactive) UST 565971 (inactive)

Parcel 8714 (Figure 5c) is bordered by South Park Mail & Parcel to the south, residential properties to the east, Dolex Dollar Express to the north, and 14th Avenue S to the west. According to King County tax assessor records, the following buildings are located on the parcel:

- a 1,110 sq ft retail store built in 1936, and
- a 814 sq ft retail store built in 1926.

6.6.1 Current Operations

Information regarding current operations at the property was not available for review.

6.6.2 Historical Operations

According to a 2001 UST Decommissioning and Cleanup report, a gasoline service station historically operated at the property. The USTs associated with the former service station had been out of service since 1995. These tanks included a 2,000-gallon UST, a 3,500-gallon UST, and a 4,000-gallon UST. An excavation and cleanup of the facility was conducted in December 2000 (KS Environmental 2001).

No additional information regarding historical operations at the property was available for review.

6.6.3 Regulatory History

Information regarding regulatory interactions for this property was not available for review during the preparation of this Data Gaps Report.

6.6.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are presented on Figure 33. A summary of all chemicals in soil detected at the facility is included in Table D-25.

UST Removal (2000)

On October 18, 2000, a limited subsurface investigation was completed around the three USTs associated with the former service station. Elevated levels of gasoline contamination were present in the subsurface soils beneath the former dispensing island. No evidence of soil contamination was detected around the existing tanks (K&S Environmental 2001).

On December 20 through 22, 2000, the three USTs, dispenser islands, and product piping associated with the former service station were removed from the property. During the removal activities, three previously abandoned 550-gallon USTs were discovered near the dispenser islands. The three 550-gallon USTs were also removed from the property. The three abandoned USTs appeared to be the source of soil contamination at the facility. Approximately 128 tons of gasoline contaminated soil was removed from the property and disposed of at a permitted facility (K&S Environmental 2001).

In March 2010, SPU collected storm drain solids samples from right-of-way catch basins (RCB181, RCB182, and SD14) located near the property. Concentrations of PCB, zinc, chrysene, phenanthrene, fluoranthene, BEHP, butyl benzyl phthalate, diethylphthalate, dimethylphthalate, di-n-butylphthalate, 4-methylphenol, benzoic acid, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6b) (SPU 2010n).

6.6.5 Potential for Sediment Recontamination

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

Groundwater Discharge

Soil and groundwater at this property may be contaminated with petroleum hydrocarbons; however, a remedial excavation has been performed to address gasoline-range hydrocarbons in soil. Petroleum hydrocarbons are not LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

6.6.6 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.7 Former Crosby Auto Repair Shop

Facility Summary: Former Crosby Auto Repair Shop	
Tax Parcel No.	7883607842
Address	8621 14th Avenue S
Property Owner	Nguyen Long NGOC
Parcel Size	0.14 acre (6,000 sq ft)
Facility/Site ID	93927211
Alternate Name(s)	South Park Frame and Wheel Alignment
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	UST 550452 (active) LUST 545685 (active)

Parcel 7842 (Figure 5c) is bordered by S Donovan Street to the south, 14th Avenue S to the east, a restaurant to the north, and residential properties to the west. King County tax assessor records indicated that there is one building on the property, a 1,929 sq ft open office building constructed in 1930.

6.7.1 Current Operations

King County tax assessor records indicate that the facility is used as a sewing shop. No additional information regarding current operations at this facility was available for review.

6.7.2 Historical Operations

The former Crosby Auto Repair shop was also known as South Park Frame & Wheel Alignment. A 4,000-gallon UST was in operation prior to 1965 (SD&C 2000). No additional information regarding historical operations at the property was available for review.

6.7.3 Regulatory History

Information regarding regulatory interactions for this facility was not available for review during the preparation of this Data Gaps Report.

In March 2010, SPU collected storm drain solids samples from right-of-way catch basins (RCB183 and RCB184) located near the property. Concentrations of PCB, lead, mercury, zinc, BEHP, butyl benzyl phthalate, diethylphthalate, and heavy oil-range hydrocarbons exceeded the storm drain screening values (Table 6b) (SPU 2010n).

6.7.4 Environmental Investigations and Cleanups

One environmental investigation has been performed at this property. Sample locations are presented on Figure 34 and summaries of chemicals that exceeded soil and groundwater screening levels are provided in Table 27 and 28. A summary of all chemicals in soil detected at the facility is included in Table D-26 and D-27.

Subsurface Investigation (2000)

In September 2000, the 4,000-gallon gasoline UST was closed in place due to its proximity to a city utility. One soil sample and one groundwater sample were analyzed for gasoline-range hydrocarbons, Stoddard solvent, BTEX, and lead. Lead and Stoddard solvent concentrations were not detected in the soil or groundwater sample. BTEX concentrations in the soil were detected at levels below MTCA Method A cleanup levels. Benzene and gasoline-range hydrocarbon concentrations exceeded MTCA Method A cleanup levels for groundwater. Gasoline-range hydrocarbon concentrations exceeded the MTCA Method A cleanup levels for soil. The absence of lead contamination and the gasoline-to-benzene ratio suggested the petroleum hydrocarbon release that occurred more recently than 1965 (SD&C 2000).

6.7.5 Potential for Sediment Recontamination

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

Groundwater Discharge

Petroleum hydrocarbons and VOCs have been detected in groundwater at the former Crosby Auto Repair Shop; however, these contaminants are not considered LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

6.7.6 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.8 Sea Mar Family Housing

Facility Summary: Sea Mar Family Housing	
Tax Parcel No.	7883608720
Address	1000 S Henderson Street
Property Owner	Sea Mar South Park Family
Parcel Size	1.76 acres (76,555 sq ft)
Facility/Site ID	9401
Alternate Name(s)	Cesar Chavez Village
SIC Code(s)	1794: Excavation and Foundation Work
EPA ID No.	NA
NPDES Permit No.	WAR010790 (Inactive Construction Permit)
UST/LUST ID No.	None

Parcel 8720 (Figure 5b) is almost completely surrounded by parcels owned by the Sea Mar Skilled Nursing Home. The Sea Mar Skilled Nursing home is located to the east of parcel 8720. The block containing parcel 8720 is bounded by S Trenton Street to the north, 10th Avenue S to the west, 12th Avenue South to the east, and S Henderson Street to the south.

As of September 2011, King County tax assessor records list parcel number 8720 as a multi-family apartment complex (Cesar Chavez Village). The current apartment complex was completed in 2009.

6.8.1 Current & Historical Operations

This property is currently occupied by an apartment complex built in 2009. No additional information regarding the current and historical operations at this property was available for review.

6.8.2 Regulatory History

Sea Mar Family Housing was issued a Construction Stormwater General Permit from July 2008 to March 2010 during the construction of the Cesar Chavez Village. No additional information regarding regulatory interactions for this property was available for review.

6.8.3 Potential for Sediment Recontamination

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

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

6.8.4 Data Gaps

No data gaps were identified for this property.

6.9 Former Tom Thurber Property

Facility Summary: Former Tom Thurber Property	
Tax Parcel No.	7883608604
Address	1420 S Henderson Street
Property Owner	Sandra M Mykris
Parcel Size	0.31 acre (13,440 sq ft)
Facility/Site ID	23653754
Alternate Name(s)	Signal Motor Sports, Washington Equipment, Inc.
SIC Code(s)	None
EPA ID No.	None
NPDES Permit No.	None
UST/LUST ID No.	101847

Parcel 8604 (Figure 5b) is bordered by Former American Bathtub Refinishers Inc. to the west, S Henderson Street to the south, and Boeing to the east and north. The property has one building, a 3,360 sq ft garage, service, and repair shop built in 1982.

6.9.1 Current Operations

No information regarding the current operations of this facility was available for review.

6.9.2 Historical Operations

Signal Motor Sports operated at this facility between 1997 and 2003. Washington Equipment, Inc. operated at this facility at some time between 2000 and 2007. One 1,000-gallon diesel UST was installed at this facility in December 1964 and was removed in 1992. No additional information regarding historical operations at this property was available for review.

6.9.3 Regulatory History

Information regarding regulatory interactions for this property was not available for review during the preparation of this Data Gaps Report.

6.9.4 Environmental Investigations and Cleanup

Site Hazard Assessment and UST Closure (1992)

On September 30, 1992, the 1,000-gallon UST was removed from the property (Ecology 1992g). The tank was located on the east side of the building, under the loading dock on the property. The UST was in good condition and no evidence of leaks was observed during the tank excavation. Soil samples were taken at the bottom of the excavation, a composite of the east and west ends, and a composite of the north and south sides. Soil samples were analyzed for diesel-range hydrocarbons. Diesel-range hydrocarbons were detected at concentrations below 25 mg/kg in the soil samples. All soils removed during the excavation were placed back in the excavation and filled to grade with clean fill dirt (Bison Environmental 1992c). Sample locations are presented on Figure 35.

6.9.5 Potential for Sediment Recontamination

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

Groundwater Discharge

Soil and groundwater at this property may be contaminated with petroleum hydrocarbons. Petroleum hydrocarbons are not LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

6.9.6 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.10 Former American Bathtub Refinishers Inc.

Facility Summary: Former American Bathtub Refinishers Inc.	
Tax Parcel No.	7883608608
Address	1412 S Henderson Street
Property Owner	Manchester Tuscany LLC
Parcel Size	0.14 acre (6,000 sq ft)
Facility/Site ID	26135396
Alternate Name(s)	Modrock Concrete Design, Kens Custom Contracting, Inc.
SIC Code(s)	None
EPA ID No.	WAH000010512 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 8608 (Figure 5b) is bordered by S Henderson Street to the south, former Tom Thurber property to the east, an apartment complex to the north, and an apartment complex and an industrial vacant lot to the west. One building, a 2,520 sq ft office/warehouse built in 1951, is present on the property.

6.10.1 Current Operations

Modrock Concrete Design, a fabricator of handcrafted countertops, tables, sinks, fireplaces and many other architectural concrete pieces, appears to be the current operator at this facility. The company has been at this location since 2009 (Modrock Concrete Designs 2011). No additional information regarding current operations at the facility was available for review.

6.10.2 Historical Operations

American Bathtub Refinishers, Inc. (American Bathtub Refinishers) was a reglazing and chip repair, fiberglass, and bathtub, shower, and sink refinishing company that operated at this facility from at least 2000 to 2003. The company had commercial and residential clients.

Kens Custom Contracting, Inc. (KC Contracting) began operations in 2001 and shared this facility with American Bathtub Refinishers (American Bathtub Refinishers 2000).

This facility accumulated approximately two to four 5-gallon containers of waste paint/thinner a year. According to the manager of American Bathtub Refinishers, waste paint and thinner were given to KC Contracting for disposal through a lacquer thinner reclaimer. Prior to this arrangement with KC Contracting, waste paint/thinner was disposed of by an employee or manager to the residential waste and then taken to the Wastemobile (American Bathtub Refinishers 2000). The length of KC Contracting tenure at the facility is unknown.

No additional information regarding historical operations at the property was available for review.

6.10.3 Regulatory History

Ecology visited this facility on November 24, 1999, and requested information on how waste, primarily paint and lacquer thinner, had previously been disposed. As a result of the inspection, Ecology required that the company obtain an EPA State Identification Number and a permit from the Puget Sound Clean Air Agency for their paint booths (Ecology 2000a).

6.10.4 Potential for Sediment Recontamination

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

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

6.10.5 Data Gaps

- Information regarding ModrockConcrete Design's operations is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.11 Warner's Foreign Auto Repair

Facility Summary: Warner's Foreign Auto Repair	
Tax Parcel No.	7883608556
Address	9001 14th Avenue S
Property Owner	Arthur Warner
Parcel Size	0.10 acre (4,200 sq ft)
Facility/Site ID	1661671
SIC Code(s)	7538: Auto Repair Shops
EPA ID No.	WAD988495040 (inactive)
NPDES Permit No.	None
UST/LUST ID No.	LUST: 2970 (inactive) UST: 10726 (inactive)

Parcel 8556 (Figure 5b) is bordered by S Henderson Street to the north, 14th Avenue S to the east, and single family residences to the south and west. There is one building located on this property, a 1,800 sq ft service repair garage built in 1947.

6.11.1 Current & Historical Operations

Warner's Foreign Auto Repair is an auto repair shop that has operated at this facility since 1982. No additional information regarding the current and historical operations of this facility was available for review.

6.11.2 Regulatory History

Information regarding regulatory interactions for this property was not available for review.

6.11.3 Environmental Investigations and Cleanup

Two environmental investigations have been performed at this property. Sample locations are presented on Figure 36, and a summary of chemicals that exceeded soil screening levels is provided in Table 29. A summary of all chemicals in soil detected at the facility is included in Table D-28.

Site Hazard Assessment (1991)

In December 1991, three USTs were removed from the property. These tanks included 1,000-gallon and 3,000-gallon USTs used to store gasoline and a 550-gallon UST used to store waste oil (Bison Environmental 1992a).

The tanks were clean and showed no evidence of product leakage or rust. Field screening did not indicate the existence of contamination. Soil samples were collected from the bottom of each

UST excavation. Samples collected from the gasoline UST excavations were analyzed for BTEX and lead. The sample collected from the waste oil UST excavation was analyzed for total recoverable petroleum hydrocarbons (TRPH). No analytes were detected above cleanup levels in the samples collected from the gasoline UST excavations. TRPH was detected at concentrations up to 3,100 ppm in soil from the waste oil UST excavation, which exceeded the MTCA Method A cleanup level (Bison Environmental 1992a).

UST Decommissioning (1992)

On January 9, 1992, three USTs were decommissioned and removed from the Warner’s Foreign Auto Repair (Ecology 1992c). All three tanks were located under the parking area on the north side of the property adjacent to S Henderson Street. All soils removed during excavation were used as backfill and additional material was brought in and used to return the location to the original grade (Bison Environmental 1992a).

6.11.4 Potential for Sediment Recontamination

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

Groundwater Discharge

Soil and groundwater at this property may be contaminated with petroleum hydrocarbons. Petroleum hydrocarbons are not LDW sediment COCs. While the presence of petroleum hydrocarbon s in soil and groundwater may mobilize naturally occurring arsenic (Harter and Rollins 2008), arsenic is not a sediment COC for the Riverside Drive source control area. Therefore, the potential for sediment recontamination via the groundwater discharge pathway is low.

6.11.5 Data Gaps

- Information regarding Warner’s Foreign Auto Repair ongoing industrial activities is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.12 Heartwood, Inc.

Facility Summary: Heartwood, Inc.	
Tax Parcel No.	5388600041
Address	1414 Director Street
Property Owner	Eustis Holdings LLC
Parcel Size	1.03 acres (45,063 sq ft)
Facility/Site ID	73671237
SIC Code(s)	5021: Furniture 5021-12: Office Furniture and Equipment Dealers (Wholesale)
EPA ID No.	WAD982656431 (active)
NPDES Permit No.	None
UST/LUST ID No.	None

Parcel 0041 (Figure 5b) is bordered by Boeing to the east, apartment housing and 14th Avenue S to the west, S Director Street to the south, and S Henderson Street to the north. There is one building located on this property, a 31,604 sq ft industrial light manufacturing building constructed in 1985.

6.12.1 Current Operations

Heartwood, Inc. (Heartwood) is a custom contract and metal manufacturer specializing in custom conference tables and other custom furniture. The company has been in operation at this facility since 1977 (Heartwood 2011).

6.12.2 Historical Operations

Information regarding the historical operations at this property was not available for review.

6.12.3 Regulatory History

Heartwood reported to Ecology as a hazardous waste planner from January 1993 to March 2000 and as a hazardous waste generator since 1989. The hazardous waste stream is lacquer thinner contaminated with paint (an acetone/toluene mixture) (Ecology 1989).

Ecology conducted an inspection at Heartwood on May 20, 2008. Ecology referred Heartwood to KCIW for solid waste clearance and identified the following corrective actions as a result of the inspection (Jeffers 2008c).

- Cease unauthorized industrial waste disposal to dumpster.
- Cease discharge of industrial waste to sewer.
- Correctly, label and close waste containers.

Ecology conducted a re-inspection on July 2, 2008, and determined that the facility had satisfactorily completed the corrective actions and was in compliance (Jeffers 2008d).

Ecology inspected Hearwood on April 6, 2011, and identified the following corrective actions (Ecology 2011f):

- Properly document waste disposal.
- Properly label containers.

The inspector recommended the facility improve housekeeping, cover floor drains when not in use, and perform regular maintenance of catch basins.

Ecology conducted a follow-up inspection at Heartwood in June 2011, and found that the company had satisfactorily completed the corrective actions and was in compliance (Ecology 2011l).

6.12.4 Potential for Sediment Recontamination

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

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

6.12.5 Data Gaps

Heartwood appears to maintain appropriate source control BMPs and has complied with corrective actions identified by Ecology. Therefore, no data gaps were identified for this property.

6.13 Former Seattle Refrigeration and Manufacturing Co

Facility Summary: Former Refrigeration and Manufacturing Co	
Tax Parcel No.	2433700226
Address	1057 S Director Street
Property Owner	Abbottsford Holdings LLC
Parcel Size	0.83 acre (36,200 sq ft)
Facility/Site ID	18225132
SIC Code(s)	3432: Plumbing Fixture Fittings and Trim 3499: Fabricated Metal Products, NEC
EPA ID No.	CRK000022890
NPDES Permit No.	SO3001958 (inactive)
UST/LUST ID No.	None

Parcel 0226 (Figure 5b) is bordered by 12th Avenue S and Pacific Industrial Supply to the east, single family residences to the north and west, and SR 99 to the south. One building is present on this property, a 15,000 sq ft light manufacturing building constructed in 1980.

6.13.1 Current Operations

Information regarding current operations at the facility was not available for review.

6.13.2 Historical Operations

Seattle Refrigeration and Manufacturing Co (Seattle Refrigeration) was a manufacturer of component refrigeration parts and a refrigeration contractor involved in total refrigeration systems for industrial, marine, and commercial customers. These systems include freezers, cold storage, ice making, ice storage and deliver, and ultra-low temperature freezers for hospitals, laboratories, and vapor recovery (Seattle Refrigeration 2011).

Seattle Refrigeration began operations in 1932 as a parts manufacturer and transitioned to a refrigeration contractor from 1964 to 2007 (Seattle Refrigeration 2011).

6.13.3 Regulatory History

Seattle Refrigeration operated under a Stormwater Baseline General Permit (SO3-001958) beginning in 1994 (Ecology 1994b). In 2007, Seattle Refrigeration submitted a Notice of

Termination of coverage under their IGSP due to termination of all industrial activity requiring a permit at the facility (Ecology 2007c).

6.13.4 Potential for Sediment Recontamination

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

Groundwater Discharge

There is no information available that indicates that soil or groundwater contamination is present at this property.

6.13.5 Data Gaps

- Information regarding ongoing industrial activities, if any, is needed to verify that these activities are in compliance with all applicable regulations and BMPs.

6.14 Other Properties in the 8th Avenue S CSO Basin

Facility inspections have not been performed at the following properties. No information regarding the operations at these facilities was available for review. Operations and activities performed at these properties/facilities may be potential sources of contaminants to sediments near the Riverside Drive source control area.

Facility/ Site ID	Facility or Property Name	Current Operator	Address & Parcel
83132785	Reamco Electronics	Same	817 S Kenyon Street, 7327906840
15388822	Service Specialties Inc.	Same	800 S Kenyon Street, 7327906860
93511879	Former Cascade Enterprises	Juan Colorado Restaurant	8709 14th Avenue S, 7883608096
47552226	Former Burned Laundry	Race Recycling and Compacting Equipment LLC	1414 S Concord Street, 7883608623
48968474 64285373	Former South Park BP Former Schauer Northwest Inc.	76 Service Station	8819 14th Avenue S, 7883608370
92792171	Former Bus & Air Parcel Service Inc.	AAA Used Tires, Inc.	9004 14th Avenue S, 7883608578
1992812	Petrocard Systems Inc.	Pacific Pride	9014 14th Avenue S, 7883608593

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7.0 Summary

The Riverside Drive source control area is one of 24 source control areas identified as part of the overall cleanup process for the LDW Superfund Site. Ecology is the lead agency for source control for the LDW 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 plan is to identify and manage potential sources of sediment recontamination in coordination with sediment cleanups. Source control will be achieved by using existing administrative and legal authorities to perform inspections and require necessary source control actions.

7.1 COCs in Sediments Near the Riverside Drive Source Control Area

The following chemicals are considered to be COCs for the Riverside Drive source control area with regard to potential sediment recontamination (Section 2.2.2):

- Mercury
- PCBs
- PAHs
- Phthalates
- Other SVOCs
- Pesticides
- Dioxins/furans

7.2 Potential Adjacent or Upland Sources of Contaminants

Two public storm drains and one CSO outfall discharge to the LDW within the Riverside Drive source control area (Section 3.1):

Outfall No.	Outfall Name	Location	Pipe Diameter/Material	Outfall Type
2112	7th Avenue S SD	2.7 W	unknown	SPU SD
2107	8th Avenue S CSO	2.8 W	36-in. reinforced concrete pipe	KC CSO
3037	OF6620	3.2 W	18-in. corrugated metal pipe	KC SD

Source: LDW Phase 2 RI Final (Windward 2010b, Appendix H)

7.2.1 7th Avenue S SD Basin

The 7th Avenue S SD basin discharges via Outfall 2112 (Section 3.1.1), which is located on the right-of-way at approximately RM 2.7 West (Figures 4a and 4b). Based on data provided by SPU, the 7th Avenue S SD basin drains an area of approximately 230 acres (SPU 2010n). The drainage basin comprises the following areas:

- The lower 7th Avenue S SD basin is approximately 66 acres and spans east-to-west from the LDW to WA-99 and north-to-south from S Webster Street to S Rose Street.

- The middle 7th Avenue S SD basin is approximately 126 acres and spans east-to-west from WA-99 to WA-509 and north-to-south from S Rose Street to one block north of S 96th Street.
- The upper 7th Avenue S SD basin is approximately 38 acres and spans east-to-west from WA-509 to SW 97th Place and north-to-south from 2nd Avenue SW to 550 feet north of SW 100th Street.

7.2.2 8th Avenue S CSO Basin

The 8th Avenue S CSO basin covers approximately 2,980 acres, spanning east-to-west from the LDW to West Marginal Way SW in the northern area of the basin and from the LDW to WA-509 in the southern area of the basin (Section 3.1.2). Land uses within the CSO basin include industrial, residential, and commercial properties. The storm drain and sanitary sewer lines associated with the 8th Avenue S CSO basin are shown in Appendix C.

From 1991 to 1996, combined wastewater and stormwater overflows were discharged through the 8th Avenue S CSO on average 2.3 times per year. The 8th Avenue S CSO did not discharge between 1997 and 2009. The CSO discharged a total of 18 gallons during one event in October 2010 (King County 2011a).

7.2.3 Adjacent and Upland Properties

Properties located directly adjacent to the LDW that could affect sediments from RM 2.6 to 3.4 West include (Figures 4b and 4c):

- Pacific Pile and Marine
- 640 S Riverside Drive
- Former Hurlen Construction
- Lukas Machine Inc.
- Independent Metals Plant 2
- Former Long Painting – 10th Avenue S Facility

Residential properties are located adjacent to the LDW within the Riverside Drive source control area, from RM 3.1 to 3.4 West (Figures 4a and 4c).

There are 68 upland properties that could potentially affect RM 2.6 to 3.4 West sediments (Figures 4b through 4d). These properties are listed on Table 1. The parcels associated with these adjacent and upland facilities are identified on Figures 5a through 5c. On Figures 5a through 5c, parcels identified with like colors are operated by the same facility.

In addition, the 8th Avenue S CSO basin was reviewed to identify any additional facilities that could represent potential sediment recontamination sources. Ecology has assigned Facility/Site identification numbers to 309 facilities within the 8th Avenue S CSO basin (Appendix C).

Readily available information regarding the outfalls and properties in the Riverside Drive source control area has been summarized in Sections 3.0 through 6.0 of this Data Gaps Report.

7.3 Potential Contaminant Migration Pathways

Potential sources of sediment recontamination associated with the Riverside Drive source control area include storm drains, CSO outfalls, and discharges from adjacent and upland properties. Transport pathways that could contribute to the recontamination of sediments within the source control area 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.

7.3.1 Direct Discharges via Outfalls

Direct discharges may occur from public or private storm drain systems, CSOs, and EOFs. There are two public outfalls, three private outfalls, three storm drain outfalls of unknown origin, and one CSO within the Riverside Drive source control area.

Large spills of hazardous substances and waste materials containing COCs may be transported to a storm drain and therefore have the potential to impact sediment in the LDW. There is a potential for spills of COCs from many of the industrial and commercial businesses from upland properties as well as from trucks and trains transporting hazardous substances and waste materials. Spills that occur in upland properties could enter the onsite or public SD system and be discharged to the LDW.

7.3.2 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 practices at adjacent properties may contribute to the movement of contaminants to the LDW via runoff.

7.3.3 Spills to the LDW

Near-water and overwater activities have the potential to impact adjacent sediment from spills directly to the LDW of material containing COCs. Parcels adjacent to the LDW within the Riverside Drive source control area are a combination of residential properties and industrial properties that conduct overwater activities. Accidental spills during loading/unloading operations may result in transport of contaminants to sediment. Facilities that conduct overwater activities include Pacific Pile and Marine and Independent Metals Plant 2.

7.3.4 Groundwater Discharges

Contaminants in soil resulting from spills and releases to adjacent and upland properties may be transported to groundwater and subsequently released to the LDW. Soil and groundwater contamination was documented at the following properties:

- 640 S Riverside Drive property
- Former Long Painting 10th Avenue S Facility
- Coach Maintenance
- Fire King of Seattle, Inc.

- Former Glitsa American
- Interstate Coatings, Inc.
- Marine Lumber Service Inc.
- Modern Machine Company & Olsson Manufacturing
- Ness Cranes, Inc.
- Former Crosby Auto Repair
- Warner's Foreign Auto Repair

In addition, soil and groundwater contamination is suspected at Independent Metals Plant 2. Contamination in soil and groundwater could be released directly to sediments via groundwater discharge.

7.3.5 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. Banks within the Riverside Drive source control area are composed of riprap, vegetation, wharfs, and exposed soil. Facilities with exposed soil along the shoreline include Pacific Pile and Marine, 640 S Riverside Drive, former Hurlen Construction, Lukas Machine, and Independent Metals Plant 2. Contaminants in exposed soils along the banks could be released directly to sediments via erosion.

7.3.6 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; 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 Riverside Drive source control area are currently regulated as point sources of air emissions.

7.4 Data Gaps

Data gaps have been identified for outfalls and adjacent and upland properties in Sections 3.0 through 6.0.

7.4.1 Initial Inspections

Facility inspections have not been performed by Ecology or SPU at the following properties, or new activities have been introduced since the facility was last inspected. Based on the information reviewed for the Data Gaps Report, operations at these facilities may represent potential sediment recontamination sources.

Facility or Property Name	Current Operator	Address	Facility/ Site ID	Data Gaps Report Section
Adjacent Properties				
Former Long Painting – 10th Avenue Facility	Unity Electric	1024 S Elmgrove Street	16838 29633897 71678662	4.6
Facilities in the 7th Avenue S SD Basin				
Former Airport Towing	Unknown	301 S Sullivan Street	14644	5.39
Former Brown Engineering	Mech Agents	550 S Monroe Street	29149762	5.25
Former Guinns Automotive & Electric	Unknown	245 S Austin Street	36385877	5.43
Interstate Coatings, Inc.	Same	745 S Chicago Street	2335 25623222	5.13
King Auto & Truck Wrecking, Inc.	Same	543 S Monroe Street	2278	5.27
Former KJM Electric Co/Former Chemithon Surface Finishing Inc.	Unknown	521 S Monroe Street	1370584 88237831	5.28
Manufacturing Technologies Inc. (MTI)	MTI, Swift Tools and Pretzel Logic	7709 5th Avenue S	15761	5.10
Former Mike's Truck Repair & Fabrication	Unknown	515 S Southern Street	11457	5.34
The Revere Group	Same	9310 4th Avenue S	17130	5.43
Former Screen Matic Arts	Unknown	9354 4th Avenue S	84435338	5.43
Seidelhuber Iron & Bronze Works Inc.	Same	8009 7th Avenue S	59692187	5.29
Westec Industries, Inc. McFabco Steel Corporation	Same	540 S Elmgrove Street 635 S Elmgrove Street	45558857 89886819	5.30
Westeel Company	Same	8001 7th Avenue S	19739	5.26
Facilities in the 8th Avenue S CSO Basin				
Former American Bathtub Refinishers Inc.	Modrock Concrete Design	1412 S Henderson Street	26135396	6.10
Former Burned Laundry	Unknown	1414 S Concord Street	47552226	6.14
Former Bus & Air Parcel Service Inc.	Unknown	9004 14th Avenue S	92792171	6.14
Former Cascade Enterprises	Unknown	8709 14th Avenue S	93511879	6.14
Former Crosby Auto Repair Shop	Unknown	8621 14th Avenue S	93927211	6.7
Petrocard Systems Inc.	Pacific Pride	9014 14th Avenue S	1992812	6.14
Reamco Electronics	Same	817 S Kenyon Street	83132785	6.14
Former Scott Andrews Property	Unknown	8520 14th Avenue S	41287367	6.6
Seattle Fire Station 26	Same	800 S Cloverdale Street	13152935	6.5
Former Seattle Refrigeration and Manufacturing Co	Unknown	1057 S Director Street	18225132	6.13
Service Specialties Inc.	Same	800 S Kenyon Street	15388822	6.14
Former South Park BP/ Former Schauer Northwest Inc.	76 Service Station	8819 14th Avenue S	48968474 64285373	6.14

Facility or Property Name	Current Operator	Address	Facility/ Site ID	Data Gaps Report Section
Former Tom Thurber Property	Unknown	1420 S Henderson Street	23653754	6.9
Warner's Foreign Auto Repair	Same	9001 14th Avenue S	1661671	6.11

All Facility/Site ID numbers associated with a facility/property are listed in the table.

7.4.2 Follow-Up Inspections

Corrective actions were identified at the following facilities during recent inspections performed from 2008 to 2011. To date, the corrective actions have not been achieved or the facility has not been re-inspected to confirm compliance with the corrective actions. Follow-up inspections are needed at the following facilities:

Facility or Property Name	Address	Facility/ Site ID	Data Gaps Report Section
Adjacent Properties			
Independent Metals Plant 2	816 S Kenyon Street	16139 861945 95749157	4.5
Facilities in the 7th Avenue S SD Basin			
American Plastic Manufacturing Incorporated	526 S Monroe Street	77734273	5.23
The Gear Works	500 S Portland Street	26215242 78952325 93436287	5.8
Global Fabricators Inc.	7619 5th Avenue S	10128921	5.4
Northwest Grating Products, Inc.	9230 4th Avenue S	74745382	5.42
Olympic Steel Door, Redox Inc., and All Metal Arts	7800 7th Avenue S	45787437	5.18
Washington Liftruck	700 S Chicago Street	77384581	5.43
West Coast Wire Rope & Rigging	7777 7th Avenue S	18137296	5.16

All Facility/Site ID numbers associated with a facility/property are listed in the table.

7.4.3 Industrial Stormwater General Permits

The companies listed below are within the 7th Avenue S SD Basin and have been directed by Ecology to obtain coverage under the ISGP, obtain a CNE, or Ecology has recommended that an evaluation be performed to determine if coverage under the ISGP is needed. Discharges to the storm drain from these facilities may contain sediment COCs.

Facility Name	Address	ISGP/CNE/ Evaluation	Facility/ Site ID	Data Gaps Report Section
American Plastic Manufacturing Incorporated	526 S Monroe Street	ISGP/CNE	77734273	5.23
Machinists Inc. Tooling Division	8201 7th Avenue S	ISGP	5885095	5.32
MEECO Manufacturing Co.	432 S Cloverdale Street	Evaluation	71378133 56755158	5.38
Modern Machine Company	519 S Elmgrove Street	ISGP/CNE	7969 25678771 81861618 92291647	5.31
Olsson Manufacturing Co.	525 S Southern Street	ISGP/CNE	7969	5.31
Olympic Steel Door, Redox Inc., and All Metal Arts	7800 7th Avenue S	ISGP/CNE	45787437	5.18

All Facility/Site ID numbers associated with a facility/property are listed in the table.

7.4.4 Review Responses to EPA CERCLA Section 104(e) Request for Information Letters

The companies and property owners listed below are within the Riverside Drive source control area and have received EPA CERCLA Section 104(e) Request for Information letters. A review of the responses to these letters is needed to determine if historical or current operations at the properties are potential sources of contaminants to the sediments associated with the Riverside Drive source control area.

Facility Name	Property Owner	Party Responsible for 104(e) response	Facility/ Site ID	Data Gaps Report Section
Adjacent Properties				
640 S Riverside Drive	City of Seattle	Mark Hansen	22726	4.2
Former Hurlen Construction Company	Hurlen Logistics LLC & Six Twenty South Logistics	Hurlen Construction	42127616	4.3
Former Hurlen Construction Company	Hurlen Logistics LLC & Six Twenty South Logistics	American Civil Constructors	42127616	4.3
Independent Metals Plant 2	Silver Bay Logging	Independent Metals	16139 861945 95749157	4.5
Independent Metals Plant 2	Silver Bay Logging	Silver Bay Logging	16139 861945 95749157	4.5
Former Long Painting – 10th Avenue Facility	Elm Grove LLC	Elm Grove LLC	16838 29633897 71678662	4.6

Facility Name	Property Owner	Party Responsible for 104(e) response	Facility/ Site ID	Data Gaps Report Section
Lukas Machine	Lukas Machine, Inc.	Brenda Lukas	39232961	4.4
Lukas Machine	Billie Macksene Lukas	Billie Macksene Lukas	39232961	4.4
Pacific Pile & Marine	Brackish Properties LLC	Pacific Pile & Marine	56779778 (DC Tooling Repair)	4.1
Facilities in the 7th Avenue S SD Basin				
AIC International	Ream Family Limited Partner	Norman Ream	6060	5.14
Northwind Marine	Reagan Properties LLC	Allison Reagan	7221	5.1

All Facility/Site ID numbers associated with a facility/property are listed in the table.

7.4.5 Facility-Specific Data Gaps

Facility specific data gaps were identified for the facilities listed below.

Data Gaps	Facility/ Site ID	Data Gaps Report Section
7th Avenue S SD Basin (Outfall 2112)		
Additional information is needed to verify that cleanup of arsenic-contaminated soil at the right-of-way near Marine Lumber Services is complete.	NA	3.1
Additional information is needed to determine if undocumented industrial operations are occurring within the 7th Avenue S SD basin that may be an ongoing source of sediment recontamination.		
Outfall 3037		
Source tracing information is needed for Outfall 3037 to determine if discharges from the outfall are a potential source of sediment recontamination.	NA	3.1
Private Outfalls 2106, 2108, and 2113		
Information regarding the status of the three unresolved outfalls is needed to determine if they are operational or have been abandoned.	NA	3.2
Additional information is needed to determine if storm drain lines are connected to the unresolved outfalls and the associated drainage areas of these outfalls, if any, to determine the potential for sediment recontamination via the stormwater pathway.		
Adjacent Properties		
Former Hurlen Construction Company (620 & 700 S Riverside Drive)		
Additional information is needed to determine if fill used for the barge removal ramp is a potential source of contaminants to adjacent sediments.	42127616	4.3
Independent Metals Plant 2 (816 S Kenyon Street)		
Additional information is needed to determine if Independent Metals has completed and implemented the plans to design a process area that would contain fluids released or spilled from recyclable materials.	16139 861945	4.5

Data Gaps	Facility/ Site ID	Data Gaps Report Section
Additional information is needed to determine if Independent Metals has implemented a control plan to prevent track-out onto 8th Avenue S.	95749157	
A review of PCBs and mercury data for stormwater discharge samples collected and analyzed with techniques, analytical methods, and detection limits acceptable to Ecology is needed to determine potential for sediment recontamination via stormwater discharge.		
Further investigation is needed to determine if Outfalls 2109 and 2111 are operational and the drainage areas associated with the outfalls, if any.		
An environmental investigation is needed to determine if LDW sediment COCs are present in soil, groundwater, and bank soil at concentrations that indicating a potential for sediment recontamination.		
Lukas Machine Inc. (707 S Riverside Drive)		
Additional information regarding the historical operations performed by Hansen Machine Corp. is needed to determine if operations may have resulted in releases of contaminants to soil and/or groundwater.	39232961 41888934	4.4
Pacific Pile and Marine (582 S Riverside Drive)		
A facility plan showing the locations of catch basins and storm drains is needed to evaluate the potential for contaminant transport to the LDW via the stormwater discharge and surface runoff pathways.	56779778	4.1
Additional information regarding the historical operations performed by DC Tooling Repair is needed to determine if operations may have resulted in releases of contaminants to soil and/or groundwater.		
Facilities in the 7th Avenue S SD Basin		
Coast Crane Company (8250 5th Avenue S)		
Additional information is needed to determine groundwater beneath the property is contaminated by metals and PAHs. Contaminated groundwater may infiltrate the storm drain system and be conveyed to LDW sediment.	2430	5.36
Fabrication Specialties Ltd Art (527 S Portland Street)		
Additional information regarding the possible improper disposal of PCB-oil and metal shavings is needed to determine the potential for sediment recontamination via the groundwater discharge pathway.	11942 6661875	5.17
Due to the potential for PCB-contaminated groundwater beneath this property, additional information is needed to determine if PCBs are present in groundwater at concentrations exceeding the storm drain screening values.		
Fire King of Seattle, Inc. (244 S Holden Street)		
Due to the potential for PCB contaminated soil and groundwater beneath the property, additional information is needed to determine if PCBs are present in groundwater at concentrations exceeding the storm drain screening values.	68488062	5.5
The Gear Works (500 S Portland Street)		
Additional information is needed to determine if soil and groundwater beneath the property has been contaminated through historical waste disposal practices.	26215242 78952325 93436287	5.8

Data Gaps	Facility/ Site ID	Data Gaps Report Section
Former Glitsa American (327 S Kenyon Street)		
Additional information is needed to determine if appropriate source control BMPs have been implemented to prevent impacts to surface water during the environmental remediation of the property.	63168342	5.24
Machinists Inc. – Main Facility (7600 5th Avenue S)		
Additional information regarding the installation of a stormwater treatment system in September 2011 is needed to determine the potential for sediment recontamination via stormwater discharge.	22736 72567932	5.3
Marine Lumber Service Inc. (525 S Chicago Street)		
A review of the September 2011 inspection report is needed to evaluate the Marine Lumber Service's progress with regard to implementing source control BMPs and preventing ACZA leachate from entering the storm drain system.	38921541 73969348	5.19
Olympic Steel Door (7800 7th Avenue S)		
Additional information regarding the initial investigation conducted on August 8, 2011, is needed to determine the potential for sediment recontamination via groundwater discharge.	45787437	5.18
Rogers Machinery Co Inc. (7800 5th Avenue S)		
Additional information regarding the potential contaminants in the wash water generated by the pressure washer is needed to determine if it is a potential source of sediment recontamination.	59283333	5.20
Seattle Heat Treaters, Inc. (521 S Holden Street)		
Additional information is needed to determine if Seattle Heat Treaters installed a recirculating cooling system.	6407	5.9
West Coast Wire Rope & Rigging (7777 7th Avenue S)		
A review of DMRs is needed to assess the water quality of stormwater being conveyed to the 7th Avenue S SD system from West Coast Wire.	18137296	5.16
Facilities in the 8th Avenue S CSO Basin		
Independent Metals Plant 1 (747 S Monroe Street)		
Information is needed to determine if soil and groundwater beneath the property has been contaminated by the metals recycling operations.	9309618	6.3

All Facility/Site ID numbers associated with a facility/property are listed in the table.

7.5 Facilities in Compliance

No facility-specific data gaps were identified for the facilities listed below. These facilities have been inspected by Ecology or SPU within the past four years (2008 or later). Ecology and SPU inspectors identified corrective actions for the facilities and verified that the facilities complied with the corrective actions during a re-inspection. For some of these facilities, no corrective actions related to source control were identified during the inspection.

Facility or Property Name	Address	Facility/ Site ID	Data Gaps Report Section
Facilities in the 7th Avenue S SD Basin			
African Northwest, Inc.	470 S Kenyon Street	72668839	5.21
Cain Bolt & Gasket	7724 7th Avenue S	7503	5.7
Cloverdale Business Park	309 S Cloverdale Street	4328 7170 6253396 12724197 28226866 38246778 78879968	5.41
Coach Maintenance	255 S Holden Street	4612472	5.11
Consistent Coatings, Inc.	719 S Riverside Drive	9604	5.6
Custom Crating	233 S Holden Street	82818857	5.12
Graham Trucking	7222 S Chicago Street	62275925 73412486	5.15
Hudson Bay Insulation	8230 5th Avenue S	76764554	5.35
Ness Cranes, Inc.	500 S Sullivan Street	4203517 38576231	5.37
Portable Storage of America	7510 5th Avenue S	7936495	5.2
Rasmussen Equipment Company	8727 5th Avenue S	81158515 22497475	5.40
Tierney Electrical Manufacturing Company	7901 7th Avenue S	12333317	5.22
Tours Northwest	8221 7th Avenue S	9457	5.33
Facilities in the 8th Avenue S CSO Basin			
Heartwood, Inc.	1414 Director Street	73671237	6.12
National Products Inc.	8410 Dallas Avenue S	24615 13132191	6.4
Sea Mar Family Housing	1000 S Henderson Street	9401	6.7
Smith Berger Marine, Inc.	7915 10th Avenue S	12429	6.1
Sound Propeller Services, Inc.	7916 8th Avenue S	6950604 70748294 56738526	6.2

All Facility/Site ID numbers associated with a facility/property are listed in the table.

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8.0 Documents Reviewed

A-1 Pump (A-1 Pump Service, Inc.). 1993. Letter from Walter Ebeling, A-1 Pump, to Hurlen Construction Company. Site Assessment Re: UST Site ID# 011414. April 10, 1993.

AECOM. 2010. Draft Final Feasibility Study, Lower Duwamish Waterway, Seattle, Washington. Prepared by AECOM for the Lower Duwamish Waterway Group. October 15, 2010.

African Northwest, Inc. 2011. African Northwest, Inc. http://www.africannorthwest.com/Default.htm. Accessed on September 21, 2011.

AGRA (AGRA Earth & Environmental). 1997a. Phase I Environmental Site Assessment, Long Painting Company Facility, 8025 10th Avenue South, Seattle, Washington. August 19, 1997.

AGRA. 1997b. Limited Phase II Environmental Assessment, Long Painting Company Facility, 8025 10th Avenue South, Seattle, Washington. September 12, 1997.

AGRA. 1998. UST Excavation Assessment, Long Painting Company, 8025 – 10th Avenue S., Seattle, Washington. December 9, 1998.

AIC (AIC International, Inc.). 2011. AIC International, Inc. website: http://www.aicconstruction.com/index.php. Accessed on September 8, 2011.

Airport Towing. 2011. Airport Towing Company Website. http://www.airporttow.com. Accessed on September 20, 2011.

American Bathtub Refinishers and Remodelers. 1999. Letter from Beverly Lind, American Bathtub, to Pinky Feria, Ecology. Subject: Information regarding waste disposal methods and general shop procedures. December 27, 1999.

American Plastic (American Plastic Manufacturing). 2011. American Plastic Manufacturing website: www.apmbags.com. Accessed on November 7, 2011.

Analytical Resources, Incorporated. 2008. Letter from Mark D. Harris, ARI, to Beth Schmoyer, SPU. Chain of Custody Record and the Final Results from Duwamish-South Park ARI Job No. MM72, Modern Machine Sediment Samples. April 1, 2008.

Autry. 2006. Email from Eric Autry, SPU, to Ellen Stewart, SPU. Information Request on NPDES Permits for Industrial Facilities in Seattle. October 20, 2006.

B&C Equipment (B&C Equipment Co.). 1991. Letter report from Barry D. DePan, B&C Equipment, to Underground Storage Tank Section, Department of Ecology. Re: Seidelhuber Iron and Bronze, Inc., 8009 7th Avenue South, Seattle, Washington 98108. December 9, 1991.

Bison Environmental (Bison Environmental Northwest, Inc.). 1992a. Letter from Susan Glasby, Ecology, to Scott Brown, Lee Morse General Contractor, Inc. Warner's Foreign Auto Repair UST Site Assessment, Environmental Checklist, and Lab Results. February 10, 1992.

Bison Environmental. 1992b. Letter from Bill Shuck, Bison Environmental, to Ron Berry, Lee Morse General Contracting. Re: Glitsa American UST Closure. September 2, 1992.

Bison Environmental. 1992c. Letter from Harry E. Bush, Bison Environmental Northwest, to Scott Brown, Lee Morse General Contractor, Inc. Tom Thurber UST Site Assessment, Environmental Checklist, and Lab Results. October 12, 1992.

Bison Environmental. 1994a. Underground Storage Tank Removal, Site Assessment Report, Marine Lumber Service, Inc. June 24, 1994.

Bison Environmental. 1994b. Letter to Scott Brown, Lee Morse General Contractor, Inc, from Harry E. Bush, Bison Environmental. Re: Site Assessment Report-Coach Maintenance, Seattle. October 17, 1994.

Bison Environmental. 1995. Phase II Environmental Site Assessment, Fire King of Seattle, 240 South Holden Street, Seattle, Washington, Project Number 95567.

Booth and Herman. 1998. Duwamish Coalition: Duwamish basin groundwater pathways conceptual model report. City of Seattle Office of Economic Development and King County Office of Budget and Strategic Planning, Seattle, WA. As cited in Windward 2003.

Braicks Construction, Inc. 2011. Braicks Construction Company Website. http://braicksconstruction.com. Accessed on October 11, 2011.

Bridgestone. 2011. What's a Logging Company doing in Real Answers? Silver Bay Logging Inc. Retrieved December 5, 2011 from www.bridgestonetruckstires.com/us_eng/real/magazines/98v3issue4/v3i4fleet.asp.

Cargill. 2001. Email from Dan Cargill, Ecology, to Rick Huey, Ecology. Re: Long Painting. September 7, 2001.

Cargill. 2011. Email from Dan Cargill, Ecology, to Rachel McCrea, Ecology. Re: You've got ERTS-626441-National Products. April 29, 2011.

Chemithon. 2011. Chemithon Company Website. http://www.chemithon.com/our_history.html. Accessed on October 10, 2011.

Christian Brothers Floor Service. 2011. Christian Brothers Floor Service Company Website. http://www.christianbrothersfloors.com. Accessed on October 11, 2011.

City of Seattle. 1980. Analysis and Decision of the Director of the Department of Construction and Land Use for Shoreline Permit at Hurlen Construction. October 22. February 27, 1980.

City of Seattle. 1984. Final Declaration of Non-Significance for shoreline substantial permit at Hurlen Construction. 1984.

City of Seattle. 2010. SEPA DNS Analysis and Decision of the Director of the Department of Planning and Development Regarding Land Use Application for Independent Metals Plant 1. May 6, 2010.

Coast Crane Company. 2008. Letter from Gerry Knieriem, Coast Crane Company, to Mike Jeffers, Ecology. Re: August 8, 2008 Compliance Inspection, Corrective Measures. September 5, 2008.

Colburn. 1996. Handwritten notes by Gail Colburn, Ecology regarding Long Painting. July 26, 1996.

Columbia Environmental Inc., 1995. Independent Remedial Action Report, Fire King of Seattle Property, 240 South Holden Street, Seattle, WA, 98108. August 1995.

Davido Consulting Group. 2011. 4th Ave S and S Trenton St Storm Drainage Improvements. Davido Consulting Group. Retrieved July 13, 2011 from http://www.dcgengr.com.

Department of Health (State of Washington Department of Health). 1999. Health Consultation, Interstate Coatings Inc, Seattle, King County, Washington. August 10, 1999.

Department of Health (Washington State Department of Health). 2001. Health Consultation, Evaluation of Surface Soil Samples Collected on Residential and Park Properties near Long Painting Company: South Park Neighborhood, Seattle, King County, Washington. July 2001.

Department of Revenue (State of Washington Department of Revenue). 2008. State Business Records Database Detail for Rogers Machinery Company Inc. with Map and Handwritten Dye Test Note. February 21, 2008.

Department of Revenue. 2011a. Washington State Business Records Database Detail for Cascade Enterprises. September 21, 2011.

Department of Revenue. 2011b. Washington State Business Records Database Detail for Race Recycling & Compacting Equipment LLC. September 21, 2011.

Department of Revenue. 2011c. Washington State Business Records Database Detail for Shawnee Painting and Sandblasting Co. September 21, 2011.

Department of Revenue. 2011d. Washington State Business Records Database Detail for Yale Materials Handling-Northwest Inc. September 26, 2011.

Department of Revenue. 2011e. Washington State Business Records Database Detail for Emerson Power Products Inc. September 27, 2011.

Department of Revenue. 2011f. Washington State Business Records Database Detail for MEECO Manufacturing Company Inc. September 27, 2011.

Department of Revenue. 2011g. Washington State Business Records Database Detail for Tri Emerald Services. September 27, 2011.

Department of Revenue. 2011h. Washington State Business Records Database Detail for African Northwest Inc. October 3, 2011.

Dorn. 2012. Email from Jeanne Dorn, King County Water & Land Resources Division, to Megan Buchholz Gay, SAIC. Subject: FW: “Outfall 3037” is KC OF6620 (re Riverside Drive Data Gaps). April 5, 2012.

Dwyer. 2000. Email from Scott Dwyer, Kleinfelder to Barbara Trejo, Ecology. Re: Long Painting – Groundwater Flow Map. November 16, 2000.

Ecology (State of Washington Department of Ecology). 1983a. Generator Annual Waste Report, Tierney Electrical Manufacturing Company. February 9, 1983.

Ecology. 1983b. Generator Annual Dangerous Waste Report, Pipe Specialties Inc. September 31, 1983.

Ecology. 1986a. Washington State Underground Storage Tank Notification Form, Elliott Bay Industries Inc. March 25, 1986.

Ecology. 1986b. Department of Ecology – Inspection Report, The Gear Works. July 14, 1986.

Ecology. 1986c. Department of Ecology – Inspection Report, Seattle Heat Treaters, Inc., September 4, 1986.

Ecology. 1986d. Letter from Richard Vining, Ecology, to Jim Spearman, Hurlen Construction Company. Re: Reviewed Sediment Sampling Results. December 22, 1986.

Ecology. 1989. Notification to Heartwood Corporation of Dangerous Waste Activities, 1414 S Director Street, Seattle. February 14, 1989.

Ecology. 1990a. Notification of Dangerous Activities at Westec Industries, Inc., 8111 7th Avenue S, Seattle. August 6, 1990.

Ecology. 1990b. Memo from Richard Vining, Ecology, to Corps Permit Coordinator. Re: Corps Public Notice No. 13130 Applicant Hurlen Const Co. November 7, 1990.

Ecology. 1990c. Letter from M.F. Palko, Ecology, to Jim Spearman, Hurlen Construction Company. Re: Water Quality Certification Public Notice No. B-1-13130 Maintenance Dredging Duwamish River. December 12, 1990.

Ecology. 1991a. Initial Investigation Inspection, Interstate Coatings. February 22, 1991.

Ecology 1991b. Letter from Louise Bardy, Ecology, to Dan Clark, Interstate Coatings. Re: Early Notice Letter, Interstate Coatings #N-17-5114-000. March 26, 1991b

Ecology. 1991c. UST 30 Day Notice of Intent to Close/Decommission Tanks at Warner Auto Repair, 9001 14th Avenue S, Seattle. November 1, 1991.

Ecology. 1992a. Department of Ecology Inspection Report. Marine Lumber Service. May 4, 1992.

Ecology. 1992b. Letter from Ecology to Jim Walby, Marine Lumber Service. Re: Follow-up on the Department of Ecology's inspection of your facility on May 4, 1992.

Ecology. 1992c. UST Permanent Closure Checklist for Three UST's at Warner Auto Repair, 9001 14th Avenue S, Seattle. May 11, 1992.

Ecology. 1992d. Letter from Louise Bardy, Ecology, to Paul Adams, Interstate Coatings. Re: Early Notice Letter (Second Notice), Interstate Coatings #N-17-5115-000. July 15, 1992.

Ecology. 1992e. Glitsa American UST Notice of Confirmed Release. September 2, 1992.

Ecology. 1992f. ERTS Initial Report/Follow-up #N10530 at Manitowak Western. October 9, 1992.

Ecology. 1992g. UST Permanent Closure Checklist for One UST at Tom Thurber Property, 1420 S Henderson Street, Seattle. October 26, 1992.

Ecology. 1992h. Letter from Louise Bardy, Ecology, to Will Parrot, Manitowak Western. Re: Early Notice Letter #N-17-5201-000. November 17, 1992.

Ecology. 1992i. Letter from James Krull, Ecology, to Jim Stasak, Tierney Electrical Manufacturing Company. Re: Coverage Under the Stormwater Baseline General Permit, Permit Number: SO3-000253. December 28, 1992.

Ecology. 1993a. Letter from David Hovik, Ecology, to Tom Rankin, Manitowak Western. Re: Dangerous Waste Compliance Inspection. January 13, 1993.

Ecology. 1993b. Letter from James Krull, Ecology, to Roland Ramberg, The Gear Works. Re: Coverage Under the Storm Water Baseline General Permit, SO3-000763, The Gear Works – Seattle Inc., 500 S. Portland Street, Seattle, WA 98108. March 10, 1993.

Ecology. 1994a. Letter from James D. Krull, Ecology, to Northwest Grating Productions. Re: Coverage Under the Stormwater Baseline General Permit. August 19, 1994.

Ecology. 1994b. Letter from James D. Krull, Ecology, to Craig L. Young, Seattle Refrigeration. Subject: Coverage Under the Stormwater Baseline General Permit. August 26, 1994.

Ecology 1994c. Letter from James D. Krull, Ecology, to Michael Lumsden, West Coast Wire Rope & Rigging. Re: Coverage Under the Stormwater Baseline General Permit, Permit Number: SO3-002111, Facility \Site Name: West Coast Wire Rope & Rigging, Address: 7777 7th Ave. South, Seattle, WA 98108. December 19, 1994.

Ecology. 1995. Letter from Laurence Ashley, Ecology, to B.H. Morton. Re: Dangerous waste compliance inspection at Workboats Northwest (WAD 980975700) on September 14, 1995. October 30, 1995.

Ecology. 1996a. Letter from James Krull, Ecology, to The Gear Works. Re: Stormwater Baseline General Permit for Industrial Activity. January 10, 1996.

Ecology. 1996b. Letter from James Krull, Ecology, to Tim Stasak, Tierney Electrical Manufacturing Company. Re: Stormwater Baseline General Permit for Industrial Activity. January 10, 1996.

Ecology. 1996c. Letter from James Krull, Ecology, to West Coast Wire Rope & Rigging. Re: Stormwater Baseline General Permit for Industrial Activity. January 10, 1996.

Ecology. 1996d. Environmental Report Tracking System, Incident History. Containers from Long Painting in Duwamish River, Incident ID: N23377. March 4, 1996.

Ecology. 1996e. Dangerous Waste Compliance Inspection at Manitowak Western. March 10, 1996.

Ecology. 1996f. Initial Investigation Field Report, Long Painting, 8025 10th Ave S. August 28, 1996.

Ecology. 1996g. Letter from Mary K. O'Herron, Ecology to Brian Vance, Long Painting. Subject: Long Painting, Seattle, WA. August 29, 1996.

Ecology. 1997a. Letter from Mark K. O'Herron, Ecology, to Larry Holyoke, King County DNR. Re: ERTS Referral for Spencer Industries, Inc. January 7, 1997.

Ecology. 1997b. Dangerous Waste Compliance Checklist. June 10, 1997.

Ecology. 1997c. Letter from Tiffany Yelton, Ecology, to Warren Tobin, The Gear Works. Re: Request for extension. June 25, 1997.

Ecology. 1998a. UST Inspection at Interstate Coat., 754 S. Chicago, Seattle. April 9, 1998.

Ecology. 1998b. Letter from Robert Stone, Ecology, to Mark Wilk, Interstate Coatings. Re: Dangerous waste compliance inspection Interstate Coatings, Inc. (WAD988507430) on 12/7/98. December 17, 1998.

Ecology. 1999a. Environmental Report Tracking System Referral, Record of Complaint on June 17, 1999, Long Painting Co., 8025 10th Ave S., Seattle, WA 98108. June 17, 1999.

Ecology. 1999b. Letter from Sunny Lin, Ecology, to John W. Mahoney, Spencer Industries. Re: Request for Assistance/Review. August 12, 1999.

Ecology. 1999c. Letter from Louis Bardy, Ecology, to Tye Long, Long Painting. Re: Early Notice Letter #N-17-5688-000, Long Painting, 8025 10th Ave. S., Seattle, WA, 98108. August 31, 1999.

Ecology. 1999d. Letter from Dan Cargill, Ecology, to File. Re: Marine Lumber Service. September 22, 1999.

Ecology. 1999e. Department of Ecology – Northwest Regional Office, Underground Storage Tank Notice of Confirmed Release, Olympic Steel Door. November 29, 1999.

Ecology. 2000a. Letter from Esperanza Pinky Feria, Ecology, to Bill and Marilynn Beck, American Bathtub. Subject: Follow-up letter regarding previous site visit at American Bathtub and enclosed Compliance Report. January 5, 2000.

Ecology. 2000b. Letter from Barbara Trejo, Ecology to Scott D. Dwyer, Kleinfelder. Re: Request for Assistance, Long Painting Company, 8025-10th Avenue South, Seattle, Washington 98108. April 11, 2000.

Ecology. 2000c. Letter from Melodie Selby, Ecology, to Jim Stasak, Tierney Electrical Manufacturing Company. Re: Ecology is granting continued permit coverage under the reissued stormwater general permit. November 28, 2000.

Ecology. 2000d. Initial Investigation Long Painting Company Neighborhood. December 2000.

Ecology. 2001. Hazardous Waste & Toxics Reduction Program Compliance Report for Westec Industries, Inc. on December 13, 2001. April 11, 2002.

Ecology. 2002a. Hazardous Waste & Toxics Reduction Program, Compliance Report, Long Painting Company, 8025 10th Avenue South, Seattle, WA 98108. April 19, 2002.

Ecology. 2002b. Letter from Desiree Wells, Ecology, to Interstate Coatings. Re: Interstate Coatings Inc./754 S Chicago St, Seattle/Ecology UST #9194. August 5, 2002.

Ecology. 2002c. Letter from Carrie McDougal, Ecology, to Glitsa American. Re: Glitsa American, Inc., 327 S Kenyon Street, Seattle/ Ecology UST #6178; requesting information regarding site cleanup activities. August 12, 2002.

Ecology. 2002d. Letter from Tanya P. Treat, SPU, to Tom J. Cavanaugh, Industrial Battery Systems. Subject: Results from November 1, 2002 Stormwater Pollution Prevention Inspection: Corrective Action Required. November 14, 2002.

Ecology. 2003a. Letter from Dan Cargill, Ecology to Brian Vance, Long Painting. Re: Independent Remedial Action, Former Long Painting Facility, 8025 10th Avenue South, Seattle, Washington. February 4, 2003.

Ecology. 2003b. Letter from Carrie McDougal, Ecology, to Gregory Linscott, Olympic Steel Door. Re: Requesting additional information relating to site cleanup activities. June 16, 2003.

Ecology. 2004a. Lower Duwamish Waterway Source Control Strategy. Publication No. 04-09-043. Prepared by Washington State Department of Ecology, Northwest Regional Office, Toxics Cleanup Program. January 2004.

Ecology. 2004b. Letter from Donald Seeberger, Ecology, to Jim Stasak, Tierney Electrical Manufacturing Company. Re: Ecology has modified the Industrial Stormwater Permit. December 1, 2004.

Ecology. 2005a. Department of Ecology – Environmental Report Tracking System # 526261. March 30, 2005.

Ecology. 2005b. Initial Investigation Site Visit Safety and Health Checklist. May 25, 2005.

Ecology. 2006a. Letter from Nnamdi Madakor, Ecology, to John Mahoney, Spencer Industries. Re: Determination Status for the following Hazardous Waste Site Enrolled in the Voluntary Cleanup Program. May 31, 2006.

Ecology. 2006b. Letter from Nnamdi Madakor, Ecology, to John Mahoney, Spencer Industries. Re: Further Action Determination under WAC 173-340-515(5) for Hazardous Waste Site at Spencer Industries. May 31, 2006.

Ecology. 2007a. Stormwater Compliance Inspection Report, Tierney Electrical MFG Company. March 22, 2007.

Ecology. 2007b. Stormwater Compliance Inspection Report at Northwest Grating. April 24, 2004.

Ecology. 2007c. Letter from Nancy L. Winters, Ecology, to Craig Young, Seattle Refrigeration. Subject: Notice of Termination (NOT) of Coverage under the Industrial Stormwater General Permit #SO3-001958. April 27, 2007.

Ecology. 2007d. Stormwater Compliance Inspection Report, West Coast Wire Rope & Rigging. May 31, 2007.

Ecology. 2007e. Lower Duwamish Waterway Source Control Status Report, 2003 to June 2007. Publication No. 07-09-064. Prepared by Washington State Department of Ecology, Northwest Regional Office, Toxics Cleanup Program. July 2007.

Ecology. 2007f. Letter from Susan Dier, Ecology, to Nina Christiansen, WESTEC Industries, Inc. RE: Dangerous Waste Annual Report visit to WESTEC Industries, Inc, 8101 7th Ave S, Seattle, on September 18, 2007, RCRA Site ID #: WAD988476271. October 10, 2007.

Ecology. 2007g. Letter from Nancy Winters, Ecology, to James Stasak, Tierney Electrical Manufacturing Company. Re: Conditional No Exposure Certificate Granted. December 10, 2007.

Ecology. 2008a. Letter from Nancy Winters, Ecology, to James Stasak, Tierney Electrical Manufacturing Company. Re: Notice of Termination (NOT) of Coverage under the Industrial Stormwater General Permit. January 29, 2008.

Ecology. 2008b. Letter from Barbara Smith, Ecology, to George Gorog, Global Fabricators. Re: Immediate Action Required, Dangerous Waste Compliance Inspection at Global Fabricators on January 10, 2008. January 30, 2008.

Ecology. 2008c. Stormwater Compliance Inspection Report, Independent Metals Plant 2. February 6, 2008.

Ecology. 2008d. Stormwater Compliance Report for Rasmussen Equipment Company. February 12, 2008.

Ecology. 2008e. Stormwater Compliance Inspection Report, Rasmussen Equipment Company, 8727 5th Avenue S., Seattle WA 98108. February 12, 2008.

Ecology. 2008f. Letter from Michael Jeffers, Ecology, to Michael Robinson, The Gear Works. Re: Lower Duwamish Waterway Source Control Inspection, guidance on management of dangerous wastes. April 21, 2008.

Ecology. 2008g. Stormwater Compliance Inspection Report, Machinists Inc. May 6, 2008.

Ecology. 2008h. Letter from Barbara Smith, Ecology, to George Gorog, Global Fabricators. Re: Dangerous Waste Compliance Inspections at Global Fabricators on January 10 and March 19, 2008. May 9, 2008.

Ecology. 2008i. Letter from Robert Wright, Ecology, to Don Klundt, Machinists Inc. Re: Noncompliance Notification – with RCW 90.48.160, discharging stormwater from an industrial activity without proper coverage under the NPDES Industrial Stormwater General Permit (ISWGP). May 19, 2008.

Ecology. 2008j. Lower Duwamish Waterway Source Control Status Report, July 2007 to March 2008. Publication No. 08-09-063. Prepared by Washington State Department of Ecology, Northwest Regional Office, Toxics Cleanup Program. May 2008.

Ecology. 2008k. Letter from Elliott Zimmerman, Ecology, to Mick O'Farrell, Independent Metals Plant 1. Re: Hazardous Waste Compliance Inspection at Independent Metals on June 12, 2008. June 19, 2008.

Ecology. 2008l. Letter from Barbara Smith, Ecology, to George Gorog, Global Metalworks, Inc. Re: Dangerous Waste Compliance Inspection at Global Metalworks Incorporated on July 31, 2008.

Ecology. 2008m. Letter from Barbara Smith, Ecology, to George Gorog, Global Metalworks. Re: Dangerous Waste Compliance Inspections at Global Metalworks 7619 5th Ave S, Seattle on January 10, March 19 and July 31, 2008.

Ecology. 2008n. Letter from Elliott Zimmerman, Ecology, to Mick O'Farrell, Independent Metals Plant 1. Re: Hazardous Waste Compliance Inspection at Independent Metals on June 12, 2008. September 2, 2008.

Ecology. 2008o. Letter from Mike Jeffers, Ecology, to Gerry Knieriem, Coast Crane Company. Results from the Urban Waters Environmental Compliance Inspection at Coast Crane Company on August 8, 2008. September 8, 2008.

Ecology. 2008p. Compliance Certificate at Machinists Inc. September 9, 2008.

Ecology. 2008q. Letter from Mike Jeffers, Ecology, to Don Klundt, Machinists Inc. Re: Results from the Urban Waters Environmental Compliance Inspection at Machinists Inc. on September 9, 2008: Corrective Action Required. September 17, 2008q.

Ecology. 2008r. Letter from Mike Jeffers, Ecology, to Del Davis, Westec Industries Inc. RE: Results from the Urban Water Environmental Compliance Inspection at Westec Industries Inc. on September 16, 2008: Corrective action required. September 23, 2008.

Ecology. 2008s. Letter from Mike Jeffers, Ecology, to Greg Hogan, Ness Cranes. Re: Results from the Urban Waters Environmental Compliance Inspection at Ness Cranes Inc. on October 8, 2008. October 15, 2008.

Ecology. 2008t. Letter from Mike Jeffers, Ecology, to Del Davis, Westec Industries, Inc. Subject: Results from Urban Waters Environmental Compliance Follow-Up Inspection at Westec Industries, Inc. on October 29, 2008. November 5, 2008.

Ecology. 2008u. Letter from Mike Jeffers, Ecology, to David Hopt, KJM Electric. Subject: Results from the Urban Waters Environmental Compliance Inspection at KJM Electric Co on October 29, 2008: Corrective Action Required. November 7, 2008.

Ecology. 2008v. Letter from Robert D. Swackhamer, Ecology, to Franklin Foster, Coast Crane. Re: Further Action at Coast Crane aka Manitowak Western. December 4, 2008.

Ecology. 2009a. Stormwater Compliance Inspection Report, Marine Lumber Service. March 24, 2009.

Ecology. 2009b. Letter from Mike Jeffers, Ecology, to David Hopt, KJM Electric. Subject: Results from the Urban Waters Environmental Compliance Inspection at KJM Electric Co on April 7, 2009. April 10, 2009.

Ecology. 2009c. Letter from Robert Wright, Ecology, to Todd Marker, Marine Lumber Service. Re: Warning Letter – Noncompliance with RCW 90.48.080, the discharge of polluting matter to waters of the State. May 18, 2009.

Ecology. 2009d. Letter from Mike Jeffers, Ecology, to Vuong Quang, American Plastic Manufacturing Inc. Re: Attempted Urban Waters Environmental Compliance Inspection at American Plastic Manufacturing Inc. on June 10, 2009. June 18, 2009.

Ecology. 2009e. Lower Duwamish Waterway, Source Control Status Report, September 2008 through June 2009. Publication No. 09-09-183. August 2009.

Ecology. 2009f. Letter from Susan Dier, Ecology, to Gerry Knieriem, Coast Crane Company. Re: Dangerous Waste Annual Report Visit to Coast Crane Company, 8250 5th Avenue S, Seattle on August 14, 2009 RCRA Site ID#WAR000006940. August 28, 2009.

Ecology. 2009g. Letter from Ecology to Jim Johnson, SPU. Re: Opinion on Proposed Cleanup at 640 South Riverside Drive. October 28, 2009.

Ecology. 2009h. Stormwater Compliance Inspection Report, Independent Metals Plant 2. November 4, 2009.

Ecology. 2009i. Letter from Robert Wright, Ecology, to Larry Brewer, Independent Metals. December 23, 2009.

Ecology. 2010a. Letter from Lisa Perle, Ecology, to Mick O'Farrell, Independent Metals. Re: Site Visit on December 9, 2009 RCRA ID# None. January 13, 2010.

Ecology. 2010b. Letter from Kevin Fitzpatrick, Ecology, to Todd Marker, Marine Lumber Service, Inc. Re: 5th Avenue South, between S. Kenyon Street and S. Monroe Street referenced as the South Yard. January 25, 2010.

Ecology. 2010c. UST#687 Site Inspection at Seidelhuber Iron and Bronze Works. January 26, 2010.

Ecology. 2010d. Ecology Intranet, Turbowaste.Net: Site Profile for Brown Engineering, 550 S Monroe Street, Seattle. February 18, 2010.

Ecology. 2010e. Letter from Susan Dier, Ecology, to Chuck Dillman, King Auto Wrecking. Subject: Dangerous Waste Compliance Inspection on May 6, 2010 at King Auto Wrecking RCRA ID#: None. May 14, 2010.

Ecology. 2010f. Letter from Susan Dier, Ecology, to Chuck Dillman, King Auto Wrecking. Subject: Dangerous Waste Compliance Inspection on May 6, 2010 at King Auto Wrecking (aka King Auto & Truck Parts) on May 6, 2010, RCRA Site ID: None. May 27, 2010.

Ecology. 2010g. Stormwater Compliance Inspection Report, The Gear Works, 500 S Portland Street, Seattle. June 8, 2010.

Ecology. 2010h. Stormwater Compliance Inspection Report, Northwest Grating Products, 9230 4th Avenue S, Seattle. July 20, 2010.

Ecology. 2010i. Letter from Bill Moore, Ecology, to Dale Hansen, West Coast Wire Rope & Rigging. Re: Discharge Monitoring Report for Second Quarter 2010.

Ecology. 2011a. Letter from Bill Moore, Ecology, to Mike Leiten, Northwest Grating Products Inc. Re: Administrative Order Notice of Penalty. January 18, 2011.

Ecology. 2011b. Letter from Mark Adams, Ecology, to Jim Johnson, SPU. Re: Opinion on Proposed Cleanup at 640 South Riverside Drive. January 24, 2011.

Ecology. 2011c. Letter from Mark Adams, Ecology, to Jim Johnson, SPU. Re: Opinion on Proposed Cleanup at 640 South Riverside Drive. March 1, 2011.

Ecology. 2011d. Letter from Bill Moore, Ecology, to West Coast Wire Rope & Rigging. Re: Discharge Monitoring Report for Fourth Quarter 2010. April 13, 2011.

Ecology. 2011e. Letter from Russ Olsen, Ecology, to Jim Johnson, SPU. Addendum to March 1, 2011 Opinion Letter on Proposed Cleanup Standards for 640 South Riverside Drive. April 25, 2011.

Ecology. 2011f. Letter from Donovan Gray, Ecology, to David Belisle, Heartwood, Inc. Re: Results from the Urban Waters Environmental Compliance Inspection at Heartwood, Inc. on April 6, 2011: Corrective action required. May 4, 2011.

Ecology. 2011g. Email from Dan Cargill, Ecology, to Megan Gay, SAIC. Subject: National Products ERTS#626441. May 11, 2011.

Ecology. 2011h. Industrial Stormwater General Permit Annual Report Form, Machinists Inc. May 12, 2011.

Ecology. 2011i. Environmental Report Tracking System #627121 for Modern Machine at 425 S Southern Street, Seattle. June 3, 2011.

Ecology. 2011j. Department of Ecology Intranet, Turbowaste.Net: Site Profile for The Revere Group, 93104 4th Avenue S, Seattle, WA. June 6, 2011.

Ecology. 2011k. Department of Ecology Intranet, Turbowaste.Net: Site Profile for Spencer Industries Inc., 8410 Dallas Ave S, Seattle, WA. June 6, 2011.

Ecology. 2011l. Letter from Donovan Gray, Ecology, to David Belisle, Heartwood, Inc. Re: Notification Compliane Achieved. June 8, 2011.

Ecology. 2011m. Department of Ecology Intranet, Turbowaste.Net: Site Profile for Cascade Diesel Engine Co LLC, 426 S Cloverdale Street, Seattle, WA. June 10, 2011.

Ecology. 2011n. Department of Ecology Intranet, Turbowaste.Net: Site Profile for Gear Works Seattle Inc, 500 S Portland St, Seattle, WA. June 10, 2011.

Ecology. 2011o. Department of Ecology Intranet, TurboWaste.Net, Site Profile, Graham Trucking, 245 S Austin Street, Seattle, WA 98108. June 10, 2011.

Ecology. 2011p. Department of Ecology Intranet, TurboWaste.Net, Site Profile, Guinns Automotive & Electric, 722 S Chicago Street, Seattle, WA 98108. June 10, 2011.

Ecology. 2011q. Department of Ecology Intranet, TurboWaste.Net, Site Profile, Mill Engineering & Supply Co, 516 S Chicago Street, Seattle, WA 98108. June 10, 2011.

Ecology. 2011r. Department of Ecology Intranet, Turbowaste.Net: Site Profile for Rogers Machinery Co Inc., 7800 5th Avenue S, Seattle, WA. June 10, 2011.

Ecology. 2011s. Department of Ecology Intranet, TurboWaste.Net, Site Profile, Victory Auto Bumpers Inc. 526 S Monroe Street, Seattle, WA 98108. June 10, 2011.

Ecology. 2011t. Department of Ecology Intranet, TurboWaste.Net, Site Profile, West Coast Wire Rope Rigging, 7777 7th Avenue S, Seattle, WA 98108. June 10, 2011.

Ecology. 2011u. Department of Ecology Intranet, Turbowaste.Net for Independent Metals, 747 S Monroe Street, Seattle, WA. July 21, 2011.

Ecology. 2011v. Department of Ecology Intranet, Turbowaste.Net for Long Painting Co 5th Ave, 8230 5th Ave S, Seattle, WA. July 21, 2011.

Ecology. 2011w. Letter from Daylin Davidson, Ecology, to Jim Nye, Modern Machine. Re: Dangerous Waste Compliance Inspection on July 26, 2011 at Modern Machine, 524 S Southern Street, Seattle ERTS#627121. July 29, 2011.

Ecology. 2011x. Lower Duwamish Waterway Source Control Status Report, July 2009 to September 2010. Publication No. 11-09-169. Prepared by Washington State Department of Ecology, Northwest Regional Office, Toxics Cleanup Program. August 2011.

Ecology. 2011y. Letter from Robert Wright, Ecology, to Larry Brewer, Independent Metals. RE: Warning Letter – Noncompliance with Industrial Stormwater General Permit No. WAR009725, terms and conditions. August 16, 2011.

Ecology. 2012a. Discharge Monitoring Report, Independent Metals Plant 2, 816 S Kenyon Street, Seattle, WA. Accessed through PARIS on April 2, 2012.

Ecology. 2012b. Facility details, Machinists Inc. – 5th Avenue, 7600 5th Avenue S, Seattle, WA. Accessed through PARIS on April 3, 2012.

Ecology. 2012c. Discharge Monitoring Report, The Gear Works, 500 S Portland, Seattle, WA. Accessed through PARIS on April 3, 2012.

Elliott Bay Industries. 2011. Elliott Bay Industries Company Webpage. October 3, 2011.

EMR (Environmental Management Resources). 1998. UST Decommissioning and Site Characterization Report. Prepared for Interstate Coatings, Inc. December 1, 1998.

Environ. 2007a. Results of Confirmatory Investigation of Wash Pad Area, Coast Crane Facility – 8250 5th Avenue South, Seattle, Washington. Prepared for Audax Group. July 25, 2007.

Environ. 2007b. Letter from Devon Rowe, Environ, to Brian Land, Kirkland & Ellis. Re: Results of Evaluation of Lateral and Vertical Extent of Petroleum Hydrocarbons and Volatile Organic Compounds in Soil, Wash Pad Area Third Round of Investigation: October 2007 Coast Crane Facility – 8259 5th Avenue South, Seattle, Washington. November 26, 2007.

Environ. 2008a. Remedial Action Completion Report. Prepared for Coast Crane Company. August 2008.

Environ. 2008b. Letter from Mathew Loxterman, Nick Walchuk and Allan J. Delorme, Environ, to Sara Maser, Ecology. Re: Voluntary Cleanup Program Application Submittal, Coast Crane Company. August 11, 2008.

Environmental Associates. 2002. Limited Subsurface Sampling & Testing. Prepared for Olympic Steel Door. February 25, 2002.

Environmental Associates. 2009a. Letter to Cathy Richardson, Ecology, from Robert B. Roe, Environmental Associates. Re: Underground Storage Tank Removal Report and Checklists Former Glitsa Property 327 South Kenyon Street, Seattle. April 1, 2009.

Environmental Associates. 2009b. Supplemental Exploration and Further Remediation Feasibility Study at Former Glitsa, Inc. August 11, 2009.

Environmental Associates. 2010. Letter from Robert B. Roe, Environmental Associates, to Cathy Richardson, Ecology. Re: Remediation Feasibility and Independent Cleanup Action Status Report Former Glitsa Property (LUST Release #3910) 327 South Kenyon Street, Seattle. June 23, 2010.

Enviros. 1991. Letter from Trenton G. Smith, Enviros, to Jim Sepic, Rasore Enterprises. Re: Site Assessment Checklist and Analytical Report for Soil Samples taken on August 22, 1991 at Razore Enterprises. September 12, 1991.

Envirotech. 2008. Joint Inspection Program, Lower Duwamish Waterway. Follow-up Business Inspection at Rasmussen Equipment Co. May 9, 2008.

EPA. 2007a. Letter from Daniel Opalski, EPA, to Harald Hurlen, Hurlen Construction. Re: Notice of Potential Liability Pursuant to Section 107(a) and Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. August 23, 2007.

EPA. 2007b. Letter from Daniel Opalski, EPA, to Eric Reichelt, American Civil Constructors. Re: Notice of Potential Liability Pursuant to Section 107(a) and Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. August 28, 2007.

EPA. 2008a. Letter from Daniel Opalski, EPA, to Clyde Joseph, American Civil Constructors. Re: Notice of Potential Liability Pursuant to Section 107(a) and Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. February 22, 2008.

EPA. 2008b. Letter from Sheila Eckman, EPA, to Dick Buhler, Silver Bay Logging, Inc. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. March 25, 2008.

EPA. 2008c. USTRAC Facility C & E History for Seidelhuber Iron and Bronze Works. April 28, 2008.

EPA. 2008d. Letter from Howard Orlean, EPA, to Mark Hansen, Pro Fab. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. July 17, 2008.

EPA. 2009a. Letter from Sheila Eckman, EPA, to Brian Hicks, Elm Grove LLC. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. April 23, 2009.

EPA. 2009b. Letter from Sheila Eckman, EPA, to Clyde Joseph, American Civil Constructors. Re: Supplemental Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. November 30, 2009.

EPA. 2009c. Letter from Sheila Eckman, EPA, to Dick Buhler, Silver Bay Logging, Inc. Re: Supplemental Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. November 30, 2009.

EPA. 2010a. Letter from Sheila Eckman, EPA, to Martin O’Farrell, Independent Metals. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. February 19, 2010.

EPA. 2010b. Letter from Sheila Eckman, EPA, to Ken Lederman, Riddell Williams P.S. Re: Supplemental Request for Information Pursuant to Section 104(e) of CERCLA, for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. September 17, 2010.

EPA. 2010c. Letter from Sheila Eckman, EPA, to Pacific Pile & Marine Management, Inc. and Washington Corporate Services, Inc, Registered Agent for Pacific Pile & Marine Management, Inc. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. December 1, 2010.

EPA. 2011a. Letter from Patty McGrath, EPA, to Allison Reagan, Northwind Marine. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. October 13, 2011.

EPA. 2011b. Letter from Patty McGrath, EPA, to Billie Macksene Lukas, Lukas Machine, Inc. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. October 13, 2011.

EPA. 2011c. Letter from Patty McGrath, EPA, to Brenda L. Lukas, Lukas Machine, Inc. Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Lower Duwamish Waterway Superfund Site, Seattle, Washington. October 13, 2011.

EPA and Ecology. 2002. Lower Duwamish Waterway Site Memorandum of Understanding between the United States Environmental Protection Agency and the Washington State Department of Ecology. April 2002.

EPA and Ecology. 2004. Lower Duwamish Waterway Site Memorandum of Understanding between the United States Environmental Protection Agency and the Washington State Department of Ecology. April 2004.

EPI (Environmental Partners Inc.). 2010. Stormwater Pollution Prevention Plan (SWPPP) for NPDES Industrial Stormwater General Permit No. WAR0011741B, Marine Lumber Service. March 19, 2010.

Farallon (Farallon Consulting). 2001. Stormwater Pollution Prevention Plan for Northwest Grating Products. September 6, 2001.

Farwest (Farwest Paint Manufacturing Company). 2011. Farwest Paint Manufacturing Company Historical Operations for Glitsa America Company Information. October 4, 2011.

Foster, R.F. 1945. Sources of Pollution in the Duwamish-Green River Drainage Area. Prepared for Pollution Control Commission Survey. December 6, 1945.

Friedman & Bruya. 2008. Former Glista, Inc., JN-28275, F&BI 812028. December 9, 2008.

Frontier Door & Cabinet. 2011. Frontier Door & Cabinet Company Website: http://www.frontierdoor.com. Accessed on September 30, 2011.

Gear Works (The Gear Works). 2011. Company website for The Gear Works: http://www.thegearworks.com. Accessed August 31, 2011.

Geotech (Geotech Consultants, Inc). 1994a. Letter from Sean P. O'Brien, Geotech Consultants, to Dale Starr, Rasmussen Company. Subject: Soils Assessment UST Closure Report at 415 South Cloverdale Street, Seattle. May 13, 1994.

Geotech. 1994b. UST Removal Soil Assessment at Custom Crating, 233 S Holden Street. November 15, 1994.

Glitsa American. 2002. Letter from Jeffrey T. Galeski, Glitsa American, to John Bails, Ecology. Re: Glitsa American, Inc., 327 South Kenyon Street, Seattle/Ecology UST #6178; Information Requested Regarding Site Cleanup Activities and Options. September 11, 2002.

Global Environmental. 2000. Letter from Gary Peters, Global Environmental, to Greg Linscott, Olympic Steel Door. Re; Results of Soil and Groundwater Sample Analysis Remediation Project. Prepared for Olympic Steel Door. October 23, 2000.

Global Fabricators. 2008. Fax from Gabrielle Gorog, Global Fabricators, to Barbara Smith, Ecology. Compliance Certificate and Materials Quote. August 25, 2008.

Graham Trucking. 2011. Company website for Graham Trucking: http://www.grahamtrucking.com/. Accessed September 9, 2011.

Harding. 2002. Handwritten notes and photographs prepared by Trudy Harding, Ecology. Subject: Fraser Boiler site, WAD 981 766 306. August 7, 2002.

Harsch Investments. 2011. Harsch Investments company website: http://www.harsch.com/properties/template.cfm?id=12254&region=8&type=13. Accessed on July 21, 2011.

Hart Crowser. 1996. Letter from Birgitta Beuthe and Doug Hillman, Hart Crowser, to Ecology. Re: Release Report for Spencer Industries, Inc. 8410 Dallas Avenue South, Seattle. December 18, 1996.

Hart Crowser. 1999a. Summary of Site Investigations at Spencer Industries, Inc., 8410 Dallas Avenue South, Seattle, Volume 1, Prepared for Spencer Industries, Inc. (J4686-02). April 1, 1999.

Hart Crowser. 1999b. Letter from Carl M. Einberger, Hart Crowser, Inc., to Dan Cargill, Ecology. Re: Request for Assistance Under the Voluntary Cleanup Program and Submittal of Summary Site Investigations at Spencer Industries, Inc., Seattle. April 2, 1999.

Hart Crowser. 1999c. Letter from Carl M. Einberger, Hart Crowser, Inc., to Sunny Lin, Ecology. Re: Groundwater Monitoring Plan, Spencer Industries, Inc., 8410 Dallas Avenue South, Seattle. July 8, 1999.

Harter and Rollins (Thomas Harter and Larry Rollins). 2008. Watersheds, Groundwater and Drinking Water: A Practical Guide. University of California (System) Division of Agriculture and Natural Resources. 2008.

Heartwood. 2011. Heartwood Company Webpage: http://www.heartwoodinc.com/index.html. Accessed on September 26, 2011.

Herrera (Herrera Environmental Consultants). 2004. Summary Report, Lower Duwamish Waterway Outfall Survey. Prepared for Seattle Public Utilities. January 2004.

Herrera (Herrera Environmental Consultants). 2007. Draft: Phase I Environmental Site Assessment: Industrial Shop at 640 South Riverside Drive, Seattle, Washington. Prepared for SPU. October 19, 2007.

Herrera. 2008. Limited Phase II Site Investigation: Two South Riverside Drive Properties, Seattle, Washington. Prepared for SPU. March 20, 2008.

HistoryLink.org. 2011. Website: Seattle Neighborhoods: South Park Thumbnail History: http://www.historylink.org/index.cfm?DisplayPage=output.cfm&File_Id=2985. Accessed on October 25, 2011.

Hudson Bay Insulation. 2011. Hudson Bay Insulation Company Website: http://www.hudsonbayins.com/whatwedo.html. Accessed October 17, 2011.

Independent Metals. 2011. Company website for Independent Metals: http://www.independentmetals.com/index.html. Accessed on July 19, 2011.

Interstate Coatings. 1993. Letter from Paul Adams, Interstate Coatings, to Louise Bardy, Ecology. Re: Early Notice Letter (Second Notice), #N-17-5114-000. July 23, 1993.

Interstate Coatings. 1999. Compliance Actions Required Checklist. Prepared by Mark Wilk, Interstate Coatings. Prepared for Ecology. January 19, 1999.

Jeffers. 2008a. Email from Mike Jeffers, Ecology, to Dan Cargill, Ecology. Re: December Inspections in the Duwamish-Jeffers. February 15, 2008.

Jeffers. 2008b. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC. Re: Lower Duwamish Waterway February Source Control Inspections Update. March 3, 2008.

Jeffers. 2008c. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC. Re: Lower Duwamish Waterway May Source Control Inspections Update. July 7, 2008.

Jeffers. 2008d. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC. Re: Lower Duwamish Waterway July Source Control Inspections Update. July 30, 2008.

Jeffers. 2008e. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC, and Sarah Good, Ecology. Subject: RE: Update from Ecology's HWTR LDW inspector August 2008. September 4, 2008.

Jeffers. 2008f. Email from Mike Jeffers, Ecology, to Don Klundt, Tooling Division. Re: Local Source Control Inspection for Tooling Div Plant. September 8, 2008.

Jeffers. 2009a. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC. Re: Lower Duwamish Waterway Source Control Inspections Update from December 2008 thru February 2009. March 9, 2009.

Jeffers. 2009b. Email from Mike Jeffers, Ecology, to Megan Wisdom, SPU. Re: FW: Wet aluminum storage. April 16, 2009.

Jeffers. 2009c. Email from Mike Jeffers, Ecology, to Iris Winstanley, SAIC. Re: Lower Duwamish Waterway Source Control Inspections Update from March thru the end of June 2009. July 22, 2009.

Jeffers. 2009d. Email from Mike Jeffers, SPU, to Ellen Stewart, SPU. Subject: Wash Pad Drainage at Tours Northwest. October 2, 2009.

Jeffers. 2010. Email from Mike Jeffers, SPU, to Ernie McMahon, McFabco Steel. Re: Urban Waters Environmental Compliance Inspection at McFaboc Steel. June 7, 2010.

Jensen (Jensen Tank Testing). 1991. UST # F26-1 Tightness Testing Checklist for Seattle Fire Station 26. July 2, 1991.

Jensen. 1992. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. August 6, 1992.

Jensen. 1993. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. June 2, 1993.

Jensen. 1994. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. July 13, 1994.

Jensen. 1995. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. June 14, 1995.

Jensen. 1996a. Underground Storage Tank, Tightness Testing Checklist, Long Painting Company, 1022 S. Elmgrove St., Seattle, WA, 98108. May 13, 1996.

Jensen. 1996b. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. June 19, 1996.

Jensen. 1997a. Underground Storage Tank, Tightness Testing Checklist, Long Painting Company, 1022 South Elmgrove St., Seattle, WA, 98108. July 8, 1997.

Jensen. 1997b. UST #F26-1 Tightness Testing Checklist for Seattle Fire Station 26. July 17, 1997.

Jensen. 1998. Underground Storage Tank Tightness Testing Checklist, Long Painting Company, 1022 S. Elmgrove St. Seattle, WA 98108. May 11, 1998.

Jones, Kathryn. 2011. Pacific Pile and Marine. Construction Today. Retrieved July 29, 2011 from http://construction-today.com.

KCIW (King County Industrial Waste). 1996a. Letter from Horace Lee, KCIW, to Lyle Snyder, Snyder Industries. Subject: Cancellation of Wastewater Discharge Permit No. 7528 to Snyder Industries by King County Department of metropolitan Services. March 11, 1996.

KCIW. 1996b. Letter from Horace Lee, KCIW, to Brian Vance, Long Painting. Re: Inspection of Long Painting facility on August 20, 1996. August 30, 1996.

KCIW. 2008. 2008 Combined Sewer Overflow Control Plan Update. June 2008.

KCIW. 2010. Memo from Bruce Tiffany to Lower Duwamish Waterway Source Control Work Group. Re: 2010 Sampling of Industrial Users of the King County Sanitary Sewer System for PCBs. February 1, 2011.

Kennedy Jenks (Kennedy/Jenks Consultants Engineers and Scientists). Stormwater Pollution Prevention Plan. Prepared for The Gear Works. July 1993.

King County (King County Waste Treatment Division). 1997. Letter from Elizabeth Jakab, King County, to Mary O'Herron, Ecology. Visit by King County to Spencer Industries in Response to Ecology Referral #N25710. February 12, 1994.

King County. 2007. King County Combined Sewer Overflow Basin Map. August 16, 2007. As cited in Tiffany 2010.

King County. 2008. Combined Sewer Overflow Control Program, 2008 CSO Control Plan Update. Prepared by King County Department of Natural Resources and Parks, Wastewater Treatment Division. June 2008.

King County. 2009. Combined Sewer Overflow Program. 2008 Annual Report. Wastewater Treatment Division, King County Department of Natural Resources and Parks. July 2009.

King County. 2011a. Combined Sewer Overflow Control Program, 2010 Annual Report. July 2011.

King County. 2011b. Aerial Photograph of Lukas Machine from King County website: http://www.metrokc.gov/GIS/iMAP. Accessed on November 30, 2011.

Kleinfelder (Kleinfelder, Inc.). 2000a. Letter from Scott D. Dwyer, Kleinfelder to Barbara Trejo, Ecology. Subject: Request for Voluntary Cleanup Program Assistance, Long Painting Company, Seattle, Washington. March 2, 2000.

Kleinfelder. 2000b. Memorandum from Scott Dwyer, Kleinfelder, to Barbara Trejo, Ecology. Re: Comments in draft letter regarding planned Phase II ESA work at Long Painting facility. March 31, 2000.

Kleinfelder. 2000c. Site Investigation Report, Long Painting Company, 8025 – 10th Avenue South, Seattle, Washington. September 7, 2000.

Kleinfelder. 2002. Cleanup Action Report, Former Long Painting Facility, 8025-10th Avenue South, Seattle, Washington. October 17, 2002.

K&S Environmental (K&S Environmental, Inc.). 2001. UST Decommissioning and Site Assessment Report. Prepared for Lee Morse General Contractors, Inc. January 2, 2001.

K-Sea. 2011. K-Sea Transportation Company Website: http://www.k-sea.com/. Accessed on October 17, 2011.

Laucks (Laucks Testing Laboratories, Inc.). 1980. Laboratory Report No. 69401, Report on Spoils. Prepared for Hurlen Construction Co. March 14, 1980.

Laucks. 1984. Report on Spoils. Prepared for Hurlen Construction Company. April 27, 1984.

Laucks. 1986. Report on Spoils. Prepared for Hurlen Construction Company. November 19, 1986.

Laucks. 1990. Narrative Packet. Prepared for Hurlen Construction Company. July 27, 1990.

Loop Net. 2011. Property Lease Listing for 521 S Monroe Street, Historical Location of KJM Electric. October 10, 2011.

Lord. 2007. Email from Alan Lord, SPU, to Ellen Stewart, SPU. Subject: Inspector needed. November 19, 2007.

Lukas Machine (Lukas Machine Inc.). 2011a. Industrial Stormwater General Permit Annual Report Form. April 4, 2011.

Lukas Machine. 2011b. Company website for Lukas Machine Inc.: http://www.lukas1.com/about.html. Accessed on July 28, 2011.

Machinists Inc. 2001. Company website for Machinists Inc.: http://www.machinistsinc.com. Accessed on August 15, 2011

Manitowoc (Manitowoc Western). 1995. Notification of Dangerous Activities at Manitowoc Western, 8250 5th Avenue S, Seattle. December 18, 1995.

MAPSCO (Magnetic & Penetrant Services Co., Inc.). 1981. Municipality of Metropolitan Seattle, Industrial Waste Discharge Permit, Application Form for Magnetic & Penetrant Services Co. Inc, 309 S Cloverdate Street, Unit B20, Seattle, WA. September 16, 1981.

MAPSCO. 1996. Letter from Rick Reese, MAPSCO, to Cynthia Wellner, King County, Re: Application for Renewal of Metro Permit No. 7617. July 9, 1996.

MAPSCO. 2011. Magnetic and Penetrant Services Co Company website: http://mapscofinishing.com/. Accessed October 17, 2011.

Marine Lumber Service (Marine Lumber Service Inc.). 1992. Letter from James Walby, Marine Lumber Service Inc. to Ecology. Re: Acknowledge letter of June 18, 1992. July 1, 1992.

Marine Lumber Service. 2003. Letter from John Bray, Marine Lumber Service, to John Bails, Ecology. Re: Marine Lumber Service, 525 S Chicago St, Ecology LUST #5286.

Marine Lumber Service. 2011a. Industrial Stormwater General Permit Annual Report Form, Marine Lumber Service Inc. May 17, 2011.

Marine Lumber Service. 2011b. Marine Lumber Service website: www.marinelumberservice.com. Accessed on September 28, 2011 from.

McFabco Steel (McFabco Steel Corporation). 2009. Letter to Mike Jeffers, Ecology, from Earnie McMahon, McFabco Steel Corporation. Re: Urban Waters Environmental Compliance Inspection at McFabco Steel Corporation. May 1, 2009.

McFabco Steel. 2011. McFabco Steel Corporation Company website: http://mcfabco.com/. Accessed on October 11, 2011.

Mech Agents. 2011. Mech Agents Company website: http://mechagents.com/. Accessed on October 10, 2011.

MEECO Manufacturing Company. 2011. MEECO Manufacturing Company, Inc. website: http://www.meecomfg.com/index.php. Accessed on September 27, 2011.

Meridian (Meridian Excavating & Wrecking, Inc.). 1990. Letter from John A. Kamacho, Meridian, to Ecology. RE: Tank removal project at 233 S. Holden St. July 24, 1990.

METRO. 1984a. Letter from John F. Spencer, METRO, to Dan Milette, Magnetic and Penetrant. Subject: Final Notice of company failure to file the Report on Compliance with Categorical Pretreatment Standard. August 27, 1984.

METRO. 1984b. Memo from Ray Carveth, METRO, to Doug Hilderbrand, METRO. Re: Anonymous Report of a Spill or Possible Hazardous Waste Problem at Pipe Specialties, 531 South Portland, Seattle, WA. October 1, 1984.

METRO. 1985a. Letter from Douglas A. Hilderbrand, METRO, to Ken Felt, Magnetic and Penetrant. Subject: Copy of Updated Final Waste Discharge Permit No. 7224. January 15, 1985.

METRO. 1985b. Memo from Vallana Piccolo, METRO, to File. Re: Anonymous Complaint – PCBs Oils Dumped in Vacant Lot. January 25, 1985.

METRO. 1987. Seattle METRO Industrial Waste Inspection Field Report at Magnetic Penetrant on November 12, 1987. November 12, 1987.

METRO. 1988a. Letter from Elsie J. Hulsizer, METRO, to Dan Milette, Magnetic Penetrant. Subject: Assessment of Informal Compliance Schedule for Discharge Violations of METRO Permit 7224. August 5, 1988.

METRO. 1988b. Letter from Christie J. True, METRO, to Richard Koch, Ecology. Subject: Waste Discharge Permit Application for Magnetic Penetrant. October 17, 1988.

METRO. 1988c. Letter from Christie J. True, METRO, to Richard Koch, Ecology. Subject: Draft of proposed Industrial Waste Discharge Permit No 7568 for Magnetic Penetrant. November 3, 1988.

Michelsen and Bragdon-Cook. 1993. Technical Information Memorandum: Organic Carbon Normalization of Sediment Data. Prepared by T.C. Michelsen and K. Bragdon-Cook for Washington State Department of Ecology. As cited in Windward 2010.

Modern Machine. 2011. Modern Machine Company Website: http://www.modernmachine.us/index.html. Accessed on October 7, 2011.

Modrock Concrete Design. 2011. Modrock Concrete Design and Yext Countertops Company Webpage: http://www.yext.com/p/citysearch/modrock-concrete-design-seattle-washington.html. Accessed on October 19, 2011.

Ness Cranes. 2008. Compliance Certificate Completed September 30, 2008 by Ness Cranes. August 8, 2008.

Nisqually (Nisqually Environmental Sampling and Consulting). 2009. Letter from John Allen, Nisqually, to Walter Cougan, Machinist Inc. Re: Results for industrial storm water testing for the 4th quarter 2008. January 22, 2009.

Nisqually. 2010a. Letter from John Allen, Nisqually, to Robert Wright, Ecology. Response to Warning Letter sent to Independent Metals on December 23, 2009. February 11, 2010.

Nisqually. 2010b. Stormwater Pollution Prevention Plan for Independent Metals, 816 S Kenyan St, Seattle, WA. February 2010.

NOAA (National Oceanic and Atmospheric Administration). 1998. Duwamish Waterway Sediment Characterization Study Report. As cited in Windward 2003.

Northwind Marine. 2011. Company website for Northwind Marine: www.northwindmarine.com. Accessed on August 4, 2011.

Olsson Manufacturing. 2011. Olsson Manufacturing Company Website: http://www.boatdavit.com/Default.aspx. Accessed on October 5, 2011.

Olympic Steel Door. 2003. Letter from Greg Linscott, Olympic Steel Door Inc., to John Bails, Ecology. Re: Request for additional information relating to site cleanup activities. July 7, 2003.

O'Sullivan (O'Sullivan Petroleum Equipment Company). 1993. Site Check & Site Assessment, Site Characterization Form, Razore Enterprises, 500 South Sullivan, Seattle, Washington 98108. February 16, 1993.

Pell. 2008. Email from John L. Pell, USACE, to Erika Hoffman, EPA. Subject: Violation on Duwamish River. May 5, 2008.

PGG (Pacific Groundwater Group). 2008. Groundwater Investigation: 7th Avenue South and South Riverside Drive. Prepared for SPU. February 27, 2008.

PGG. 2009a. Soil/Groundwater Characterization: South Park Pump Station & Water Quality Facility, Seattle, Washington. Prepared for SPU. July 7, 2009.

PGG. 2009b. Cleanup Action Plan: South Park Pump Station & Water Quality Facility, Seattle, Washington. October 9, 2009.

PGG. 2010. Interim Action Plan, South Park Pump Station & Water Quality Facility, Seattle, Washington. Prepared for SPU. September 2010.

Phil's Custom Bindery. 2011. Phil's Custom Bindery Company Website: http://www.philscustombindery.com/index.html. Accessed on October 12, 2011.

PNG (Pacific Northern Geoscience). 1995. Limited Phase II Environmental Site Assessment prepared for Stafford Frey Cooper, Manitowoc Western Facility. October 4, 1995.

Public Storage of America. 2011. Company website for Portable Storage of America: www.gotshed.com. Accessed on August 12, 2011.

Puget SoundKeeper Alliance. 2006. Letter from Sue Joerger, Puget Soundkeeper Alliance, to King Auto Wrecking Managing Agent, Subject: Notice of Intent to File Suit Under the Clean Water Act. October 5, 2006.

Rasmussen Equipment (Rasmussen Equipment Company). 2002. Spill Prevention and Cleanup Plan, Rasmussen Equipment Company, 8727 5th Ave. S. October 2002.

Rasmussen Equipment. 2011. Rasmussen Equipment website: http://rasmussenco.com. Accessed on December 5, 2011.

Razore Enterprises. 1991. Letter from Jim Sepic, Razore Enterprises, to Tom Lufkin, Ecology. Re: Intended UST Removal. March 15, 1991.

Razore Enterprises. 1992. Letter from Jim Sepic, Razore Enterprises, to Joe Hickey, Ecology, UST Removal at Razore Enterprises on November 2, 1992. February 16, 1992.

RETEC (The RETEC Group, Inc.). 2003a. Compliance Sampling Results – 10,000-gallon Diesel & Gasoline UST Removals, Long Painting Company, 1022 South Elmgrove Street, Seattle, WA 98108, Ecology UST Site 5585. July 25, 2003.

RETEC. 2003b. Geoprobe Groundwater Sampling Results – Former Fuel USTs Area, Former Long Painting Company Site, 1022 South Elmgrove Street, Seattle, WA 98108, Ecology UST Site 5585. October 24, 2003.

Robinson. 2008. Email from Brian Robinson, SPU, to Dave Haberman, King County. Subject: Results from National Products sample collected on December 5, 2007. January 7, 2008.

Robinson. 2010. Email from Brian Robinson, SPU, to Todd Marker, Marine Lumber Service. Re: Stormwater Inspection Information. November 12, 2010.

Rogers Machinery. 2008. Rogers Machinery Warehouse Addition Drainage Map, 7800 5th Avenue S, Seattle. June 21, 2008.

Rogers Machinery. 2011. Rogers Machinery Company Webpage: http://www.rogers-machinery.com/index.html. Accessed on September 16, 2011.

SAIC (Science Applications International Corporation). 2006. Draft Soil and Groundwater Screening Criteria, Source Control Action Plan, Slip 4, Lower Duwamish Waterway. Prepared for Washington State Department of Ecology. August 2006 (Revised February 2007).

SAIC. 2008. Lower Duwamish Waterway, Early Action Area 2, Supplemental Data Gaps Report, Douglas Management Company Property, 7100 2nd Avenue SW, Seattle. Prepared for the Washington State Department of Ecology, Toxics Cleanup Program. December 2008.

SAIC. 2009. Lower Duwamish Waterway Early Action Area 2, Supplemental Data Gaps Report, Boyer Towing Property. Prepared for Washington State Department of Ecology, Toxics Cleanup Program, by Science Applications International Corporation. June 2009.

SAIC. 2011a. Lower Duwamish Waterway, RM 1.6 to 2.1 West (Terminal 115), Summary of Existing Information and Identification of Data Gaps. Prepared for the Washington State Department of Ecology, Toxics Cleanup Program. June 2011.

SAIC. 2011b. Surface Sediment Sampling at Outfalls in the Lower Duwamish Waterway, Seattle, WA, Data Report. Prepared for the Washington State Department of Ecology, Toxics Cleanup Program. October 2011.

SAIC. 2012. Lower Duwamish Waterway, RM 2.1 West (1st Avenue S SD), Summary of Existing Information and Identification of Data Gaps - DRAFT. In preparation.

Schmoyer. 2011. Email from Beth Schmoyer, SPU, to Iris Winstanley, SAIC. Re: SPU LDW Data through June 30, 2011. August 18, 2011.

Schmoyer. 2012. Comments from Beth Schmoyer, SPU, regarding the Lower Duwamish Waterway, RM 2.2-3.4 West (Riverside Drive) Summary of Existing Information and Indentification of Data Gaps Draft Report. January 27, 2012.

SD&C (Slotta Design and Construction). 2000. Subsurface Investigation Report prepared for Foss Environmental for South Park Frame and Wheel Alignment, 8721 14th Avenue, Seattle. October 8, 2000.

SEACOR. 1991. Letter from John M. Gieber and Klaus P. Rohwer, SEACOR, to Kory Holm, Northwest Envirofield Services. Re: Underground Storage Tank Removal, Westfork Nelson, Inc., 7916 8th Avenue South, Seattle, Project No. 00061-007-01. April 15, 1991.

Seattle Freight (Seattle Freight Service, Inc.). 2011. Seattle Freight Company Website: http://seattlefreight.com. Accessed on September 7, 2011.

Seattle Industry. 2008. "100 Year Mark Passes by Seidelhuber Iron and Bronze Works." Posted on Seattle Industry Website: http://www.seattleindustry.org/SP07_southpark.php. Posted on October 1, 2008.

Seattle PI. 2008. Bruce Reagan, 1945-2008: He built boats for three decades. Written by Bill Virgin. November 7, 2008.

Seattle Refrigeration. 2011. Seattle Refrigeration Company Website: http://www.seafrig.com/about.htm. Accessed on October 19, 2011.

Seattle Weekly. 2001. Painter peels off, Long Paint, the Northwest's largest painting company, flees Seattle after year of controversy. Written by Rick Anderson. August 23, 2001.

SKCDPH (Seattle-King County Department of Public Health). 1998. Letter from Carsten Thomsen, SKCDPH, to Mark Wilk, Interstate Coatings. Re: Completed Site Hazard Assessment. July 20, 1998.

Smith Berger Marine. 2011. Smith Berger Marine Company Website: http://www.smithberger.com. Accessed on October 7, 2011.

Snyder Industries (Snyder Industries, Inc.). 1989. Municipality of Metropolitan Seattle Waste Discharge Permit Application for Snyder Industries at 524 S. Southern St., Seattle, WA 98108. Prepared by Lyle K. Snyder, President, Snyder Industries. July 31, 1989.

SPU (Seattle Public Utilities). 1994. Water Quality Source Control Business Inspections, Elliott Bay/Duwamish Drainage and Wastewater Utility at Rasmussen Equipment Company, 8727 5th Avenue S, Seattle. October 7, 1994.

SPU. 2002a. Business Inspection Checklist at Braicks Construction, 309 S Cloverdale, Seattle. August 29, 2002.

SPU. 2002b. Letter from Ryean-Marie Woods, SPU, to Nancy Larson Hammond, Braicks Construction, Inc. Subject: Results from the August 29, 2002 stormwater pollution prevention inspection: No Action Required. September 9, 2002.

SPU. 2002c. Seattle Public Utilities Business Inspection Form, Cain Bolt & Gasket Inc, 7724 7th Avenue S, Seattle. September 10, 2002.

SPU. 2002d. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Rasmussen Equipment Co. September 11, 2002.

SPU. 2002e. Letter from Tasha Bassett, SPU, to Rich Rasmussen, Rasmussen Equipment. Subject: Results from September 9, 2002 Stormwater Pollution Prevention Inspection: Corrective Action Required. September 11, 2002.

SPU. 2002f. Seattle Public Utilities, Business Inspection Form, Gourmondo, 309 S. Cloverdale, Suite B#24. September 30, 2002.

SPU. 2002g. Letter from Ryean-Marie Woods, SPU, to Gina Tallariti, Gourmondo. Subject: Results from the September 30, 2002 stormwater pollution prevention inspection: No action required. October 16, 2002.

SPU. 2002h. Seattle Public Utilities Business Inspection Form, Hastings Photographics, S. Cloverdale St. C21&24. October 29, 2002.

SPU. 2002i. Seattle Public Utilities Business Inspection Form, Ode Gutter Product, 309 South Cloverdale St. C#7-9, #C24-35. October 29, 2002.

SPU. 2002j. Seattle Public Utilities Business Inspection Form, Elecool, 309 S. Cloverdale St B17. October 31, 2002.

SPU. 2002k. Seattle Public Utilities Business Inspection Form, Front Panel Express, 309 S. Cloverdale St. C34. October 31, 2002.

SPU. 2002l. Seattle Public Utilities Business Inspection Form, O&J Sewing, 309 S. Cloverdale St C39. October 31, 2002.

SPU. 2002m. Seattle Public Utilities Business Inspection Form, Pike Place Fish Market, Inc., 309 S. Cloverdale St. C17. October 31, 2002.

SPU. 2002n. Seattle Public Utilities Business Inspection Form, Olympic Steel Door Inc, 7800 7th Avenue S, Seattle. November 26, 2002.

SPU. 2002o. Letter from Tasha Bassett, SPU, to Eric Cain, Cain Bolt & Gasket. Re: Results from November 20th 2002 stormwater pollution prevention inspection: Corrective action required. November 27, 2002.

SPU. 2002p. Letter from Tasha Bassett, SPU, to Greg Linscott, Olympic Steel Door Inc. Re: Results from November 26th 2002 stormwater pollution prevention inspection: Correct action required. November 27, 2002.

SPU. 2002q. Business Inspection Form, Rogers Machinery, 7800 5th Avenue S, Seattle, on December 2, 2002. December 2, 2002.

SPU. 2002r. Letter from Tasha Bassett, SPU, to Marck Hanscom, Rogers Machinery. Subject: Results from December 2, 2002 Stormwater Pollution Prevention Inspection at Rogers Machinery: Corrective Action Required. December 5, 2002.

SPU. 2002s. Letter from Tasha Bassett, SPU, to Steve Walum, Custom Crating. Re: Results from December 3rd 2002 stormwater pollution prevention inspection: Corrective action required. December 12, 2002.

SPU. 2002t. Letter from Tasha Bassett, SPU, to Rich Rasmussen, Rasmussen Equipment. Subject: Results from the December 6, 2002 Stormwater Pollution Prevention Re-Inspection: No Action Required. December 16, 2002.

SPU. 2002u. Letter from Tasha Bassett, SPU, to Bernie Conrad, The Gear Works. Re: Results from December 11th 2002 stormwater pollution prevention inspection: Corrective action required. December 18, 2002.

SPU. 2002v. Seattle Public Utilities Business Inspection at Classy Mailing Service, 309 S Cloverdale Street Suite E15-17, Seattle. December 19, 2002.

SPU. 2002w. Seattle Public Utilities Business Inspection Form, Fire King of Seattle, 240 S Holden Street, Seattle. December 19, 2002.

SPU. 2002x. Seattle Public Utilities Business Inspection Form, Heng Heng Supermarket, 309 S. Cloverdale St, E1-2. December 19, 2002.

SPU. 2002y. Letter from Tasha Bassett, SPU, to Jeff Stober, Seattle Heat Treaters. Re: Results from December 10th 2002 stormwater pollution prevention inspection: Corrective action required. December 24, 2002.

SPU. 2002z. Seattle Public Utilities Business Inspection Form, BLB Construction, Inc., 309 S. Cloverdale St., D13-14 D35-36. December 30, 2002.

SPU. 2002aa. Seattle Public Utilities Business Inspection Form, Delgado Bros. Upholstery, 309 S. Cloverdale St. B-21. December 30, 2002.

SPU. 2002ab. Seattle Public Utilities Business Inspection Form, PHI/Dictographs/Alarm Screens, 309 S. Cloverdale St. D26. December 30, 2002.

SPU. 2002ac. Seattle Public Utilities Business Inspection Form, Redpoint, 309 S. Cloverdale St. A10. December 30, 2002.

SPU. 2002ad. Seattle Public Utilities Business Inspection Form, Topline Products, Inc., 309 S. Cloverdale St A3-6. December 30, 2002.

SPU. 2002ae. Seattle Public Utilities Business Inspection Form, Woodco Products, 309 S. Cloverdale St. D-45. December 30, 2002.

SPU. 2003a. Business Inspection at Global Fabricators, 7619 5th Avenue S. January 9, 2003.

SPU. 2003b. Letter from Tasha Bassett, SPU, to George Gorog and Thomas Toth, Global Fabricators. Re: Results from January 9th, 2003 stormwater pollution prevention inspection: Corrective action required. January 17, 2003.

SPU. 2003c. Letter from Tasha Bassett, SPU, to Eric Cain, Cain Bolt & Gasket. Re: Results from the January 24th 2003 stormwater pollution prevention re-inspection: No action required. January 31, 2003.

SPU. 2003d. Letter from Tasha Bassett, SPU, to Steve Walum, Custom Crating. Re: Results from the January 30th 2003 stormwater pollution prevention re-inspection: No action required. January 31, 2003.

SPU. 2003e. Business Inspection Form, King Auto Wrecking, Inc., 543 S Monroe Street, Seattle. February 5, 2003.

SPU. 2003f. Letter from Ryean-Marie Woods, SPU, to Bill Lindsey, King Auto Wrecking, Inc., Results from February 5, 2003 Stormwater Pollution Prevention Inspection: Corrective Action Required. February 11, 2003.

SPU. 2003g. Letter from Tasha Bassett, SPU, to John Bray, Marine Lumber Service. Re: Results from February 6th 2003 stormwater pollution prevention inspection: Corrective action required. February 13, 2003.

SPU. 2003h. Letter from Tasha Bassett, SPU, to Marck Hanscom, Rogers Machinery. Subject: Results from February 28, 2003 Stormwater Pollution Prevention Inspection at Rogers Machinery: No Action Required. March 11, 2003.

SPU. 2003i. Letter from Tasha Bassett, SPU, to Jim Moore, Fire King of Seattle, Inc. Re: Results from the March 24th 2003 stormwater pollution prevention re-inspection: No action required. March 24, 2003.

SPU. 2003j. Letter from Tasha Bassett, SPU, to Jeff Stober, Seattle Heat Treaters. Re: Results from the March 24th 2003 stormwater pollution prevention re-inspection: No action required. March 25, 2003.

SPU. 2003k. Letter from Tasha Bassett, SPU, to William (Tracy) Taft, Fabrication Specialties Limited. Subject: Results from March 10th 2003 stormwater pollution prevention inspection: Corrective action required. April 2, 2003k.

SPU. 2003l. Letter from Tasha Bassett, SPU, to Jim Nye, Modern Machine. Subject: Results from March 24, 2003 Stormwater Pollution Prevention Inspection at Rogers Machinery: Corrective Action Required. April 7, 2003.

SPU. 2003m. Letter from Tasha Bassett, SPU, to Greg Linscott, Olympic Steel Door. Subject: Results from the April 4th 2003 stormwater pollution prevention re-inspection: No action required. April 7, 2003.

SPU. 2003n. Letter from Ryean-Marie Woods, SPU, to Bill Lindsey, King Auto Wrecking, Inc., Results from April 24, 2003 Stormwater Pollution Prevention Re-Inspection: No Further Action Required. April 24, 2003.

SPU. 2003o. Business Inspection Form, Fabrication Specialties Limited, 527 S Portland Street, Seattle, WA. May 10, 2003.

SPU. 2003p. Business Inspection Form, Coach Maintenance, 255 S Holden Street, Seattle, WA. May 19, 2003.

SPU. 2003q. Letter from Tasha Bassett, SPU, to John Bray, Marine Lumber Service. Re: Results from the April 29th 2003 stormwater pollution prevention re-inspection: No action required. May 23, 2002.

SPU. 2003r. Letter from Tasha Bassett, SPU, to Bernie Conrad, The Gear Works. Re: Results from March 7th, 2003 stormwater pollution prevention re-inspection: No action required. June 17, 2003.

SPU. 2003s. Letter from Tasha Bassett, SPU, to George Gorog and Thomas Toth, Global Fabricators. Re: Results from May 29th, 2003 stormwater pollution prevention re-inspection: No action required. June 17, 2003.

SPU. 2003t. Letter from Tasha Bassett, SPU, to Jim Nye, Modern Machine. Subject: Results from the June 2nd 2003 Stormwater Pollution Prevention Re-Inspection: No Action Required. July 11, 2003.

SPU. 2003u. Letter from Tasha Bassett, SPU, to William Taft, Fabrication Specialties Limited. Re: Results from the June 2nd 2003 stormwater pollution prevention re-inspection: No action required. Jully 11, 2003.

SPU. 2003v. Source Control Inspection Program, Sediment Remediation, Initial Inspection at Independent Metals Plant 1, 703 S Monroe Street, Seattle. August 13, 2003.

SPU. 2003w. Joint Inspection Program, Lower Duwamish Waterway. Follow-up Inspection at Independent Metals Plant 1, 703 S Monroe Street, Seattle. October 15, 2003.

SPU. 2007a. Water Quality Complaint Investigation Field Form, Manufacturing Technology Inc., 7709 5th Avenue S, Seattle. April 18, 2007.

SPU. 2007b. Joint Inspection Program, Lower Duwamish Waterway, Fire King of Seattle, Inc., 240 S Holden Street, Seattle. November 20, 2007.

SPU. 2007c. Joint Inspection Program, Lower Duwamish Waterway, Global Fabricating, 7619 5th Avenue S, Seattle. November 21, 2007.

SPU. 2007d. Letter from Brian Robinson, SPU, to Jim Moor, Fire King of Seattle, Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. November 26, 2007.

SPU. 2007e. Letter from Ellen Stewart, SPU, to Thomas Toth, Global Fabricators Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. November 30, 2007.

SPU. 2007f. Letter from Tasha Bassett, SPU, to David Wilikinson, National Products, Inc. Subject: Results from the Environmental Compliance Inspection: Corrective action required. December 12, 2007.

SPU. 2008a. Letter from Brian Robinson, SPU, to Jim Moore, Fire King of Seattle, Inc. Re: Results from the Environmental Compliance Re-Inspection: In Compliance. January 8, 2008.

SPU. 2008b. Joint Inspection Program, Lower Duwamish Waterway, Lukas Machine Inc., 707 S Riverside Drive, Seattle. January 30, 2008.

SPU. 2008c. Joint Inspection Program, Lower Duwamish Waterway. Initial and Follow-up Inspections at National Products Inc., 1017 S Elmgrove St. February 5, 2008.

SPU. 2008d. Letter from Tasha Bassett, SPU, to David Wilikinson, National Products, Inc. Subject: Results from the Environmental Compliance re-inspection: In Compliance. February 8, 2008.

SPU. 2008e. Joint Inspection Program, Lower Duwamish Waterway. Inspection at Rogers Machinery Co. Inc., 7800 5th Avenue S, Seattle. February 12, 2008.

SPU. 2008f. Letter from Brian Robinson, SPU, to Mike Iles, Lukas Machine, Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. February 14, 2008.

SPU. 2008g. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Glitsa American, Inc., 327 S Kenyon Street, Seattle. February 20, 2008.

SPU. 2008h. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Modern Machine, 519 S Elmgrove Street, Seattle. February 20, 2008.

SPU. 2008i. Letter from Brian Robinson, SPU, to Ken Winterstein, Glitsa American. Subject: Results from Environmental Compliance Inspection: Corrective Action Required. February 21, 2008.

SPU. 2008j. Letter from Brian Robinson, SPU, to Mike Proulx, Rogers Machinery. Subject: Results from February 12, 2008 Environmental Compliance Inspection: Corrective Action Required. March 5, 2008.

SPU. 2008k. Letter from Brian Robinson, SPU, to Rick Rasmussen, Rasmussen Equipment Co. Subject: Results from the Environmental Compliance Inspection: Corrective Actions Required. March 5, 2008.

SPU. 2008l. Letter from Brian Robinson, SPU, to Aaron Seifert, Modern Machine. Subject: Results from the Environmental Compliance Inspection: Corrective Action Required. March 13, 2008.

SPU. 2008m. Joint Inspection Program, Lower Duwamish Waterway, Lukas Machine Inc., 707 S Riverside Drive, Seattle. March 19, 2008.

SPU. 2008n. Letter from Brian Robinson, SPU, to Ken Winterstein, Glitsa American. Subject: Results from Environmental Compliance Re-Inspection: In Compliance. April 7, 2008.

SPU. 2008o. Letter from Brian Robinson, SPU, to Michael Robison, The Gear Works. Re: Results from the Stormwater Pollution Prevention inspection: Corrective action required. April 17, 2008.

SPU. 2008p. Joint Inspection Program, Lower Duwamish Waterway. Follow-Up Business Inspection at Rasmussen Equipment Co., 8727 5th Avenue S, Seattle. May 9, 2008.

SPU. 2008q. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Modern Machine, 8000 5th Avenue S, Seattle. May 9, 2008.

SPU. 2008r. Letter from Brian Robinson, SPU, to Michael Proulx, Rogers Machinery. Subject: Results from Environmental Compliance Re-Inspection of May 9, 2008: In Compliance. May 9, 2008.

SPU. 2008s. Letter from Brian Robinson, SPU, to Aaron Seifert, Modern Machine. Subject: Results from the Environmental Compliance Inspection: In Compliance. May 12, 2008.

SPU. 2008t. Letter from Brian Robinson, SPU, to Michael Robison, The Gear Works. Re: Results from the Environmental Compliance re-inspection: In Compliance. June 16, 2008.

SPU. 2008u. Joint Inspection Program, Lower Duwamish Waterway Initial Inspection at Braicks Construction, Inc., 809 S Cloverdale Street Suite B3, Seattle. June 19, 2008.

SPU. 2008v. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Frontier Door and Cabinet LLC, 426 S Cloverdale Street, Seattle. June 20, 2008.

SPU. 2008w. Letter from Megan Wisdom, SPU, to Annette Tyson, Braicks Construction, Inc., Subject: Results from the Environmental Compliance Inspection: Corrective Action Required. June 26, 2008.

SPU. 2008x. Letter from Megan Wisdom, SPU, to Mark Southern, Frontier Door and Cabinet. Subject: Results from the Environmental Compliance Inspection at Frontier Door and Cabinet: In Compliance. June 26, 2008.

SPU. 2008y. Joint Inspection Program, Lower Duwamish Waterway. Lukas Machine Inc., 707 S Riverside Drive, Seattle. July 9, 2008.

SPU. 2008z. Letter from Brian Robinson, SPU, to Mike Iles, Lukas Machine, Inc. Re: Results from the Environmental Compliance re-inspection: In Compliance. July 10, 2008.

SPU. 2008aa. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at National Products Inc., 8410 Dallas Avenue S, Seattle. July 11, 2008.

SPU. 2008ab. Letter from Megan Wisdom, SPU, to David Wilkinson, National Products. Subject: Results from the Environmental Compliance Inspection. July 15, 2008.

SPU. 2008ac. Joint Inspection Program, Lower Duwamish Waterway, Braicks Construction, 309 S Cloverdale Street Unit B3, Follow-up Inspection. August 26, 2008.

SPU. 2008ad. Joint Inspection Program, Lower Duwamish Waterway. Follow-up Inspection at National Products, Inc., 8410 Dallas Avenue S, Seattle. September 17, 2008.

SPU. 2008ae. Letter from Brain Robinson, SPU, to Margaret O'Hara, Industrial Battery Systems. Subject: Results from the Environmental Compliance Re-Inspection. October 14, 2008.

SPU. 2008af. Letter from Megan Wisdom, SPU, to Annette Tyson, Braicks Construction. Subject: Results from the Environmental Compliance Re-Inspection: In Compliance. October 14, 2008.

SPU. 2008ag. Geotechnical Report South Park Pump Station, Seattle Work Authorization No. C353202. November 1, 2008.

SPU. 2009a. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Phil's Custom Bindery, 309 S Cloverdale Street Suite A-12. January 3, 2009.

SPU. 2009b. Joint Inspection Program, Sediment Remediation. American Civil Constructors West Coast Inc., 700 S Riverside Drive, Seattle. January 11, 2010. (Revised March 22, 2010.)

SPU. 2009c. Letter from Megan Wisdom, SPU, to Scott Goldader, Phil's Custom Bindery. Subject: Results from the Environmental Compliance Inspection: Corrective Action Required. January 28, 2009.

SPU. 2009d. Joint Inspection Program, Sediment Remediation. Initial Inspection at Seattle Heat Treaters, 521 S Holden Street, Seattle, WA. February 19, 2009.

SPU. 2009e. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Smith Berger Marine, 7915 10th Avenue S, Seattle. February 27, 2009.

SPU. 2009f. Letter from Megan Wisdom, SPU, to Mike Thompson, Smith Berger Marine. Subject: Results from the Environmental Compliance Inspection at Smith Berger Marine: Corrective Action Required. March 3, 2009.

SPU. 2009g. Joint Inspection Program, Lower Duwamish Waterway. Follow-up Inspection at Phil's Custom Bindery, 309 S Cloverdale Street Suite A-12. March 6, 2009.

SPU. 2009h. Letter from Brian Robinson, SPU, to Todd Marker, Marine Lumber Service. Re: Results from the Environmental Compliance Inspection: Corrective action required. April 15, 2009.

SPU. 2009i. Joint Inspection Program, Sediment Remediation Program Initial Inspection at Northwind Marine, 605 S Riverside Drive, Seattle. April 16, 2009.

SPU. 2009j. Letter from Megan Wisdom, SPU, to Mark Bullard, Northwind Marine. Re: Results from the Environmental Compliance Inspection: Corrective action required. April 21, 2009.

SPU. 2009k. Joint Inspection Program, Sediment Remediation. Initial Inspection at Portable Storage of America, 7510 5th Avenue S, Seattle. April 22, 2009.

SPU. 2009l. Letter from Megan Wisdom, SPU, to Joe Hengtgen, Portable Storage of America. Re: Results from the Environmental Compliance Inspection: Corrective action required. April 30, 2009.

SPU. 2009m. Joint Inspection Program, Sediment Remediation, Initial Inspection at Fabrication Specialties Limited, 527 S Portland Street, Seattle, WA. May 6, 2009.

SPU. 2009n. Letter from Brian Robinson, SPU, to Larry Tate, Fabrication Specialties Limited Art. Re: Results from the Environmental Compliance Inspection: In Compliance. May 6, 2009.

SPU. 2009o. Joint Inspection Program, Lower Duwamish Waterway. Follow-Up Inspection at Smith Berger Marine, 7915 10th Avenue S, Seattle. May 21, 2009.

SPU. 2009p. MTCA Release Report for 640 S Riverside Drive, Seattle. May 24, 2009.

SPU. 2009q. Joint Inspection Program, Lower Duwamish Waterway. Follow-Up Inspection at Northwind Marine, 605 S. Riverside, Seattle, 98108. June 5, 2009.

SPU. 2009r. Letter from Megan Wisdom, SPU, to Mark Bullard, Northwind Marine. Re: Results of the Environmental Compliance re-inspection. June 5, 2009.

SPU. 2009s. Letter from Beth Schmoyer, SPU, to Russell Olsen, Ecology. Re: Voluntary cleanup program (VCP) application for 640 S Riverside Drive, Seattle. June 24, 2009.

SPU. 2009t. Voluntary Cleanup Program (VCP) Agreement for 640 S Riverside Drive, Seattle. July 8, 2009.

SPU. 2009u. Letter from Megan Wisdom, SPU, to Mike Hengtgen, Portable Sheds of America. Re: Results from the Environmental Compliance re-Inspection. July 23, 2009.

SPU. 2009v. Joint Inspection Program, Lower Duwamish Waterway, Manufacturing Technology Inc., 7709 5th Avenue S, Seattle. August 26, 2009.

SPU. 2009w. Joint Inspection Program, Sediment Remediation, Cain Bolt & Gasket, 7724 7th Avenue S, Seattle. August 26, 2009.

SPU. 2009x. Letter from Megan Wisdom, SPU, to Richard Smith, Cain Bolt & Gasket. Re: Results from the Environmental Compliance Inspection: Corrective action required. August 31, 2009.

SPU. 2009y. Letter from Megan Wisdom, SPU, to Martin Lyman, Manufacturing Technology Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. September 2, 2009.

SPU. 2009z. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at African Northwest, Inc., 470 S Kenyon Street, Seattle. September 11, 2009.

SPU. 2009aa. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Mike's Truck Repair and Fabrication, Inc., 515 S Southern Street, Seattle. September 11, 2009.

SPU. 2009ab. Joint Inspection Program, Lower Duwamish Waterway. Initial inspection at Olympic Steel Door Inc., 7800 7th Ave S. Seattle. September 14, 2009.

SPU. 2009ac. Letter from Mike Jeffers, SPU, to Mike Suchower, Mike's Truck Repair and Fabrication, Inc., Subject: Results from Environmental Compliance Inspection: Corrective Action Required. September 17, 2009.

SPU. 2009ad. Letter from Mike Jeffers, SPU, to Richard West, Redox Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. September 17, 2009.

SPU. 2009ae. Letter from Mike Jeffers, SPU, to Don Cosser, African Northwest, Inc., Subject: Results from the Environmental Compliance Inspection at African Northwest, Inc.: Corrective Action Required. September 22, 2009.

SPU. 2009af. Letter from Mike Jeffers, SPU, to Greg Linscott, Olympic Steel Door Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. September 22, 2009.

SPU. 2009ag. Joint Inspection Program, Lower Duwamish Waterway, All Metal Arts, 7800 7th Avenue S, Seattle. October 1, 2009.

SPU. 2009ah. Joint Inspection Program, Lower Duwamish Waterway, Consistent Coatings Inc., 719 S Riverside Drive, Seattle. October 1, 2009.

SPU. 2009ai. Joint Inspection Program, Lower Duwamish Waterway, Custom Crating. 233 S Holden Street, Seattle. October 1, 2009.

SPU. 2009aj. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Scenic Band Tours Co DBA Tours Northwest, 8221 7th Avenue S, Seattle. October 1, 2009.

SPU. 2009ak. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Harsch Investment Properties, 309 S Cloverdale Street, Suite B14, Seattle. October 5, 2009.

SPU. 2009al. Letter from Megan Wisdom, SPU, to Richard Smith, Cain Bolt & Gasket. Re: Results from the Environmental Compliance re-inspection. October 6, 2009.

SPU. 2009am. Letter from Mike Jeffers, SPU, to James Armstrong, Consistent Coatings Inc. Re: Results from the Environmental Compliance Inspection: Corrective action required. October 6, 2009.

SPU. 2009an. Letter from Mike Jeffers, SPU, to Steve Walum, Custom Crating. Re: Results from the Environmental Compliance Inspection: Corrective action required. October 6, 2009.

SPU. 2009ao. Letter from Brian Robinson, SPU, to Delilah Richman, Harsch Investment Properties, 309 S Cloverdale St, Seattle, WA. Subject: Results from the Stormwater Pollution Prevention inspection: Corrective action required. October 13, 2009.

SPU. 2009ap. Joint Inspection Program, Lower Duwamish Waterway, Olympic Steel Door, 7800 7th Avenue S, Seattle. October 19, 2009.

SPU. 2009aq. Joint Inspection Program, Lower Duwamish Waterway, Redox Inc., 7800 7th Avenue S, Seattle. October 19, 2009.

SPU. 2009ar. Letter from Mike Jeffers, SPU, to Steve Powell, Tours Northwest. Subject: Results from Environmental Compliance Inspection at Tours Northwest: Corrective Action Required. October 19, 2009.

SPU. 2009as. Joint Inspection Program, Lower Duwamish Waterway. Follow-up Inspection at African Northwest, Inc., 470 S Kenyon Street, Seattle. October 23, 2009.

SPU. 2009at. Letter from Mike Jeffers, SPU, to Mike Suchower, Mike's Truck Repair and Fabrication, Inc., Subject: Results from Environmental Compliance Follow-up Inspection: Corrective Action Required. October 23, 2009.

SPU. 2009au. Letter from Megan Wisdom, SPU, to Martin Lyman, Manufacturing Technology Inc. Re: Results from the Environmental Compliance inspection. November 4, 2009.

SPU. 2009av. Letter from Mike Jeffers, SPU, to James Armstrong, Consistent Coatings Inc. Re: Results from the Environmental Compliance re-inspection. November 10, 2009.

SPU. 2009aw. Letter from Mike Jeffers, SPU, to Steve Walum, Custom Crating. Re: Results from the Environmental Compliance re-inspection. November 10, 2009.

SPU. 2009ax. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at King Auto and Truck Park, Inc., 543 S Monroe Street, Seattle. November 16, 2009.

SPU. 2009ay. Letter from Mike Jeffers, SPU, to Mike Suchower, Mike's Truck Repair and Fabrication, Inc., Subject: Results from Environmental Compliance Inspection: In Compliance. November 19, 2009.

SPU. 2009az. Joint Inspection Program, Sediment Remediation Initial Inspection at Hudson Bay Insulation, 8230 5th Avenue S, Suite B, Seattle. December 4, 2009.

SPU. 2009ba. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Storer Enterprises DBA Airport Towing, 301 S Sullivan Street, Seattle. December 7, 2009.

SPU. 2009bb. Joint Inspection Program, Sediment Remediation. Initial Inspection at Coach Maintenance, 255 S Holden Street, Seattle, WA. December 11, 2009.

SPU. 2009bc. Letter from Mike Jeffers, SPU, to Steve Powell, Tours Northwest. Subject: Results from Environmental Compliance Inspection at Tours Northwest: Corrective Action Required. December 11, 2009.

SPU. 2009bd. Letter from Mike Jeffers, SPU, to Lynette Storer, Airport Towing. Subject: Results from Stormwater Pollution Prevention Inspection on December 7, 2009: Corrective Action Required. December 14, 2009.

SPU. 2009be. Joint Inspection Program, Sediment Remediation, Initial Inspection at Pacific Pile and Marine, 582 S Riverside Drive, Seattle, WA. December 17, 2009.

SPU. 2009bf. Letter from Megan Wisdom, SPU, to Skip Arneson, Coach Maintenance. Re: Environmental Compliance Inspection Results. December 17, 2009.

SPU. 2009bg. Letter from Mike Jeffers, SPU, to James Bang, King Auto Wrecking. Subject: Environmental Compliance Re-Inspection. December 21, 2009.

SPU. 2009bh. Letter from Mike Jeffers, SPU, to Steve Powell, Tours Northwest. Subject: Environmental Compliance Re-Inspection at Tours Northwest: In Compliance. December 28, 2009.

SPU. 2010a. Source Control Inspection, Re-Inspection Form. Re-Inspection at Storer Enterprises DBA Airport Towing, 301 S Sullivan Street, Seattle. January 1, 2010.

SPU. 2010b. Seattle Public Utilities, Source Control Inspection, Re-Inspection Form, All Metal Arts, 7800 7th Avenue S, Seattle. January 5, 2010.

SPU. 2010c. Letter from Brian Robinson, SPU, to Delilah Richman, Harsch Investment Properties, 309 S Cloverdale St, Seattle, WA. Subject: Environmental Compliance re-inspection. January 6, 2010.

SPU. 2010d. Letter from Mike Jeffers, SPU, to Frank Blakely, American Civil Constructors West Coast Inc. Subject: Environmental Compliance Inspection Results: Corrective Action Required. January 19, 2010.

SPU. 2010e. Source Control Inspection, Re-Inspection Form. Re-Inspection at Hudson Bay Insulation, 5230 5th Avenue S, Seattle. February 1, 2010.

SPU. 2010f. Source Control Inspection, Re-Inspection at Pacific Pile and Marine, 582 S Riverside Drive, Seattle, WA. February 2, 2010.

SPU. 2010g. Letter from Brian Robinson, SPU, to Todd Marker, Marine Lumber Service. Subject: Environmental Compliance Inspection Results: Second and Final Notice. February 17, 2010.

SPU. 2010h. Joint Inspection Program, Sediment Remediation, Initial Inspection at Gourmondo Café & Catering Co., 309 S Cloverdale #B24, Seattle. March 3, 2010.

SPU. 2010i. Letter from Brian Robinson, SPU, to George Eaton, Gourmondo Catering. Subject: Environmental Compliance Inspection Results: Corrective Action Required. March 9, 2010.

SPU. 2010j. Letter from Brian Robinson, SPU, to George Eaton, Gourmondo. Subject: Environmental Compliance re-inspection. March 15, 2010.

SPU. 2010k. Joint Inspection Program, Sediment Remediation, Initial Inspection at Jon's Recycling, 7620 2nd Avenue S, Seattle. June 7, 2010.

SPU. 2010l. Source Control Inspection, Re-Inspection Form, Marine Lumber Service, 525 S Chicago Street, Seattle. July 26, 2010.

SPU. 2010m. Seattle Public Utilities, Source Control Inspection, Re-Inspection Form, Marine Lumber Service, 525 S Chicago Street, Seattle. July 30, 2010.

SPU. 2010n. Seattle Public Utilities Source Control Program for the Lower Duwamish Waterway, December 2010 Progress Report. December 2010.

SPU. 2010o. Joint Inspection Program, Sediment Remediation. Initial Inspection at National Products Inc., 1017 S. Elmgrove St. December 8, 2010.

SPU. 2010p. Letter from Mike Jeffers, SPU, to David Wilkinson, National Products Inc. Subject: Environmental Compliance Inspection and Drainage System Inspection Results for 1017 and 1025 S Elmgrove St. December 13, 2010.

SPU. 2011a. Joint Inspection Program, Lower Duwamish Waterway. Initial Inspection at Modern Machine, 524 S Southern Street, Seattle. May 27, 2011.

SPU. 2011b. Letter from Mike Jeffers, SPU, to Jose Diego Lopez-Sanchez, Modern Machine. Subject: Environmental Compliance Inspection Results: Corrective Action Required. June 3, 2011.

SPU. 2011c. Letter from Mike Jeffers, SPU, to Jim Nye, Modern Machine. Subject: Environmental Compliance Inspection Results: Second and Final Notice. August 5, 2011.

SPU. 2011d. Source Control Inspection, Modern Machine, 524 S Southern Street, Seattle, WA. August 22, 2011.

SPU. 2011e. Source Control Inspection, Modern Machine, 524 S Southern Street, Seattle, WA. August 30, 2011.

SPU. 2011f. Source Control Inspection, Sediment Remediation, Initial Inspection at Meeco Manufacturing Co. Inc., 432 S Cloverdale Street, Seattle, WA. September 28, 2011.

Stewart. 2010. Email from Ellen Stewart, SPU, to Dan Cargill, Ecology. Subject: SPU Inspection Information, August 2009 to September 2010. October 21, 2010.

Struthers. 2000. Seattle Fire Station 26 UST Site Assessment Report. Prepared for The City of Seattle - Executive Services Department by Garry Struthers Associates, Inc. February 10, 2000.

Thomas. Email from Richard Thomas, Ecology, to Allison Hiltner, EPA, and Dan Cargill, Ecology. Subject: RE: Violation on Duwamish River. May 13, 2008.

Tierney Electrical Manufacturing (Tierney Electrical Manufacturing Company). 2001. Letter from Jim Stasak, Tierney, to Ron Devitt, Ecology. Re: Reply on request for Tierney Elec. Mfg. Co. SWPPP, Tierney Permit No. SO3000253C. August 24, 2001.

Tierney Electrical Manufacturing. 2011. Company website for Tierney Electrical Manufacturing Company: www.tierneytransformer.com. Accessed on October 3, 2011.

Tiffany. 2008. Comments from Bruce Tiffany, KCIW, regarding the Lower Duwamish Waterway, RM 1.7-2.0 East (Slip 2-3) Summary of Existing Information and Identification of Data Gaps Draft Report. September 30, 2008.

Tiffany. 2010. Email from Bruce Tiffany, King County, to Sarah Mansfield, Ecology. Re: Terminal 115 Data Gaps Report – Additional Drainage Basin Information Needed. February 17, 2010.

Tiffany. 2012a. Comments from Bruce Tiffany, KCIW, regarding the Lower Duwamish Waterway, RM 2.2-3.4 West (Riverside Drive) Summary of Existing Information and Indentification of Data Gaps Draft Report. January 27, 2012.

Tiffany. 2012b. Comments from Bruce Tiffany, KCIW, regarding the Lower Duwamish Waterway, RM 2.2-3.4 West (Riverside Drive) Summary of Existing Information and Indentification of Data Gaps Draft Report. March 23, 2012.

Tiffany. 2012c. Email from Bruce Tiffany, KCIW, to Megan Gay, SAIC. RE: Outfall 3037 – Riverside Drive Data Gaps. April 4, 2012.

Unity Electric. 2011. Unity Electric website: www.unityelectric.com. Accessed on August 9, 2011.

USACE (U.S. Army Corp of Engineers). 1983. Public Notice of Application for Permit. Applicant, Hurlen Construction Company. December 22, 1983.

USEPA (U.S. Environmental Protection Agency). 2002. Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites. OSWER Directive 9285.6-08. U.S. Environmental Protection Agency. February 12, 2002.

Washington Liftruck. 2011. Washington Liftruck website: http://www.washingtonlift.com/. Accessed on September 9, 2011.

West Coast Wire (West Coast Wire Rope & Rigging). 1995a. Letter from Timothy Heath, West Coast Wire Rope & Rigging, to James Krull, Ecology. Re: Unable to comply with SWPPP. September 12, 1995.

West Coast Wire. 1995b. Renewal Application for Coverage under Ecology's Baseline General Permit for Discharge of Stormwater Associated with Industrial Activity. September 18, 1995.

West Coast Wire. 2001. Stormwater Pollution Prevention Plan, Permit Number SO3-002111. October 10, 2001.

West Coast Wire. 2011. Company website for West Coast Wire Rope & Rigging. Retrieved on November 7, 2011 from www.wcwr.

Westec Industries. 2002. Letter from Tom Rogers, Westec Industries, to Victoria Sutton, Ecology. Subject: Dangerous Waste Compliance Inspection at Westec Industries, Inc. RCRA ID# WAD988476271 on December 13, 2001, Implemented Corrective Actions. June 12, 2002.

Weston (Roy F. Weston, Inc.). 1999. Site inspection report: Lower Duwamish River, RM 2.5-11.5, Volume 1 – Report and appendices. Prepared by Roy F. Weston, Inc., for U.S. Environmental Protection Agency Region 10, Seattle, WA.

Wilkinson. 2007. Email from David Wilkinson, National Products Inc., to Tasha Bassett, SPU. Subject: 1017 S Elmgrove St. December 26, 2007.

Windward (Windward Environmental LLC). 2003. Phase 1 Remedial Investigation Report, Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. July 3, 2003.

Windward. 2004. Lower Duwamish Waterway Data Report: Survey and Sampling of Lower Duwamish Waterway Seeps Final. November 18, 2004.

Windward. 2005a. Lower Duwamish Waterway Remedial Investigation: Chemical Analyses of Benthic Invertebrate and Clam Tissue Samples and Co-Located Sediment Samples Final, Prepared by Windward Environmental. May 20, 2005.

Windward. 2005b. Data Report: Round 1 Surface Sediment Sampling for Chemical Analyses and Toxicity Testing, Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. October 21, 2005.

Windward. 2005c. Data Report: Round 2 Surface Sediment Sampling for Chemical Analyses and Toxicity Testing, Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. December 9, 2005.

Windward. 2007a. Data Report: Subsurface Sediment Sampling for Chemical Analyses, Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. January 29, 2007.

Windward. 2007b. Data Report: Round 3 Surface Sediment Sampling for Chemical Analyses, Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. March 12, 2007.

Windward. 2010a. Lower Duwamish Waterway Remedial Investigation. Technical Memorandum: 2009/2010 Surface Sediment Sampling Results for Dioxins and Furans and Other Chemicals. Prepared by Windward Environmental LLC for the U.S. Environmental Protection Agency and the Washington State Department of Ecology. May 21, 2010.

Windward. 2010b. Lower Duwamish Waterway Remedial Investigation Report. Final. Prepared by Windward Environmental LLC for the Lower Duwamish Waterway Group. July 9, 2010.

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Figures

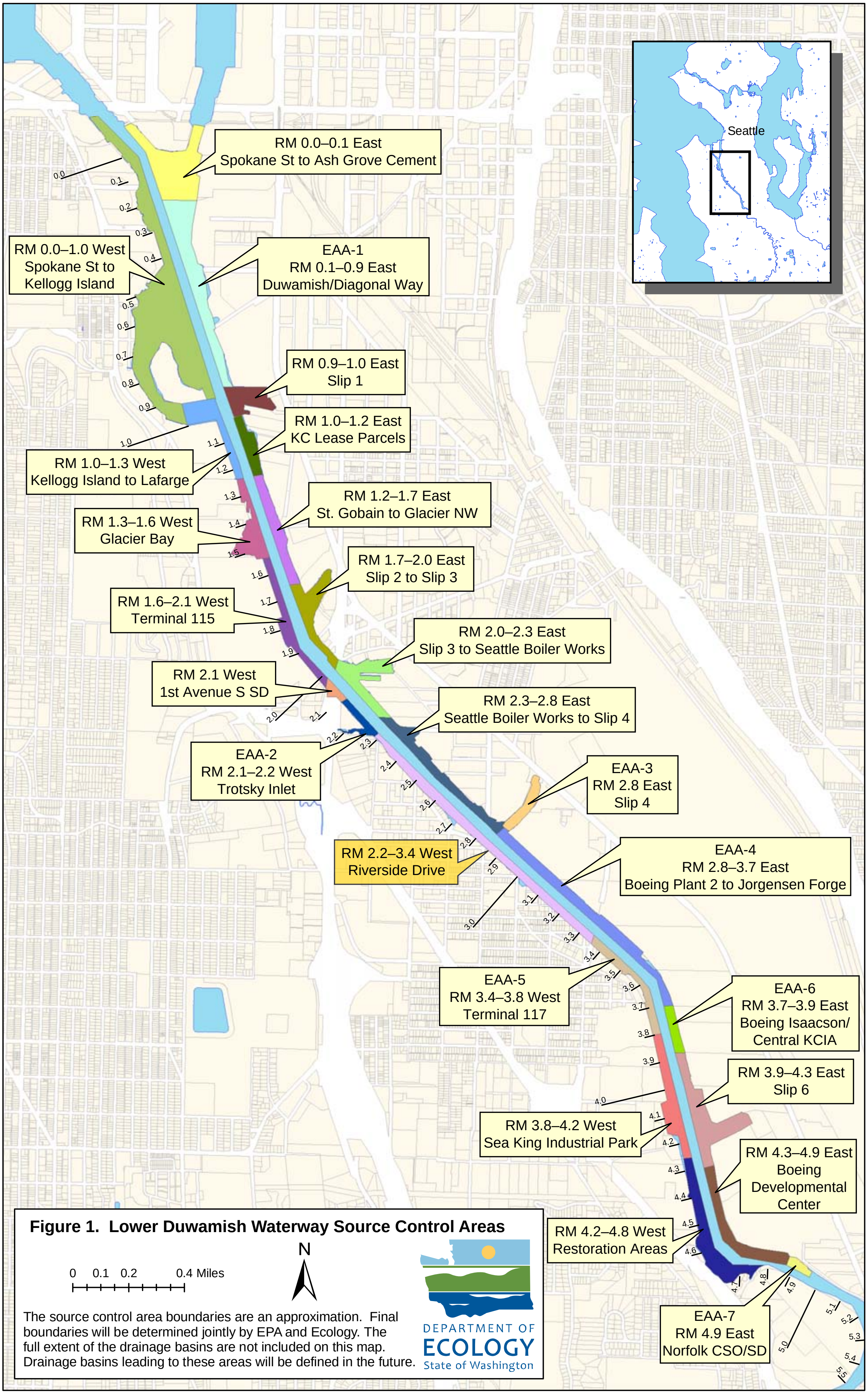
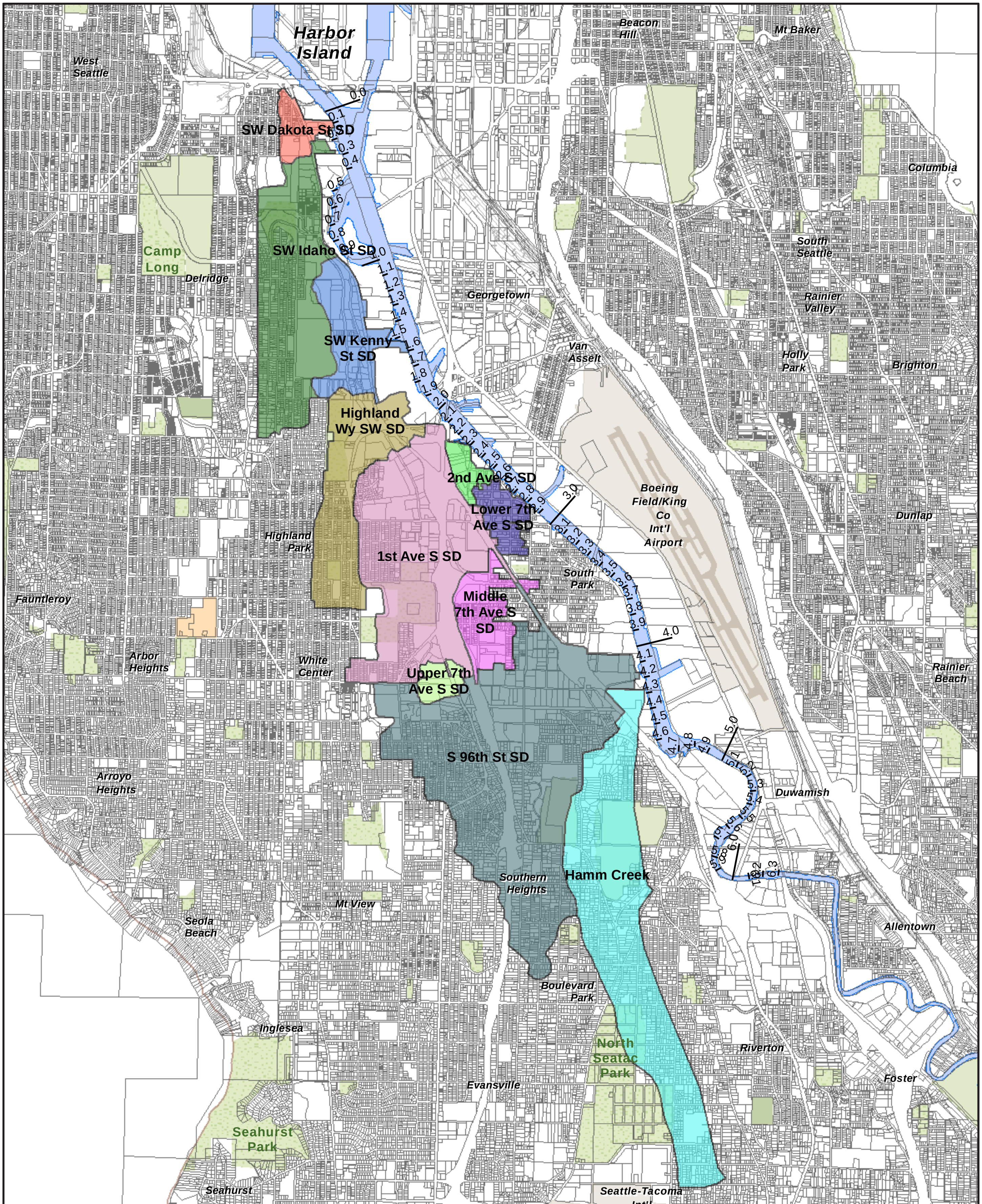


Figure 1. Lower Duwamish Waterway Source Control Areas

The source control area boundaries are an approximation. Final boundaries will be determined jointly by EPA and Ecology. The full extent of the drainage basins are not included on this map. Drainage basins leading to these areas will be defined in the future.



DEPARTMENT OF ECOLOGY
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Figure 2. Lower Duwamish Waterway Storm Drain Basins — West Side

0 2,800 5,600 Feet

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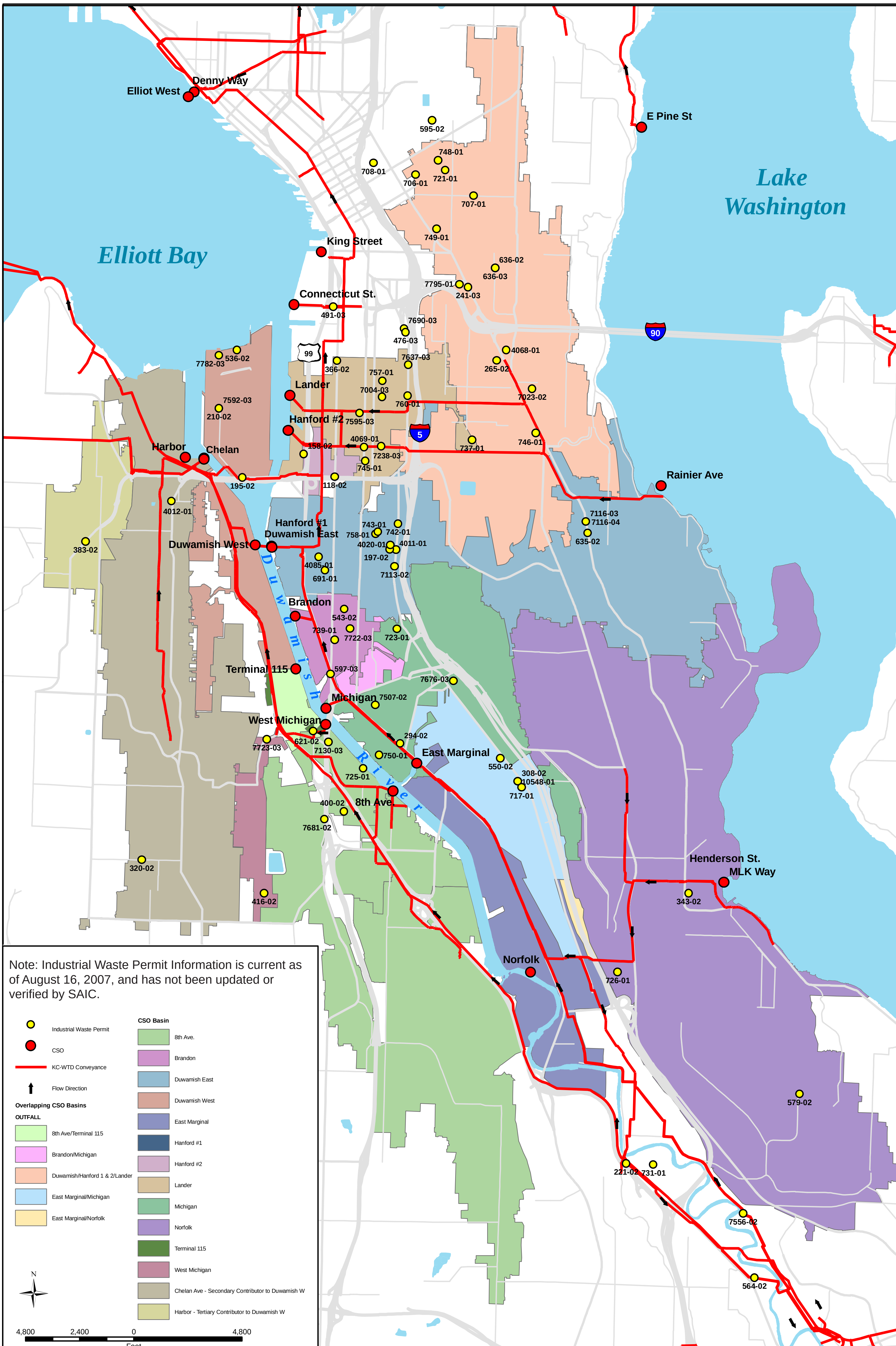

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

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File Name: Q:\Projects\WTD/Projects\DiagDuam\Graphics\LDWCSOBasins.pdf - Alyssa Benson 08/16/07

Source: King County 2007

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State of Washington

Figure 3. Lower Duwamish Waterway — King County Combined Sewer Overflow Basins

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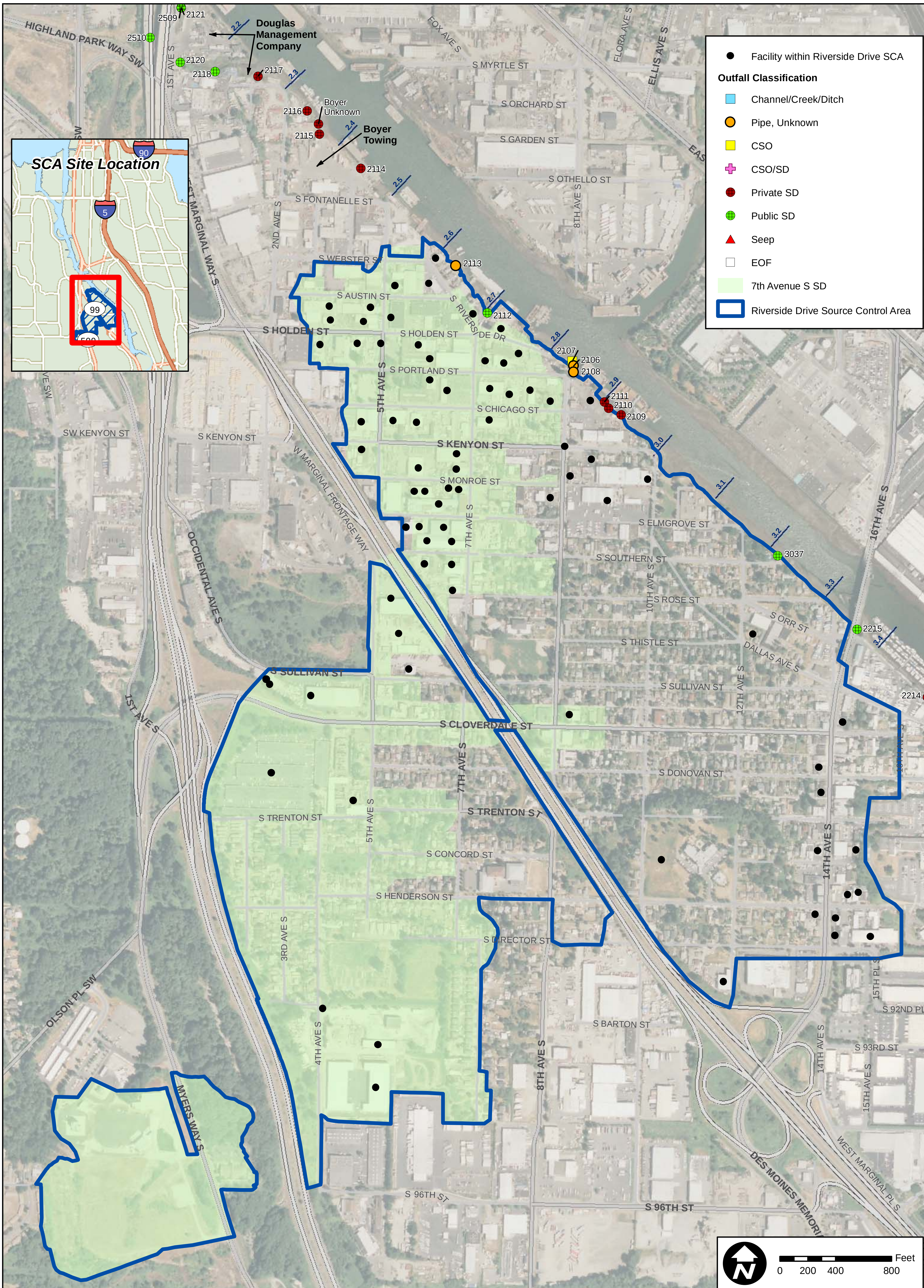

Figure 4a. Riverside Drive Source Control Area

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Coordinate System:
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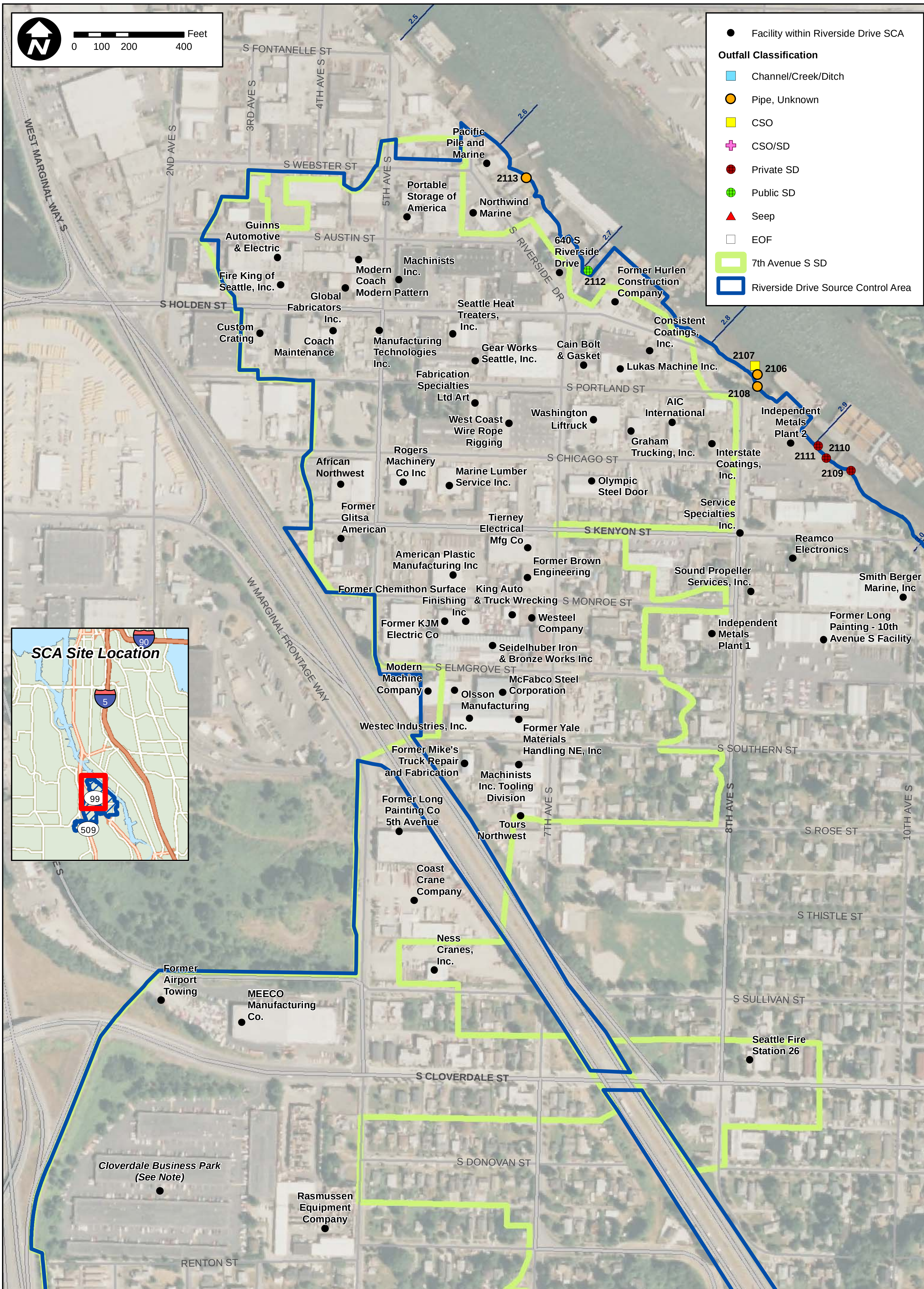
Prepared By: mlf
File: Fig-4a_Riverside Drive Source Control Area.mxd
Illustrative purposes only.



DEPARTMENT OF ECOLOGY
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Figure 4b. Riverside Drive Source Control Area – Northern Portion

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Coordinate System:
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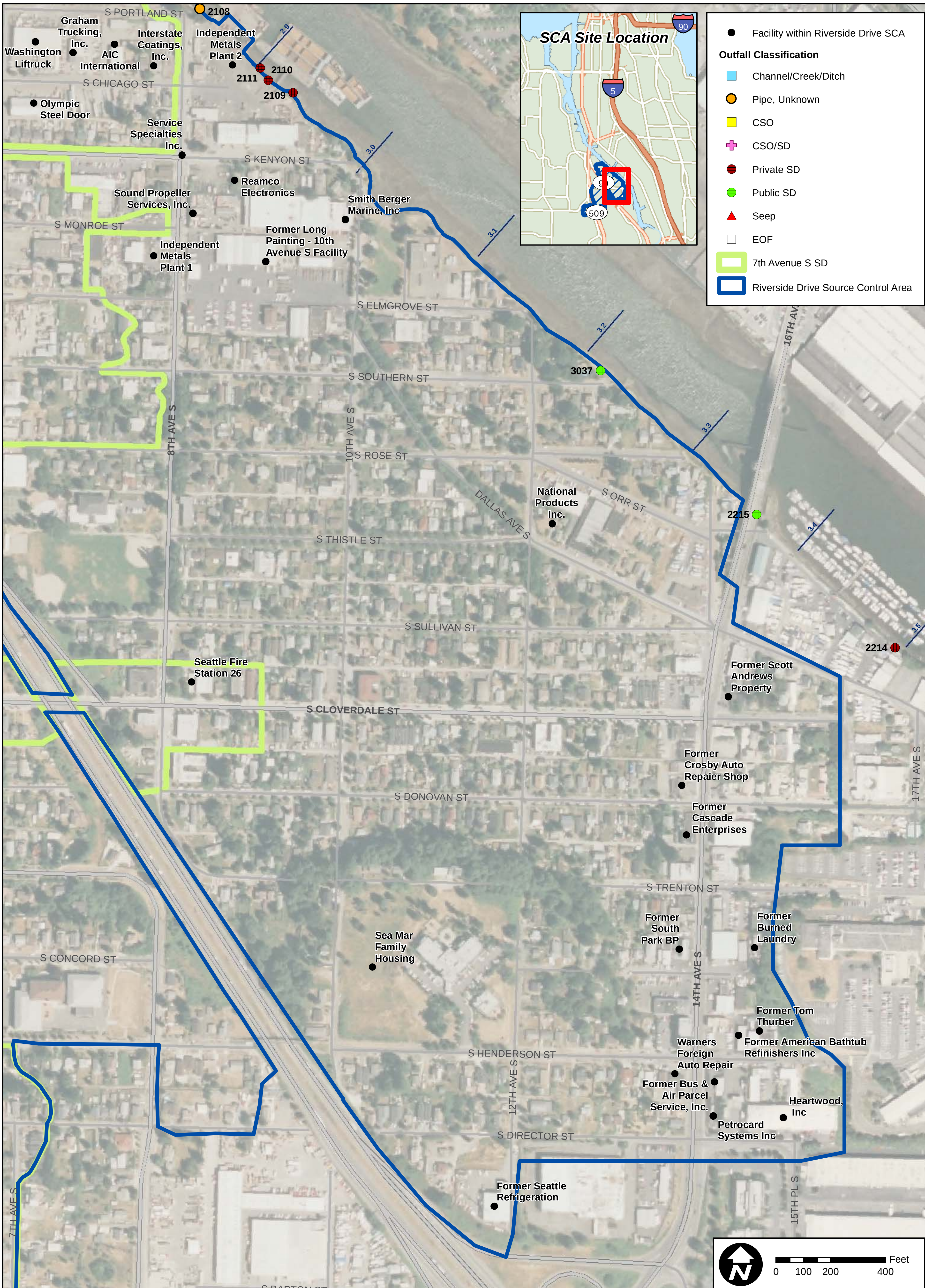
Prepared by: mlf
File: Fig-4_Riverside Drive Source Control Area.mxd
Illustrative purposes only.



DEPARTMENT OF ECOLOGY
State of Washington

Figure 4c. Riverside Drive Source Control Area – Southeastern Portion

SAIC
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Coordinate System:
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Prepared By: mlf
File: Fig-4_Riverside Drive Source Control Area.mxd
Illustrative purposes only.

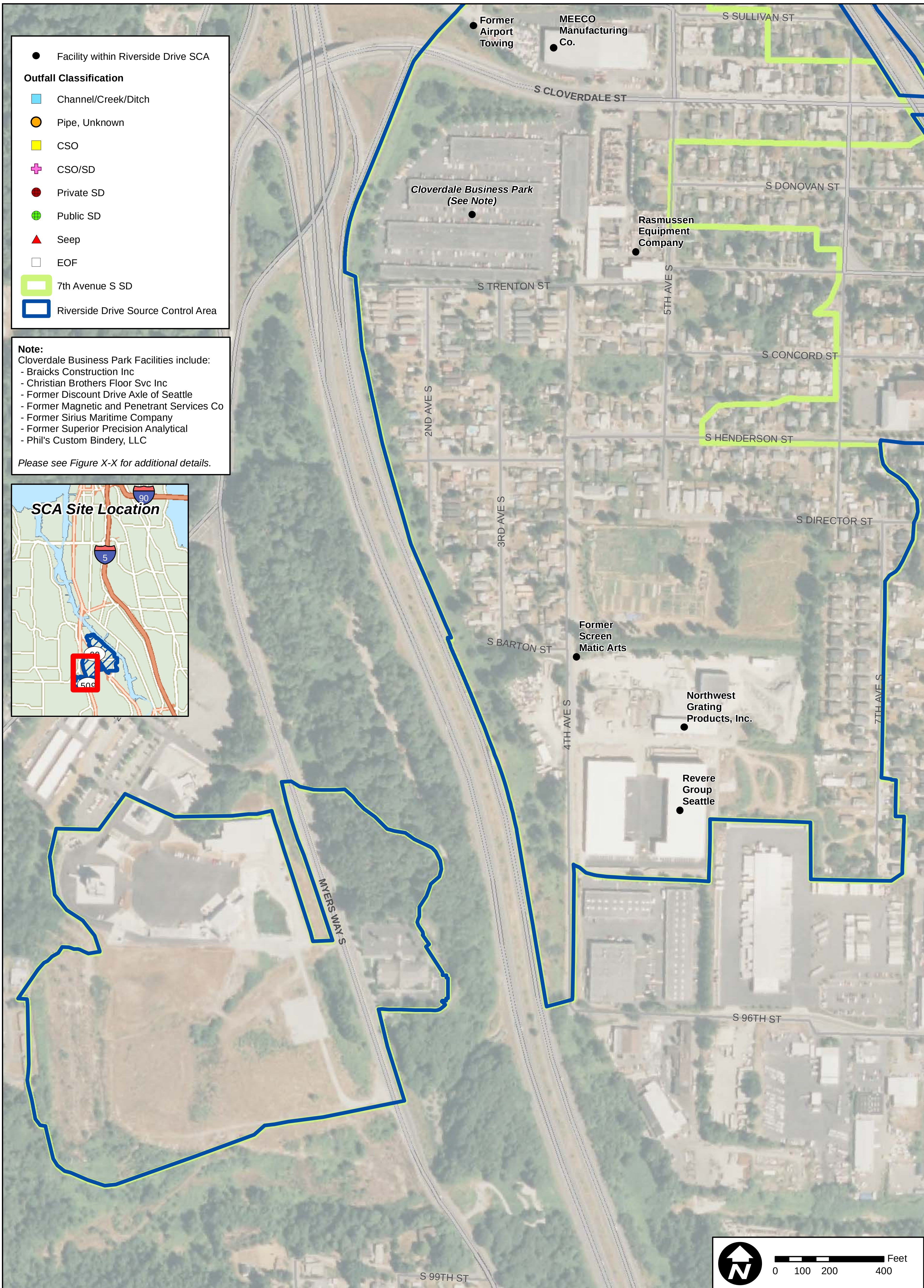

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Figure 4d. Riverside Drive Source Control Area – Southwestern Portion

SAIC From Science to Solutions

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Prepared By: mlf
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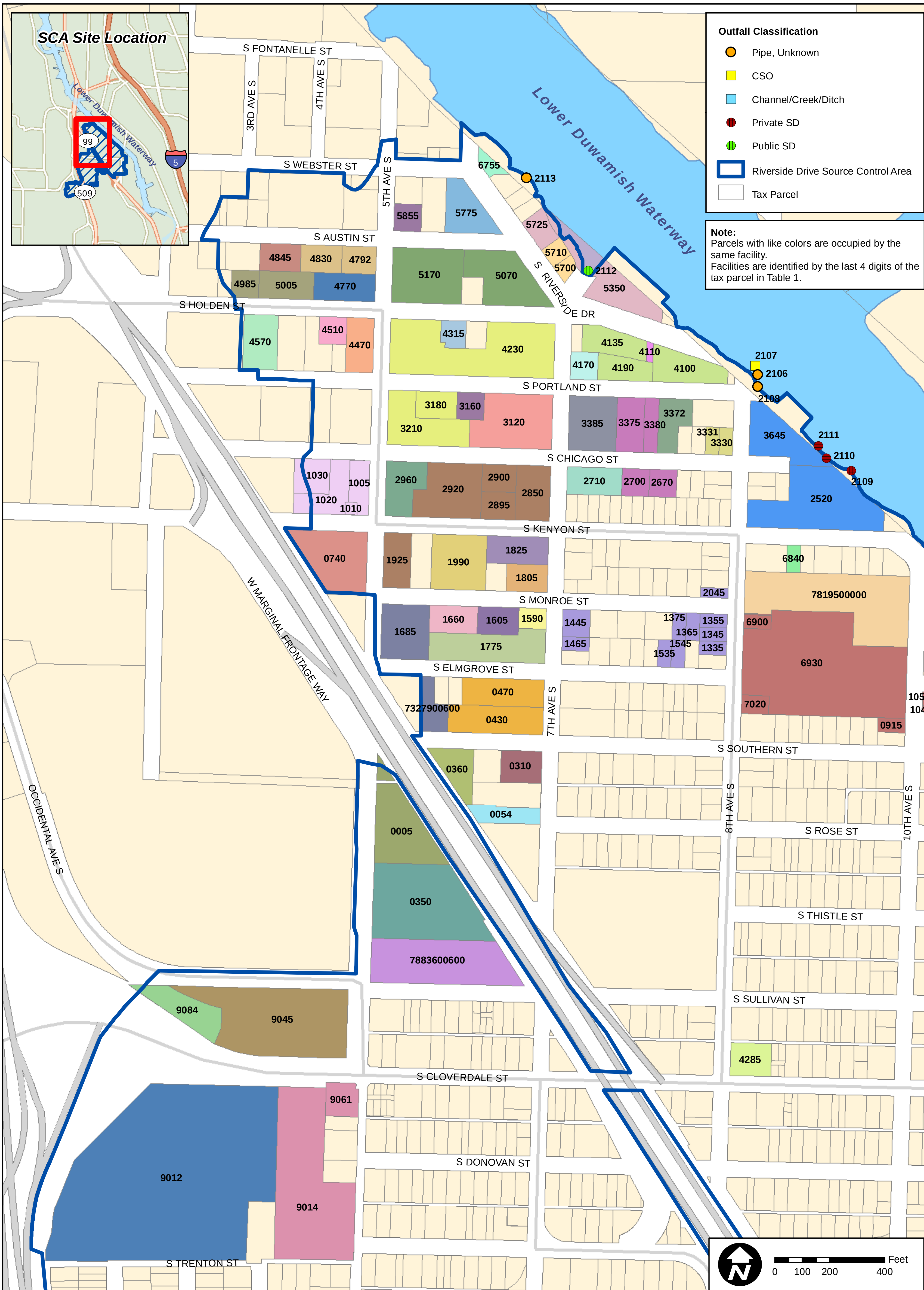

Figure 5a. Riverside Drive Source Control Area Tax Parcels – Northern Portion

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SAIC From Science to Solutions

Coordinate System:
NAD 1983 StatePlane Washington North FIPS 4601 Feet
Prepared By: mlf
File: Fig-5_Tax_Parcel_Map.mxd
Illustrative purposes only.

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State of Washington

Figure 5b. Riverside Drive Source Control Area Tax Parcels – Southeastern Portion

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Coordinate System:
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Prepared By: mlf
File: Fig-5_Tax_Parcel_Map.mxd
Illustrative purposes only.

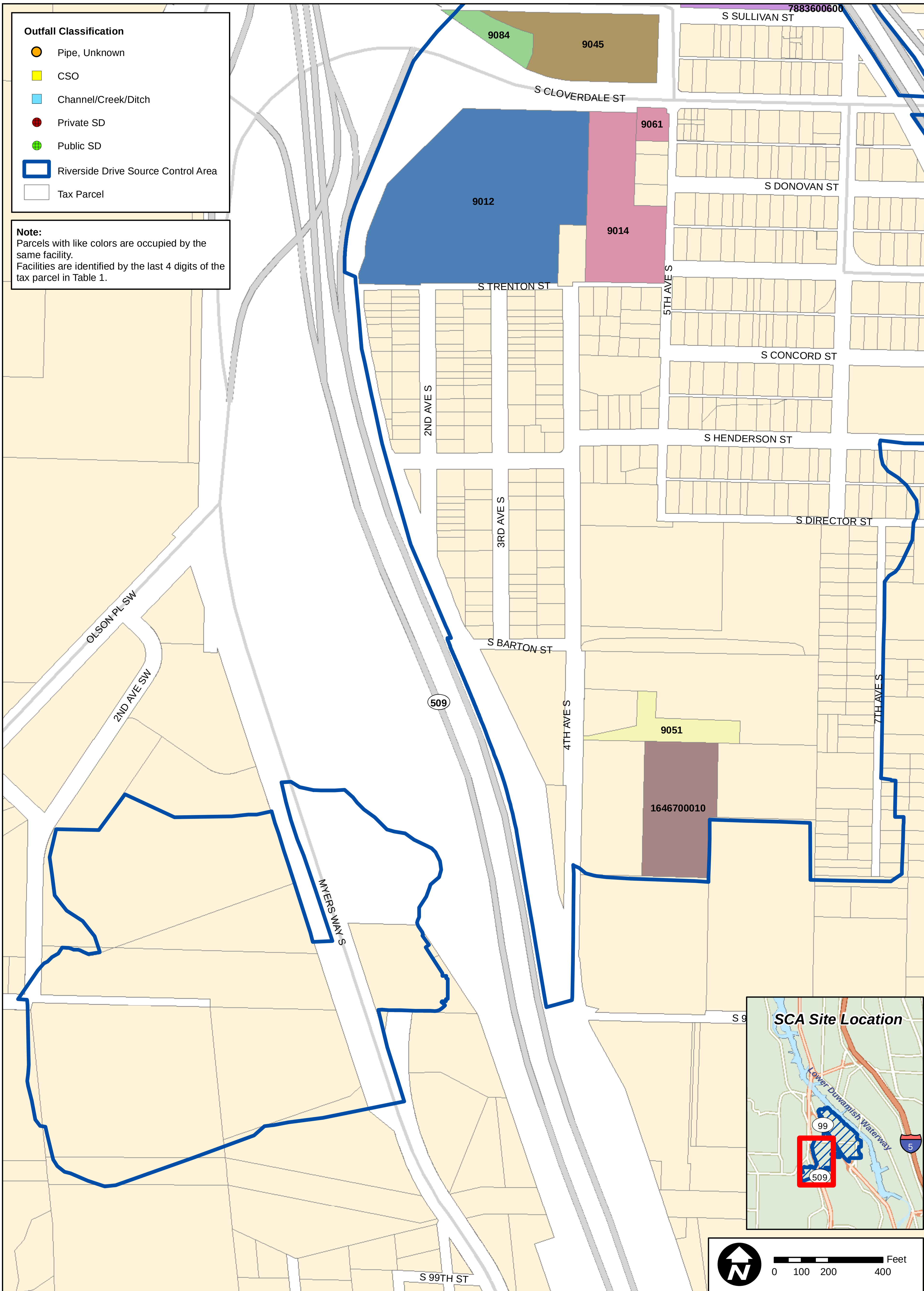

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Figure 5c. Riverside Drive Source Control Area Tax Parcels – Southwestern Portion

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Prepared By: mlf
File: Fig-5_Tax_Parcel_Map.mxd
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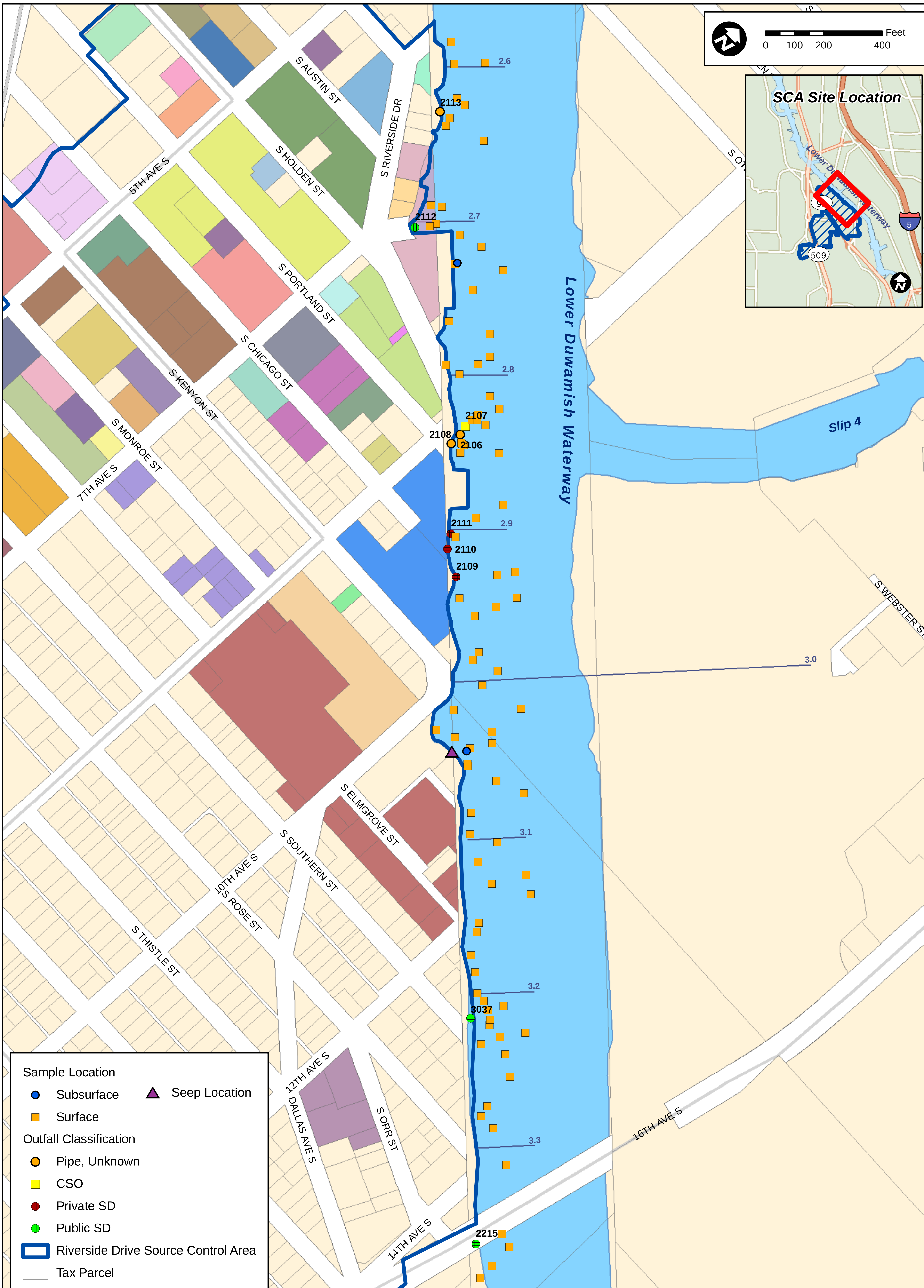

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Figure 6a. Sediment Sample Locations Near the Riverside Drive Source Control Area (RM 2.6–3.4 W)

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Coordinate System:
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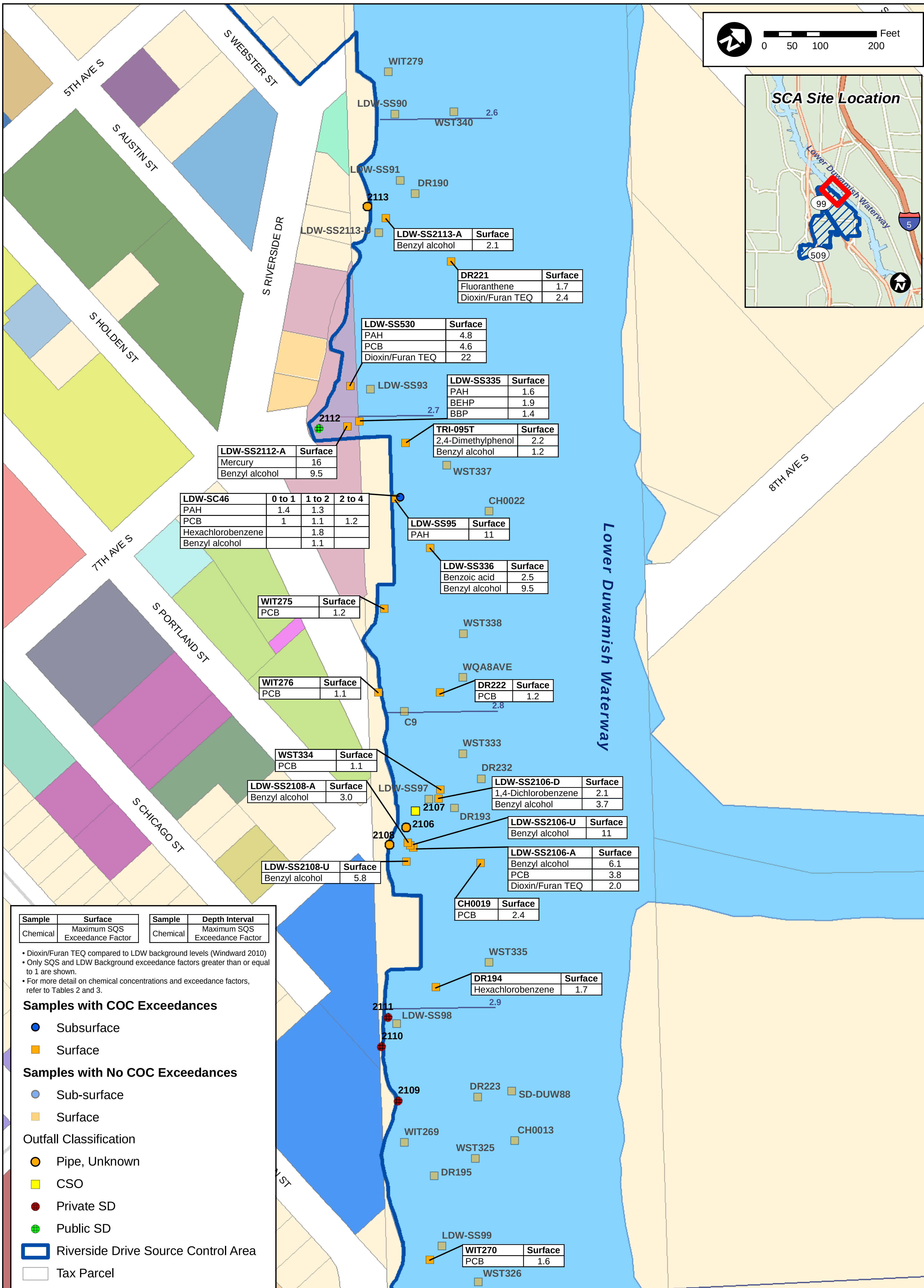
Prepared By: mlf
File: Fig-6a_Sediment_Sampling_Data.mxd
Illustrative purposes only.



DEPARTMENT OF ECOLOGY
State of Washington

Figure 6b. Sediment Sample Locations Near the Riverside Drive Source Control Area with Chemicals Detected Above Screening Levels (RM 2.6–3.0 W)

SAIC
From Science to Solutions

Coordinate System:
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Prepared By: mlf
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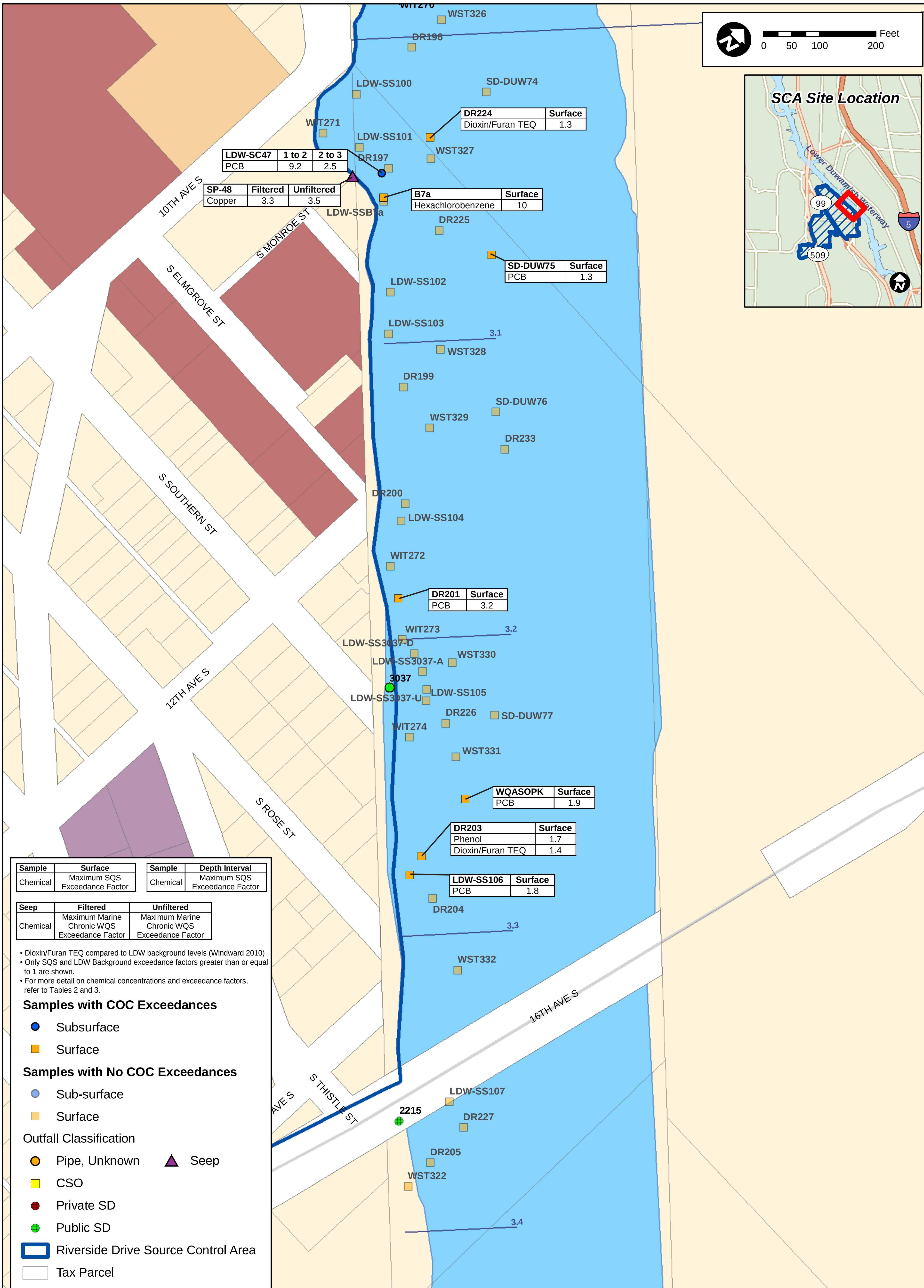
Illustrative purposes only.



DEPARTMENT OF ECOLOGY State of Washington

Figure 6c. Sediment Sample Locations Near the Riverside Drive Source Control Area with Chemicals Detected Above Screening Levels (RM 3.0–3.4 W)

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Coordinate System:
NAD 1983 StatePlane Washington North FIPS 4601 Feet
Prepared By: mlf
File: Fig-6c_Sediment_Sampling_Data.mxd
Illustrative purposes only.

Source: SPU 2010n

Figure 7a. Storm Drain Sample Locations, Riverside Drive Source Control Area, 2005 to Spring 2010

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State of Washington

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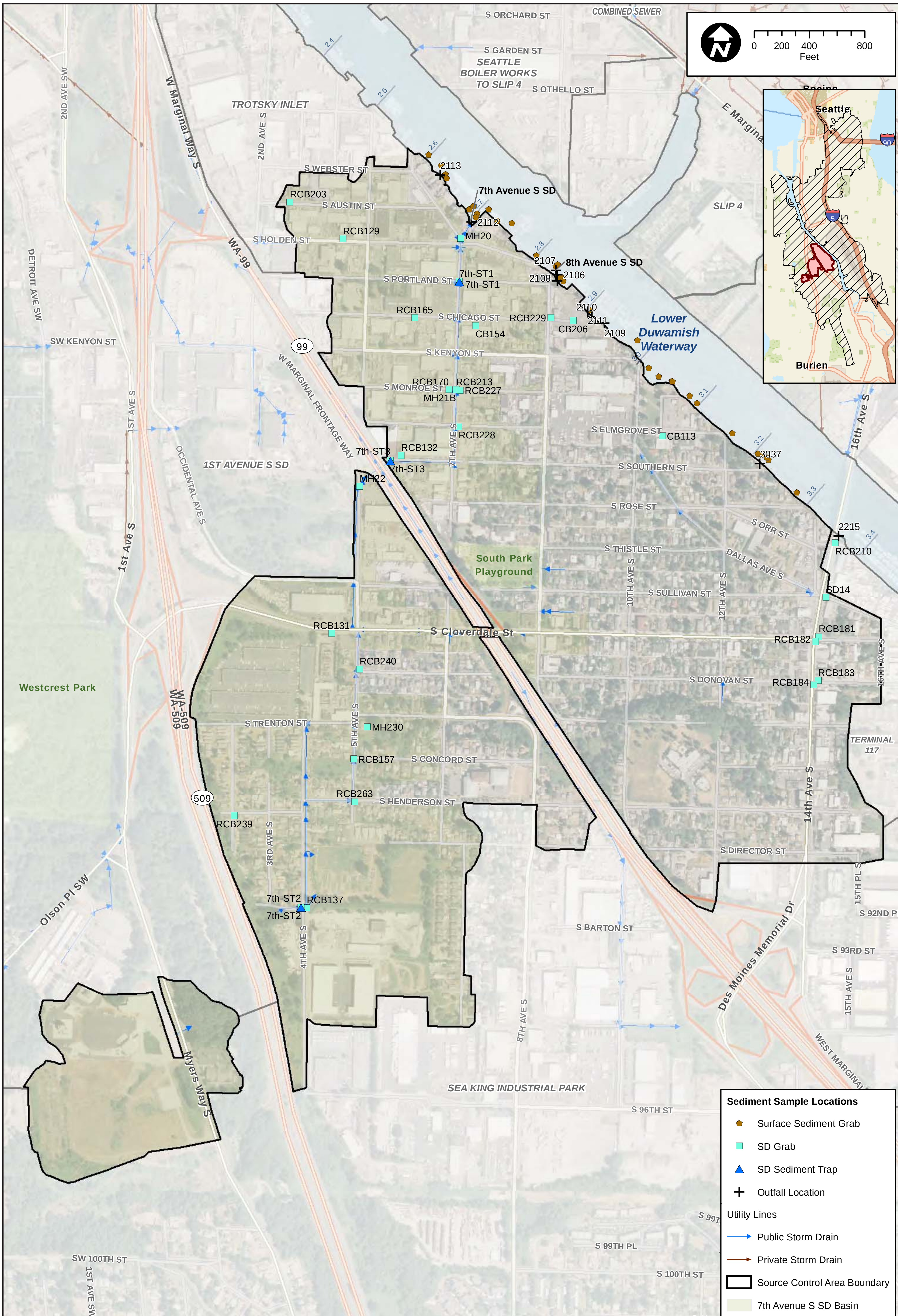

Figure 7b. Storm Drain Sample Locations, Riverside Drive Source Control Area, Fall 2010 to Spring 2011

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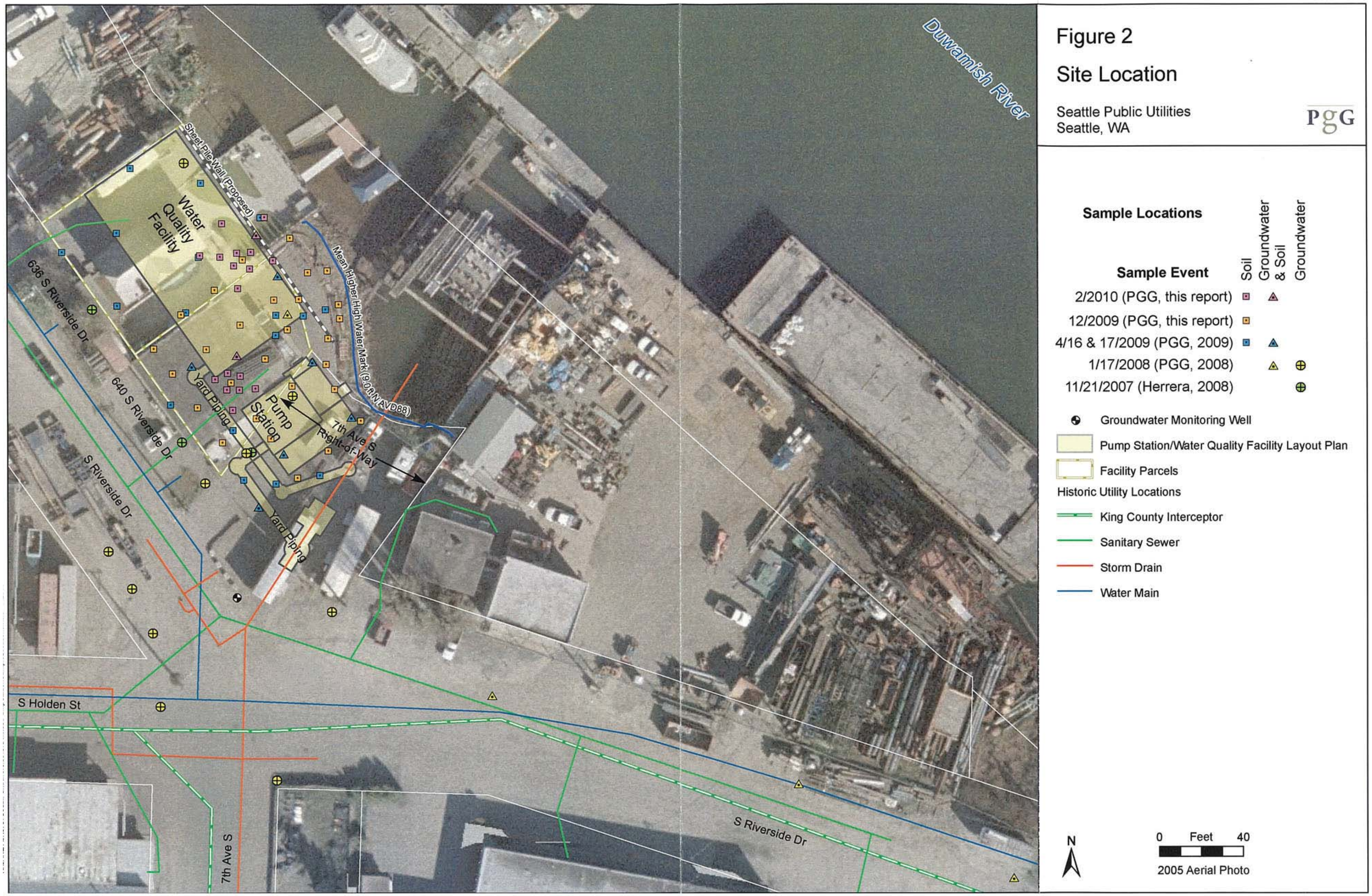
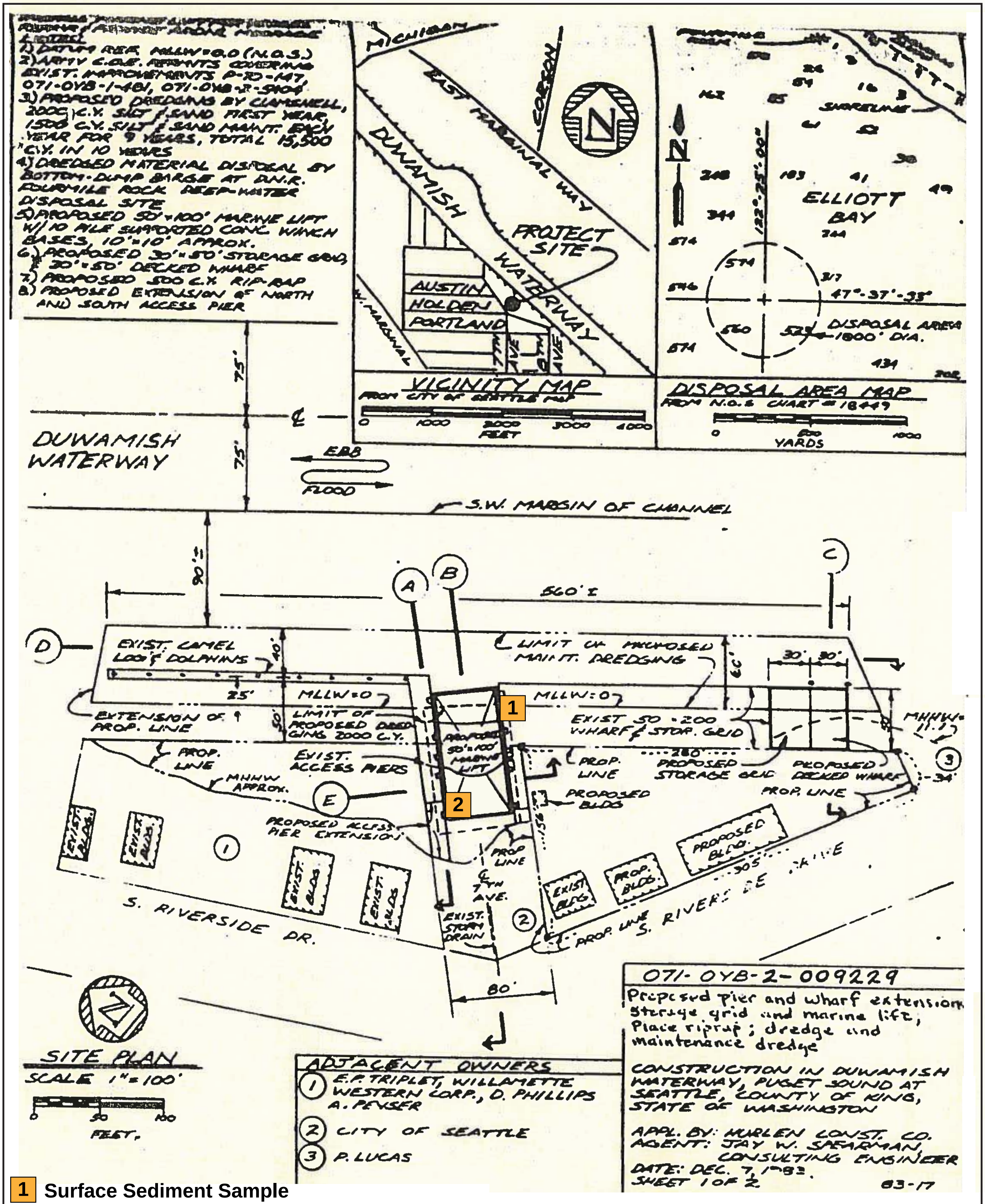
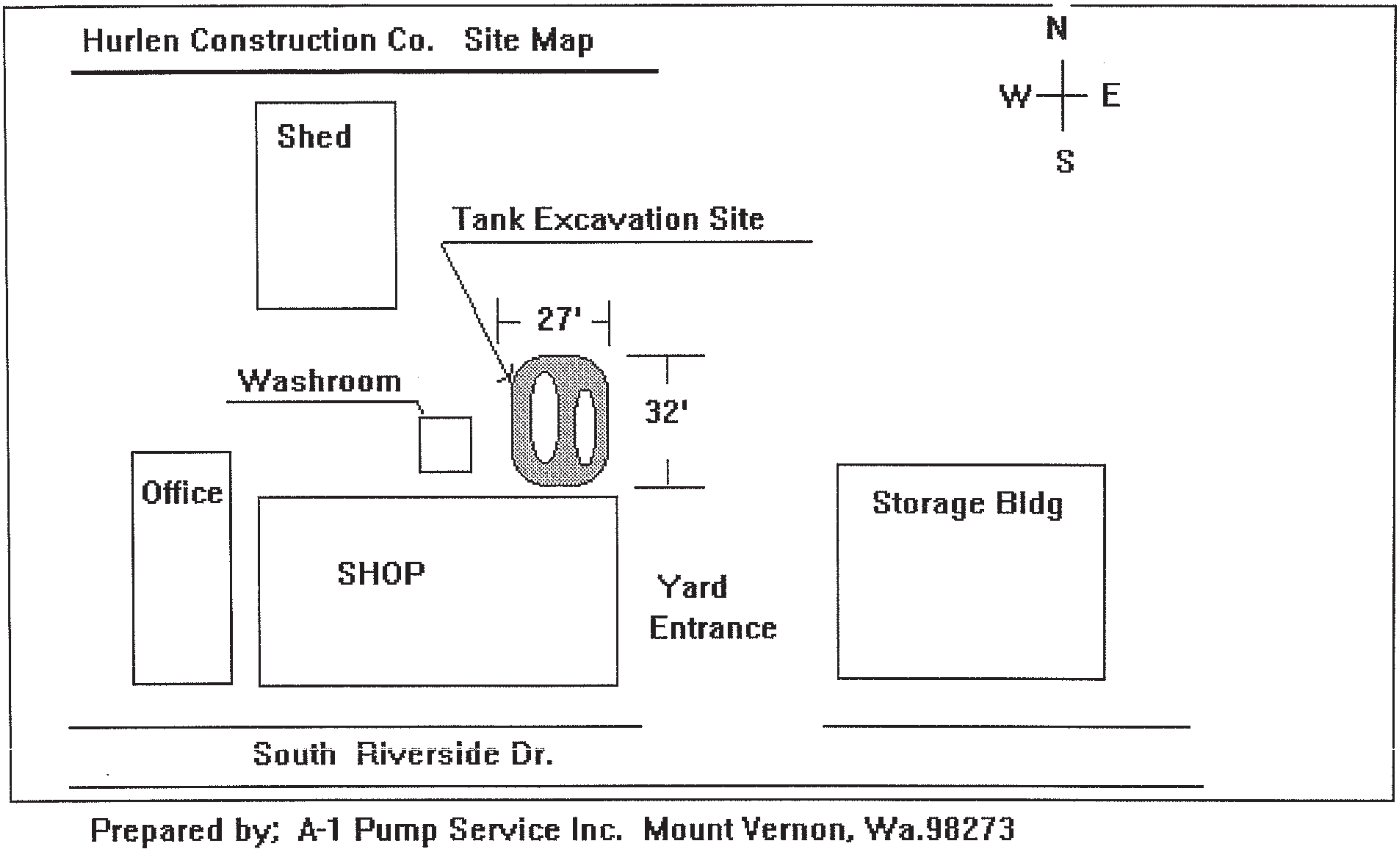


Figure 8. 640 S Riverside Drive Facility Map and Historical Sample Locations



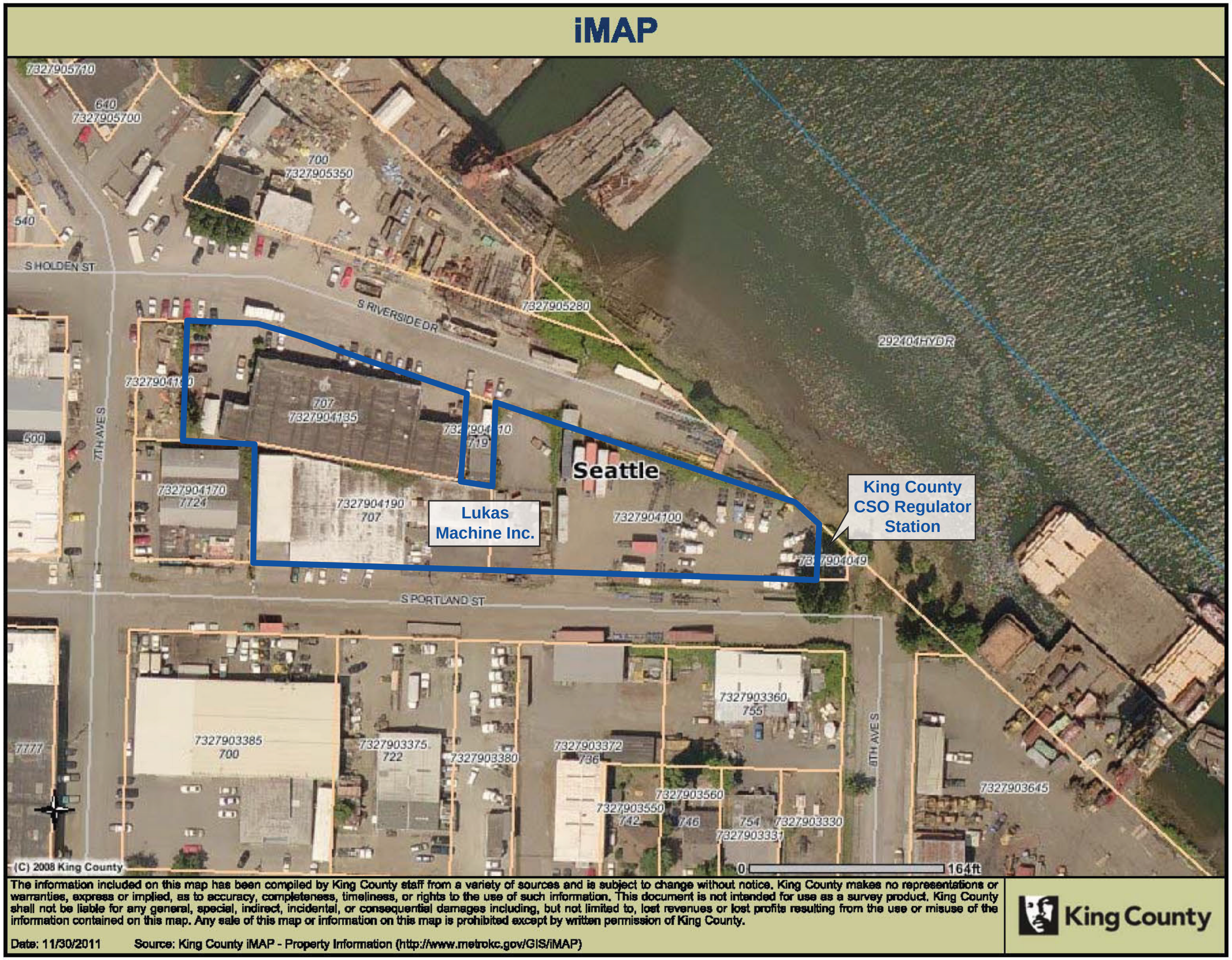
Source: Laucks 1984

Figure 9. Hurlen Construction Company Facility Map and Historical Sample Locations



Source: A-1 Pump 1993

Figure 10. Hurlen Construction Company UST Site Map



Source: King County 2011

Figure 11. Lukas Machine Inc. Facility Map

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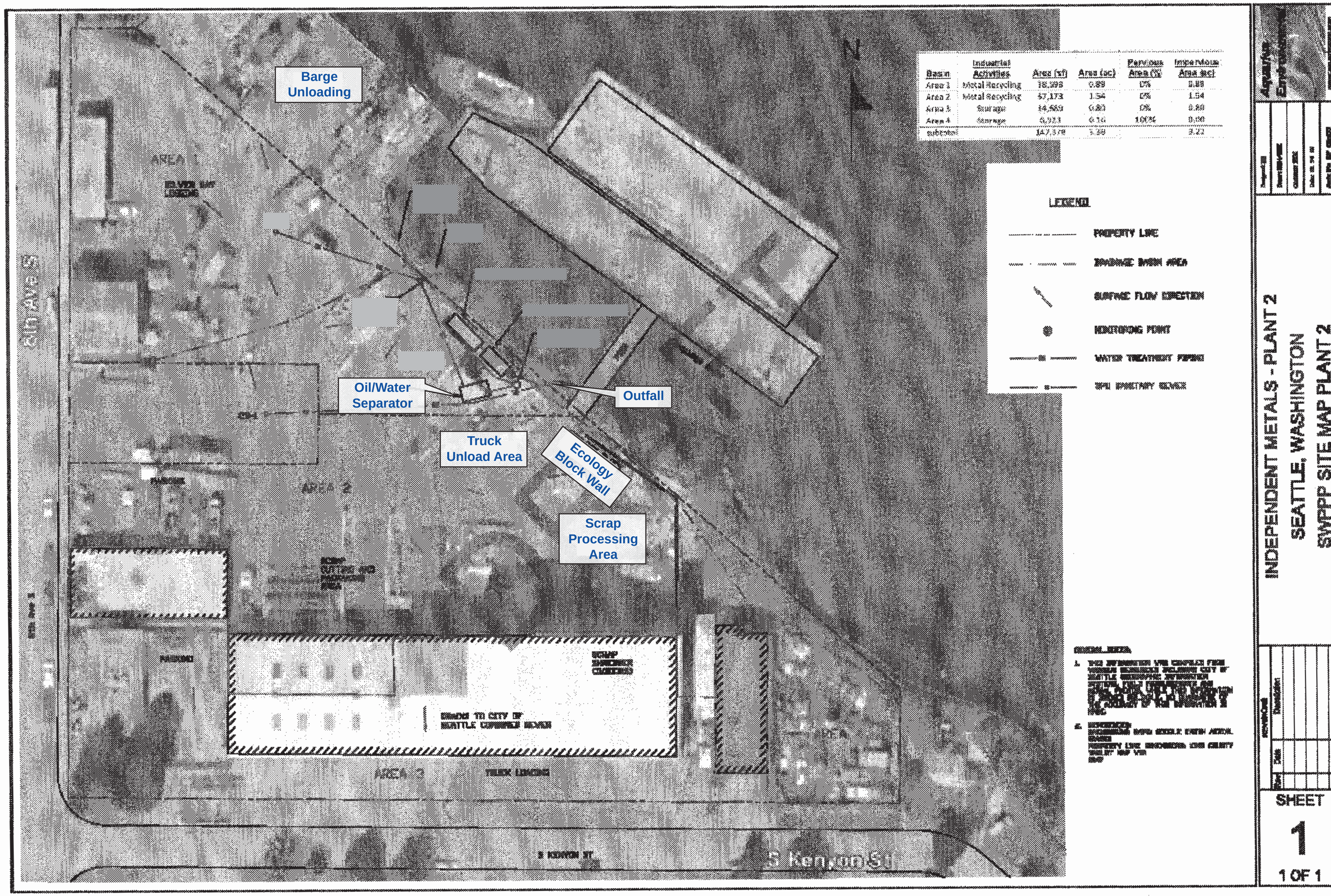
Appendix B Site Map



Source: Nisqually 2010b

Figure 12. Independent Metals Plant 2 SWPPP Facility Map

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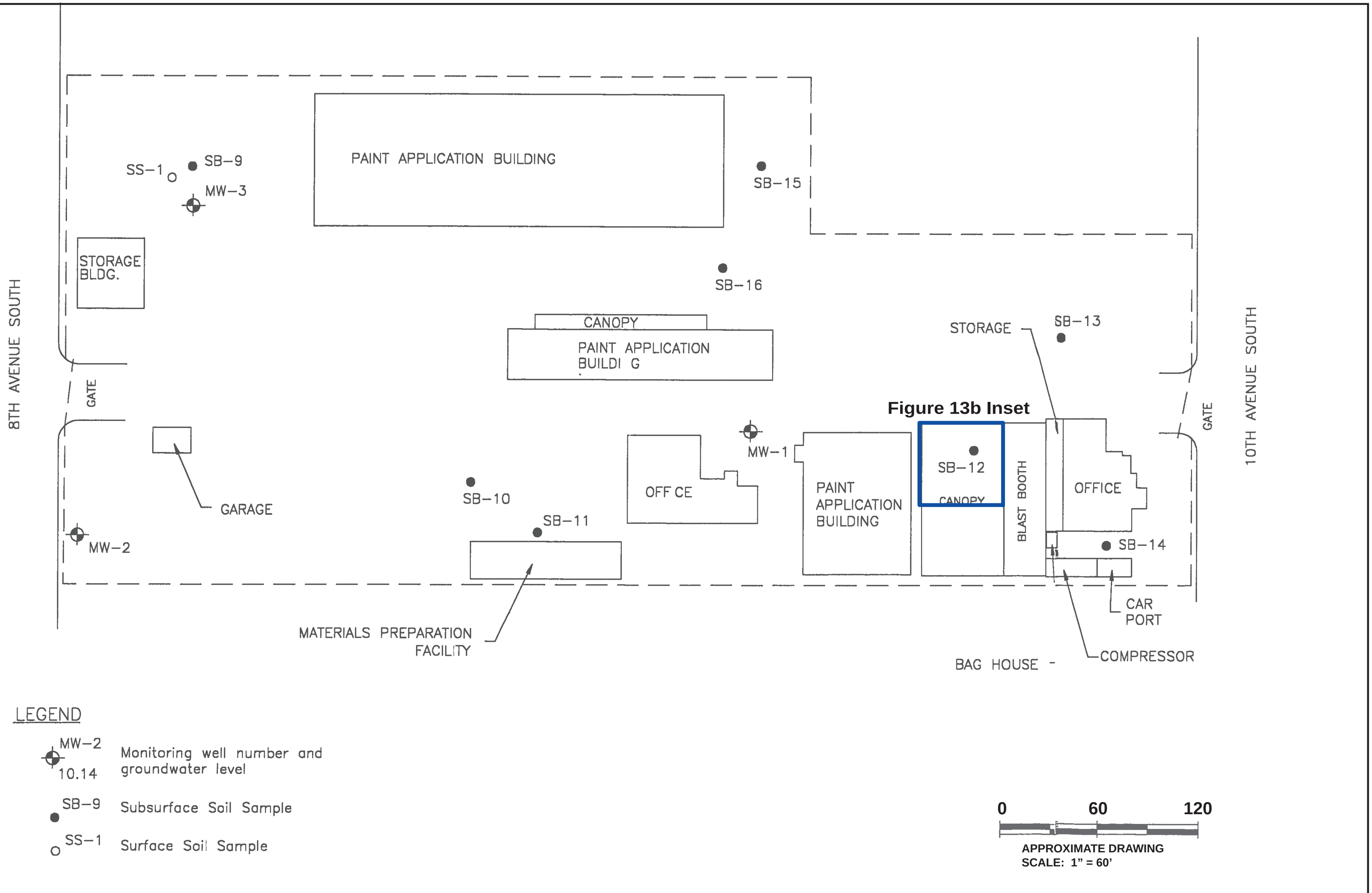

Sources: AGRA 1997b; Kleinfelder 2000c, 2002

Figure 13a. Former Long Painting – 10th Avenue S Facility Map and Historical Sample Locations

DEPARTMENT OF ECOLOGY State of Washington

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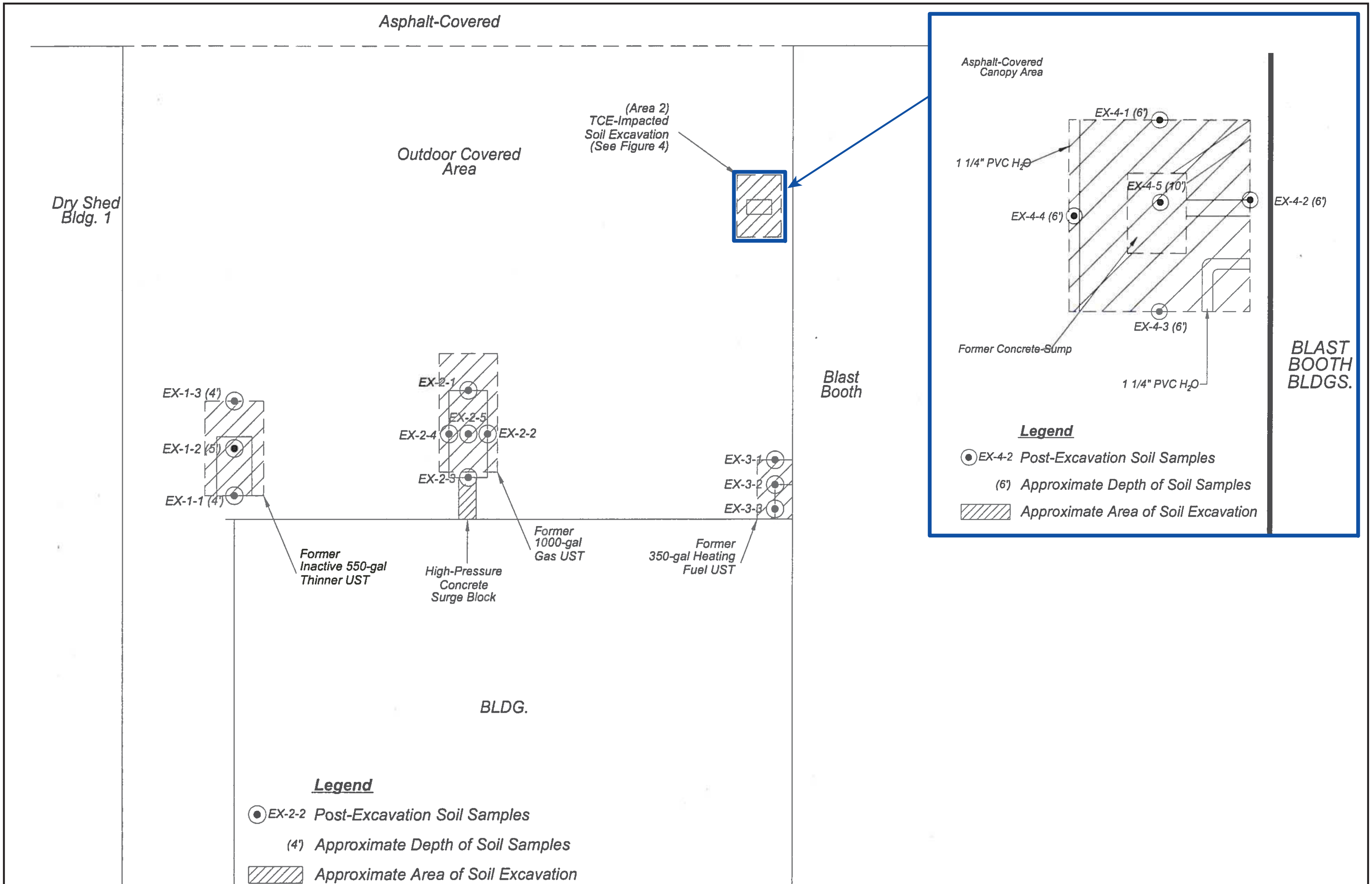
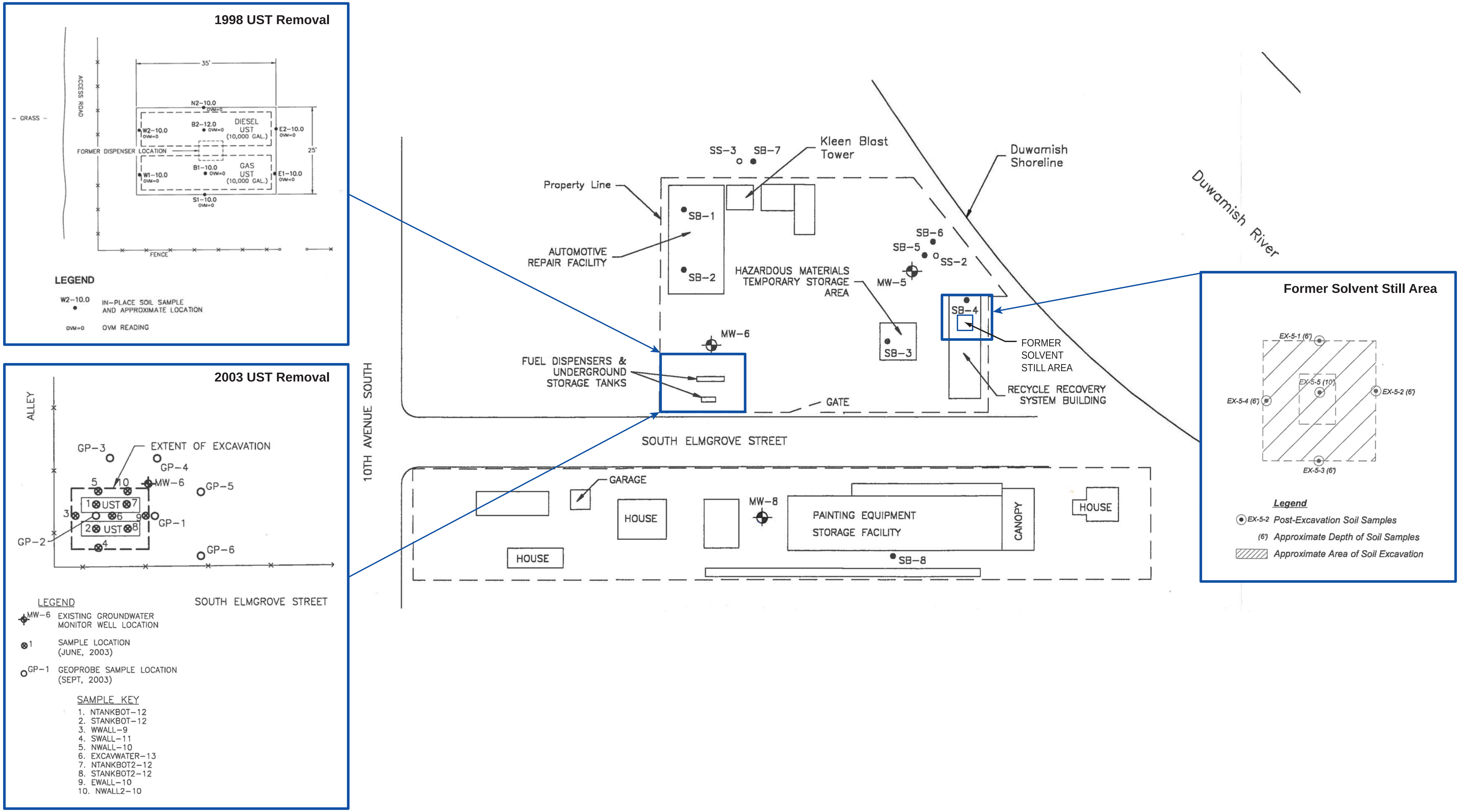


Sources: AGRA 1997b; Kleinfelder 2002

Figure 13b. Former Long Painting – 10th Avenue S Facility Map and Historical Sample Locations

DEPARTMENT OF ECOLOGY State of Washington

SAIC From Science to Solutions

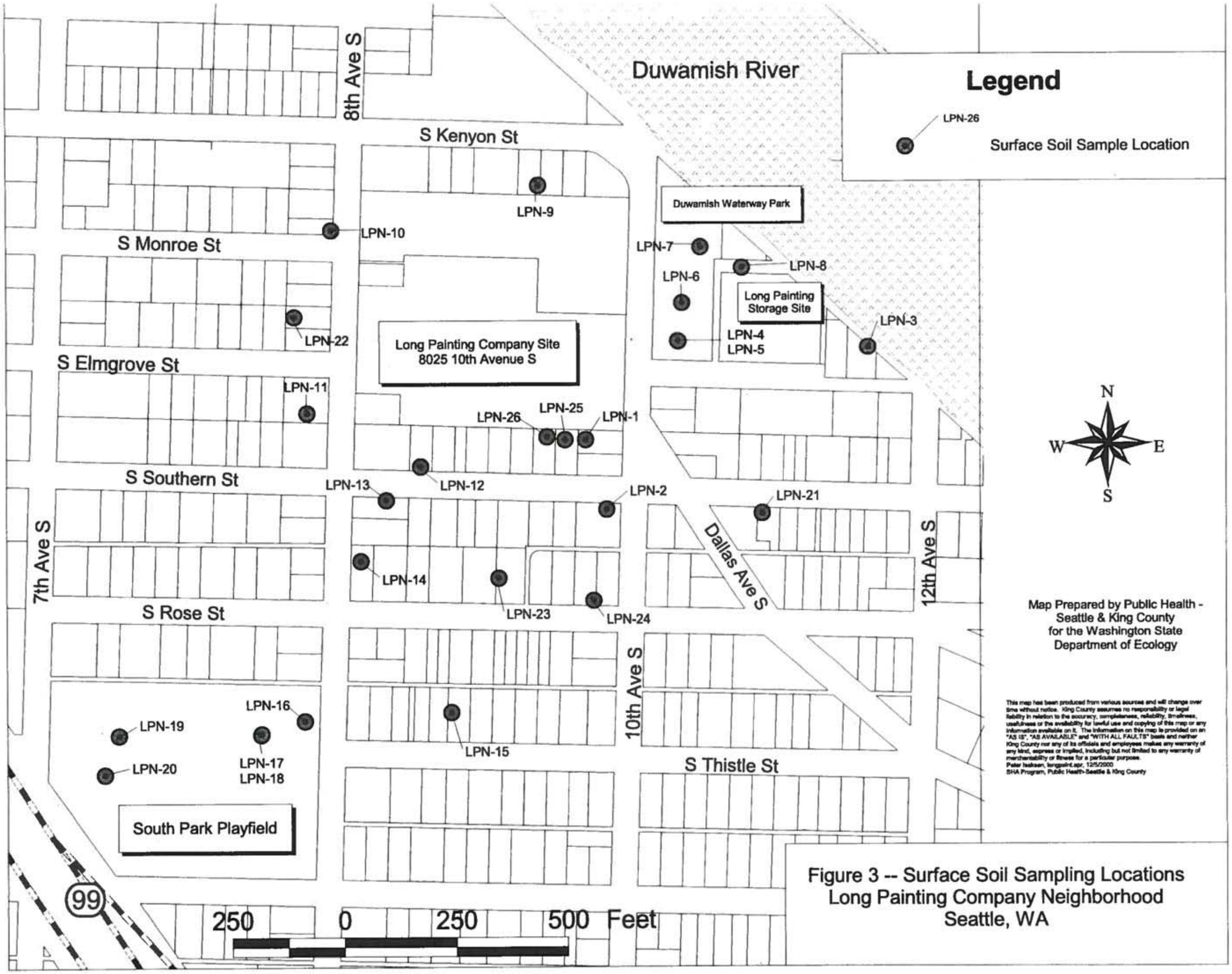


Sources: AGRA 1988; Kleinfelder 2000c, 2002; RETEC 2003b

Figure 14. Former Long Painting – 10th Avenue S Facility Site Map and Historical Sample Locations

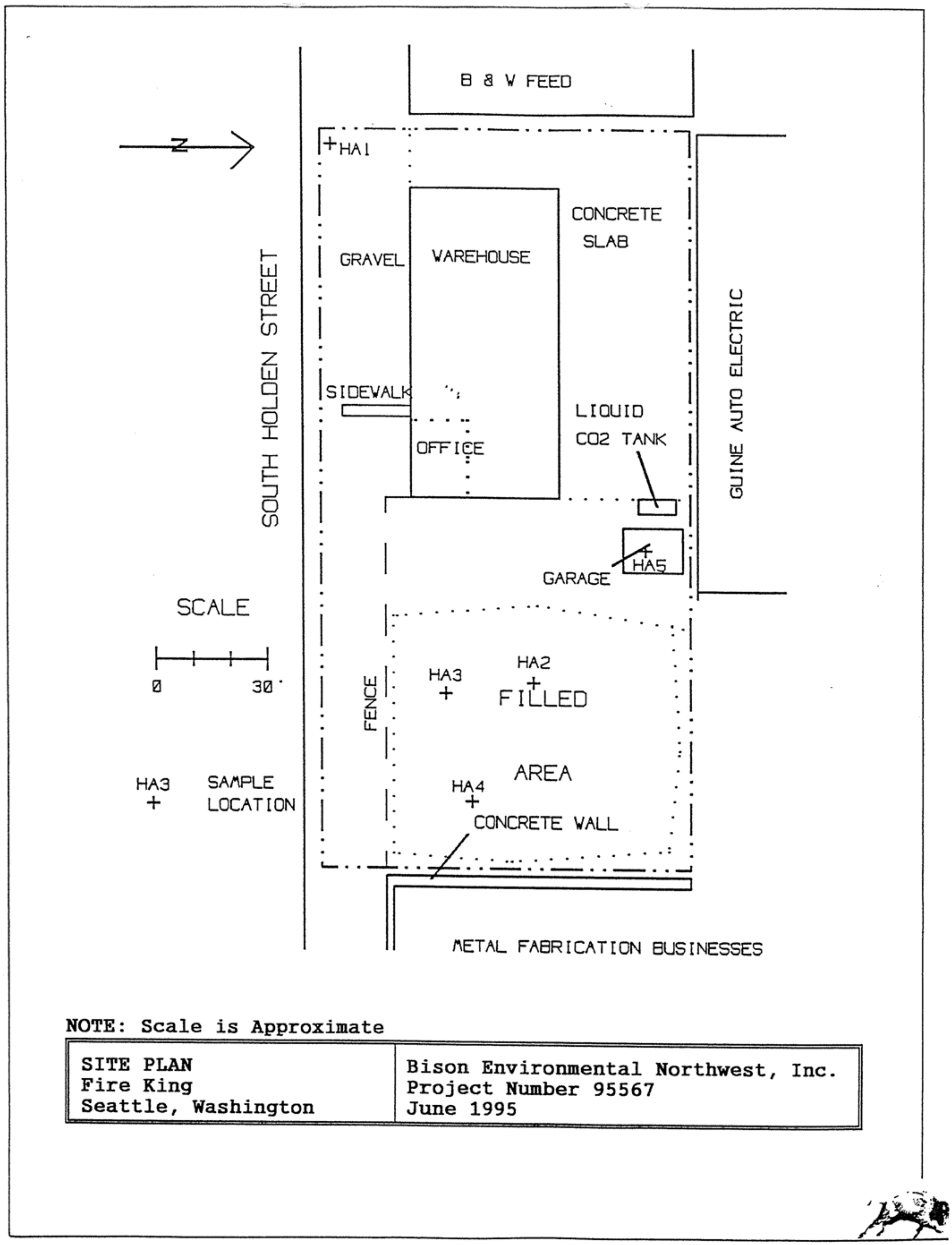
DEPARTMENT OF ECOLOGY State of Washington

SAIC From Science to Solutions



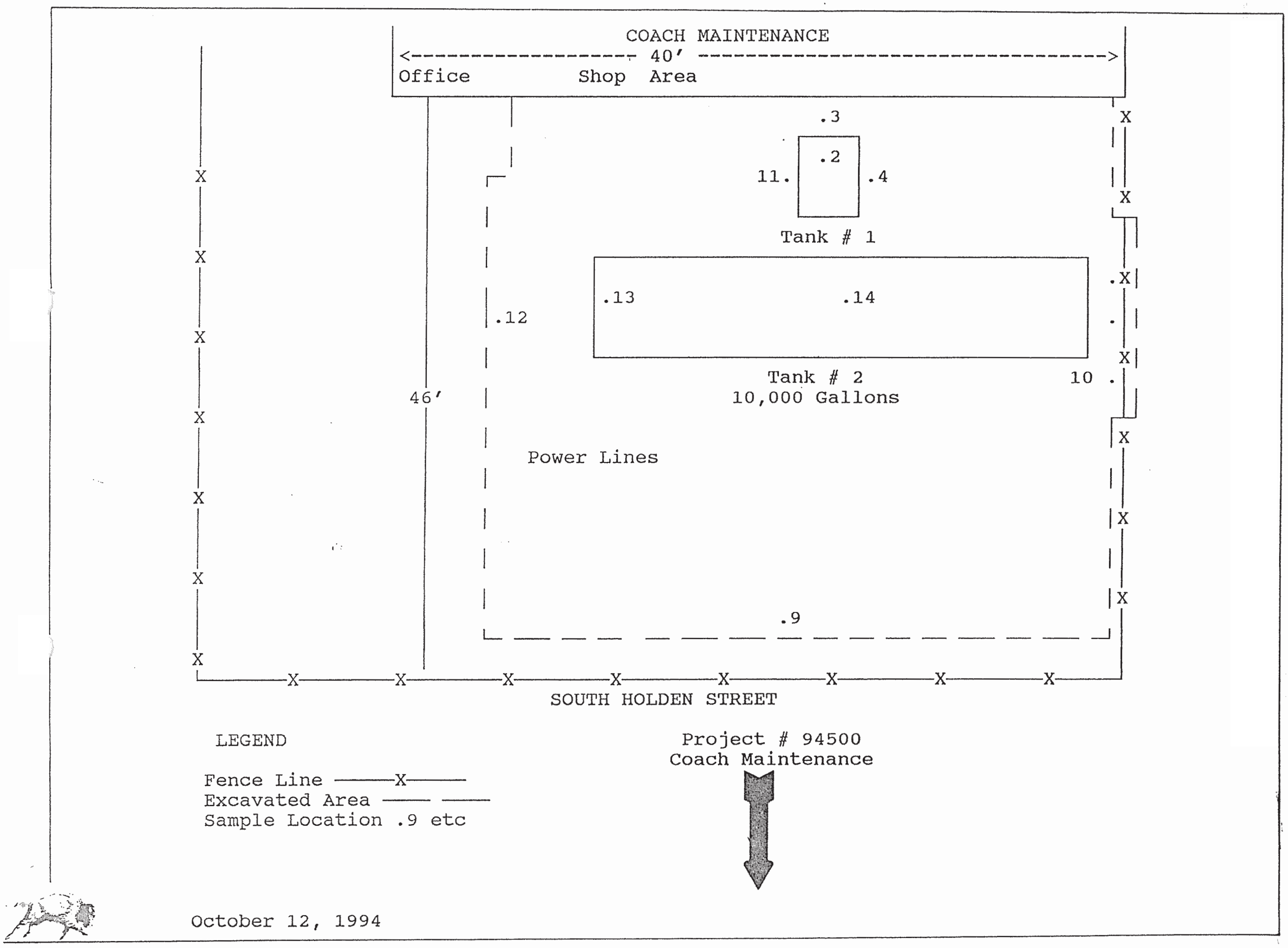
Source: Ecology 2000d

Figure 15. Surface Soil Sampling Locations Long Painting Company Neighborhood



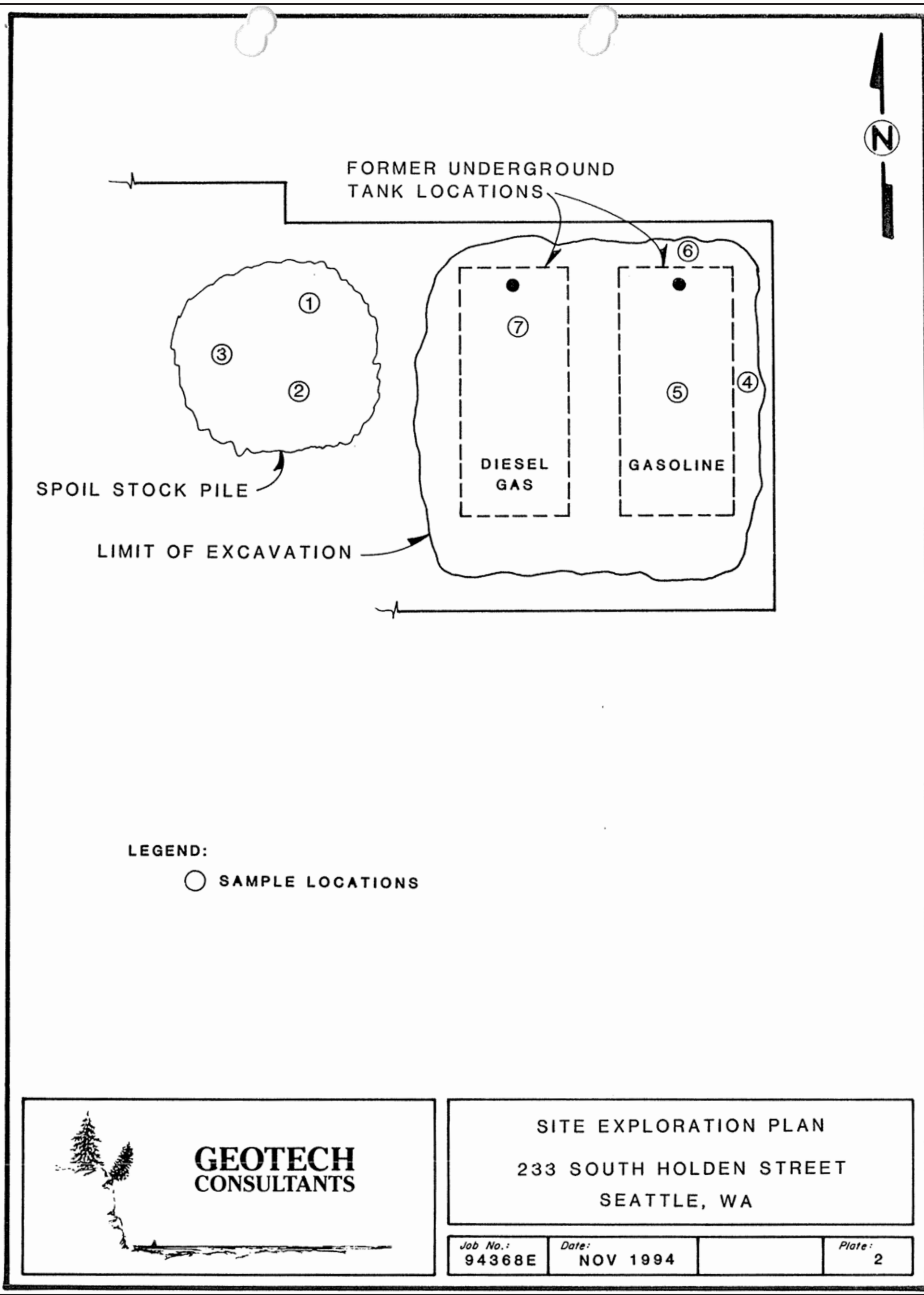
Source: Bison 1995

Figure 16. Fire King of Seattle UST Site Map



Source: Bison 1994b

Figure 17. Coach Maintenance UST Site Map



Source: Geotech 1994b

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Figure 18. Custom Crating/BESCO UST Site Map

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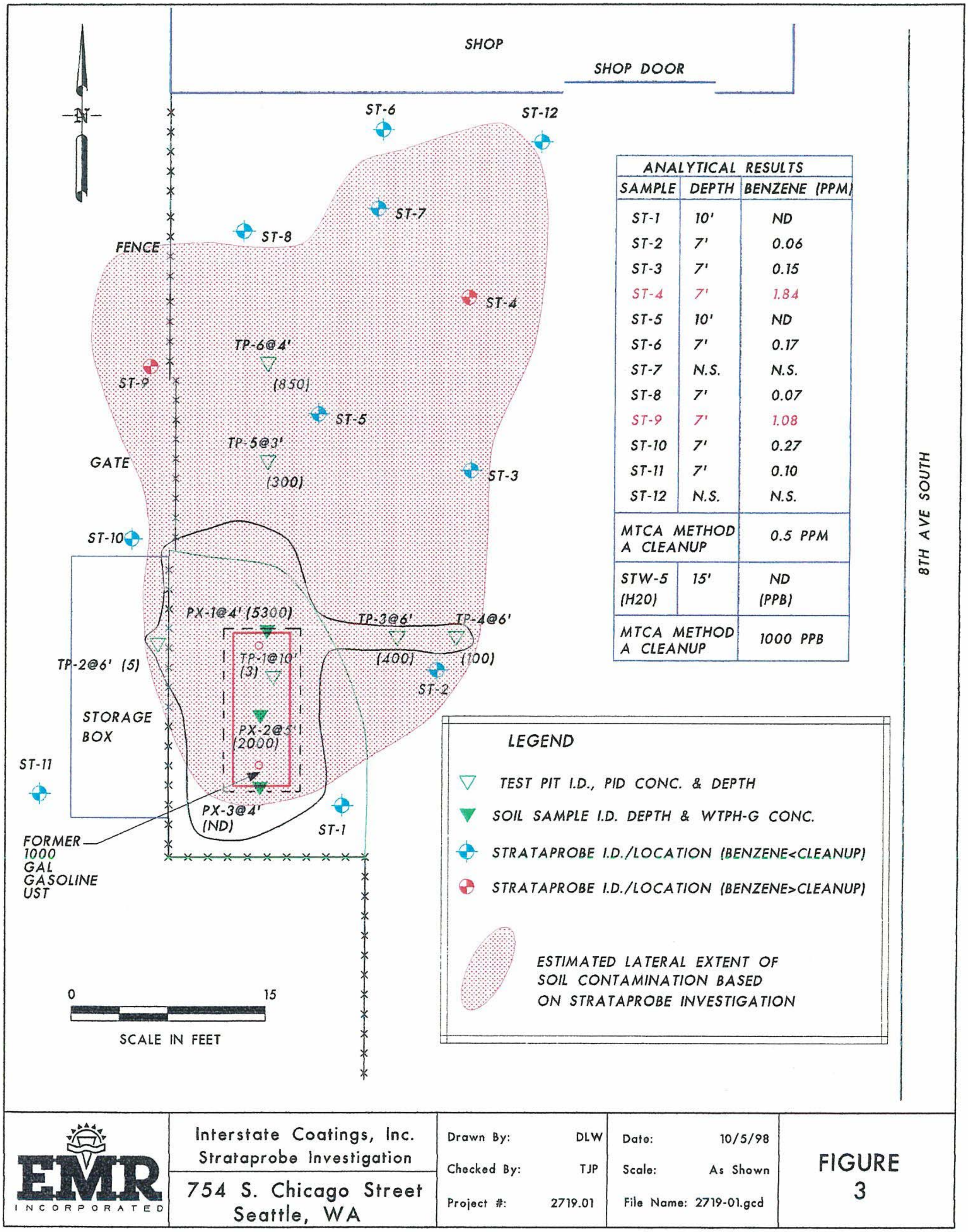

Source: EMR 1998

Figure 19. Interstate Coatings UST Site Map

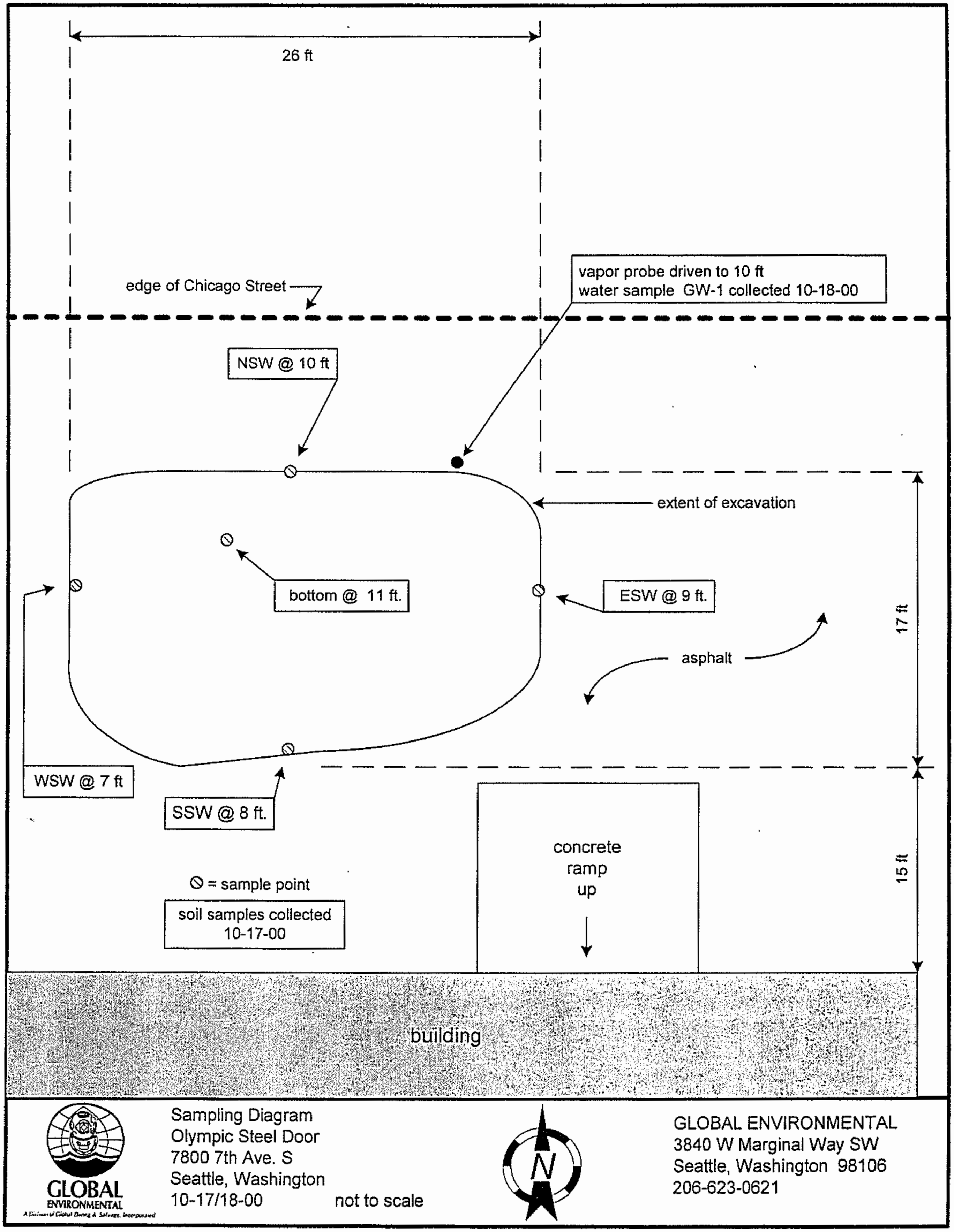

Figure 20. Olympic Steel Door Facility Map

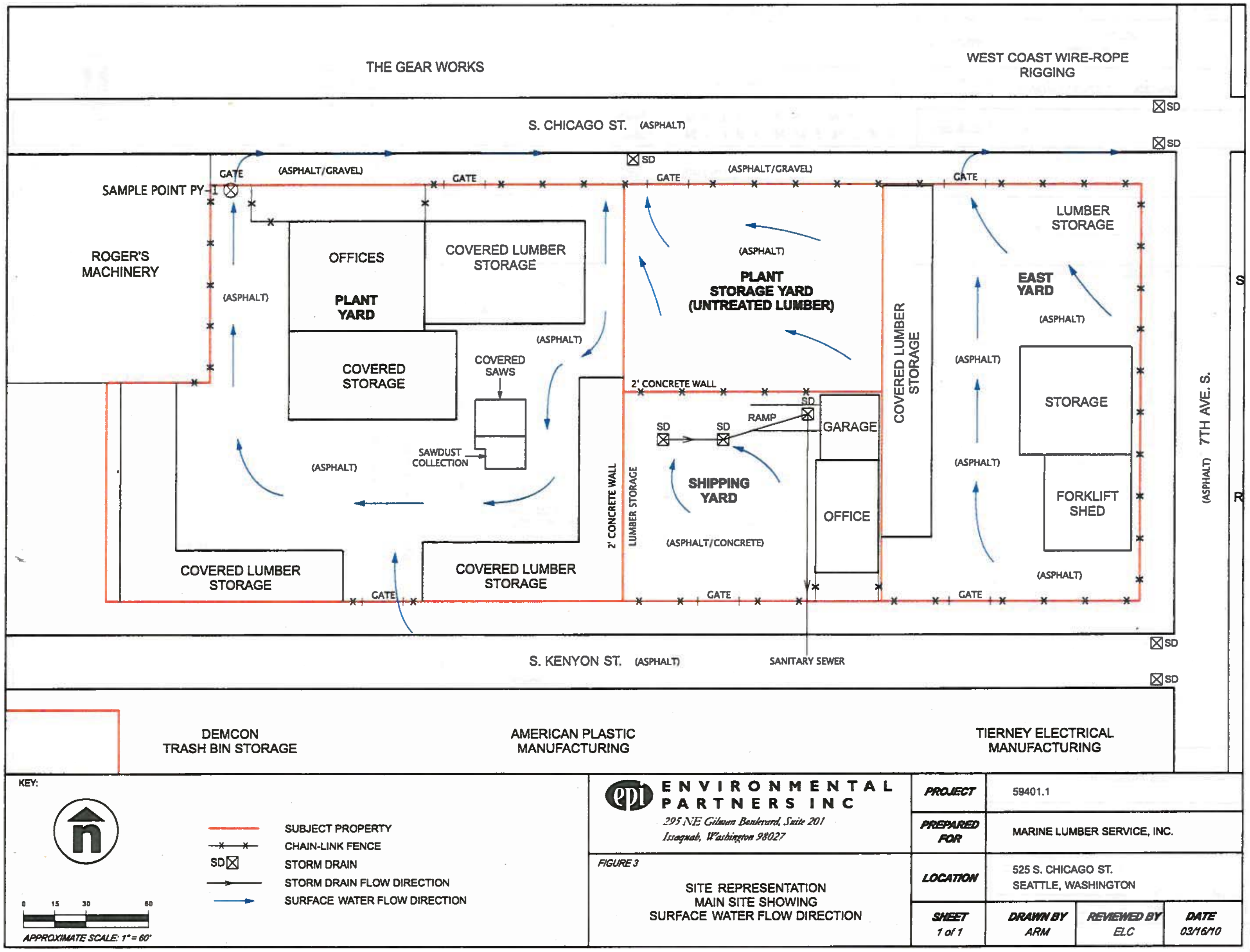

Figure 21a. Marine Lumber Service, Inc. Facility Map

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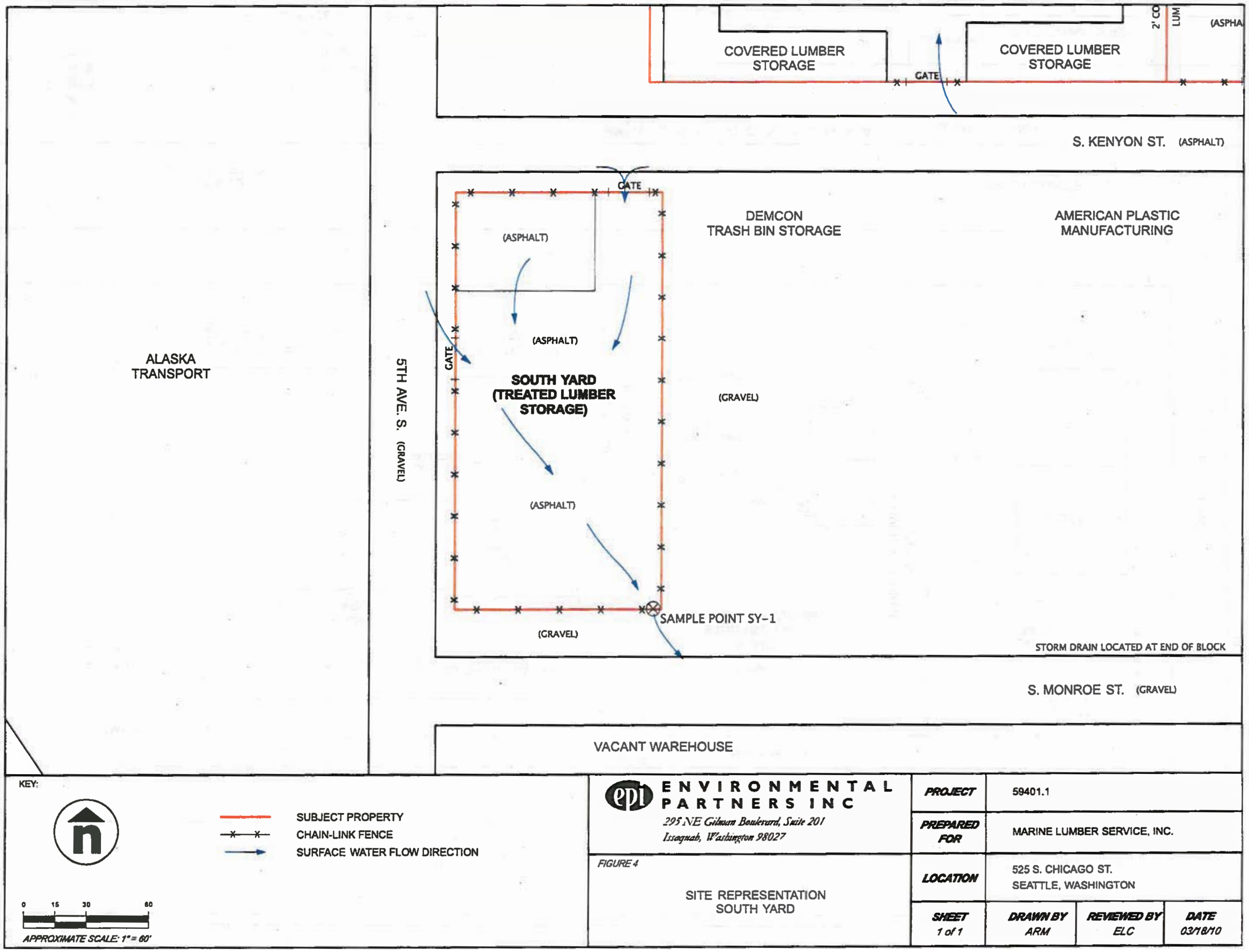

Source: EPI 2010

Figure 21b. Marine Lumber Service, Inc. Facility Map

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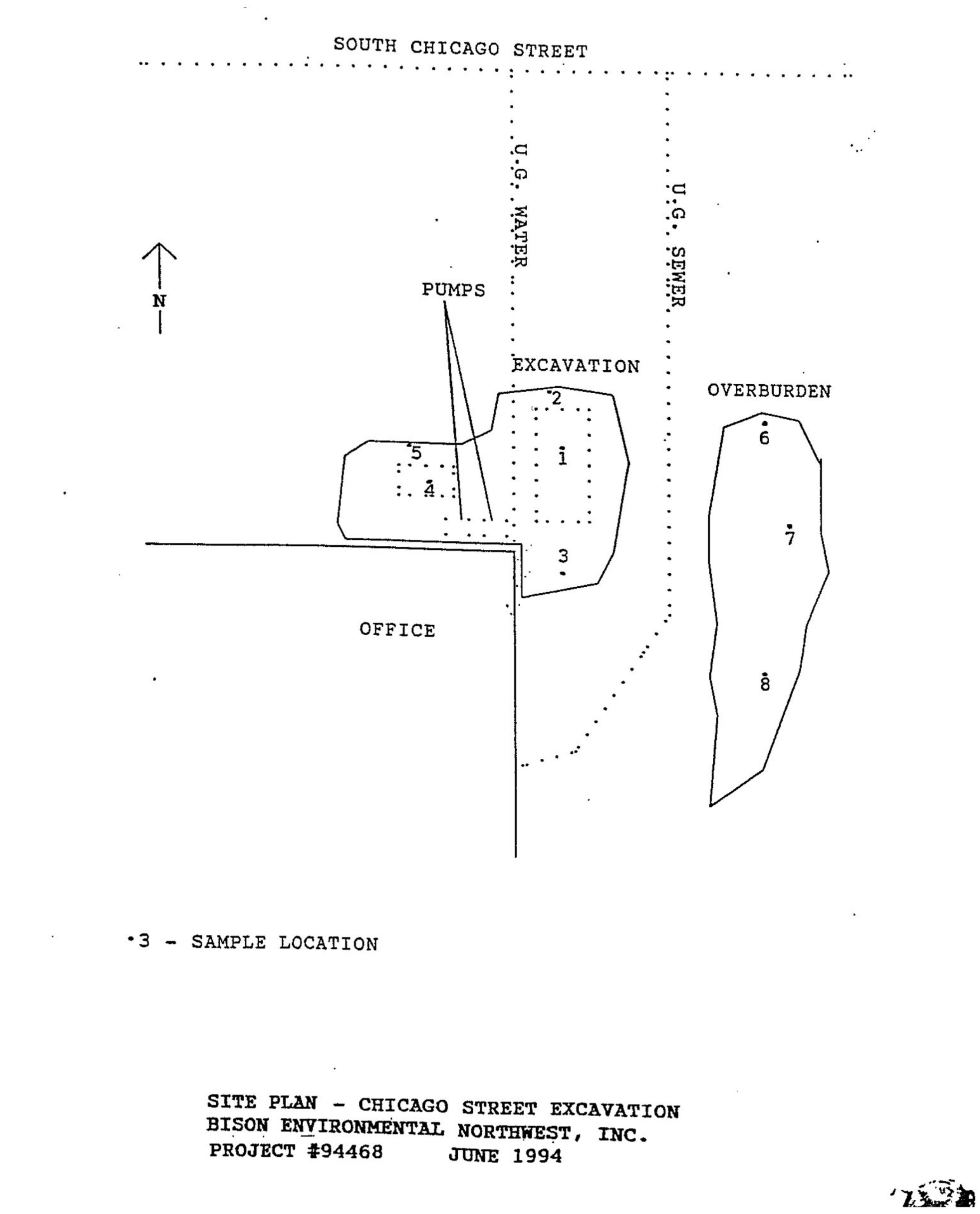

Source: Bison 1994a

DEPARTMENT OF ECOLOGY State of Washington

Figure 22. Marine Lumber Service, Inc.
UST Site Map — Plant Yard

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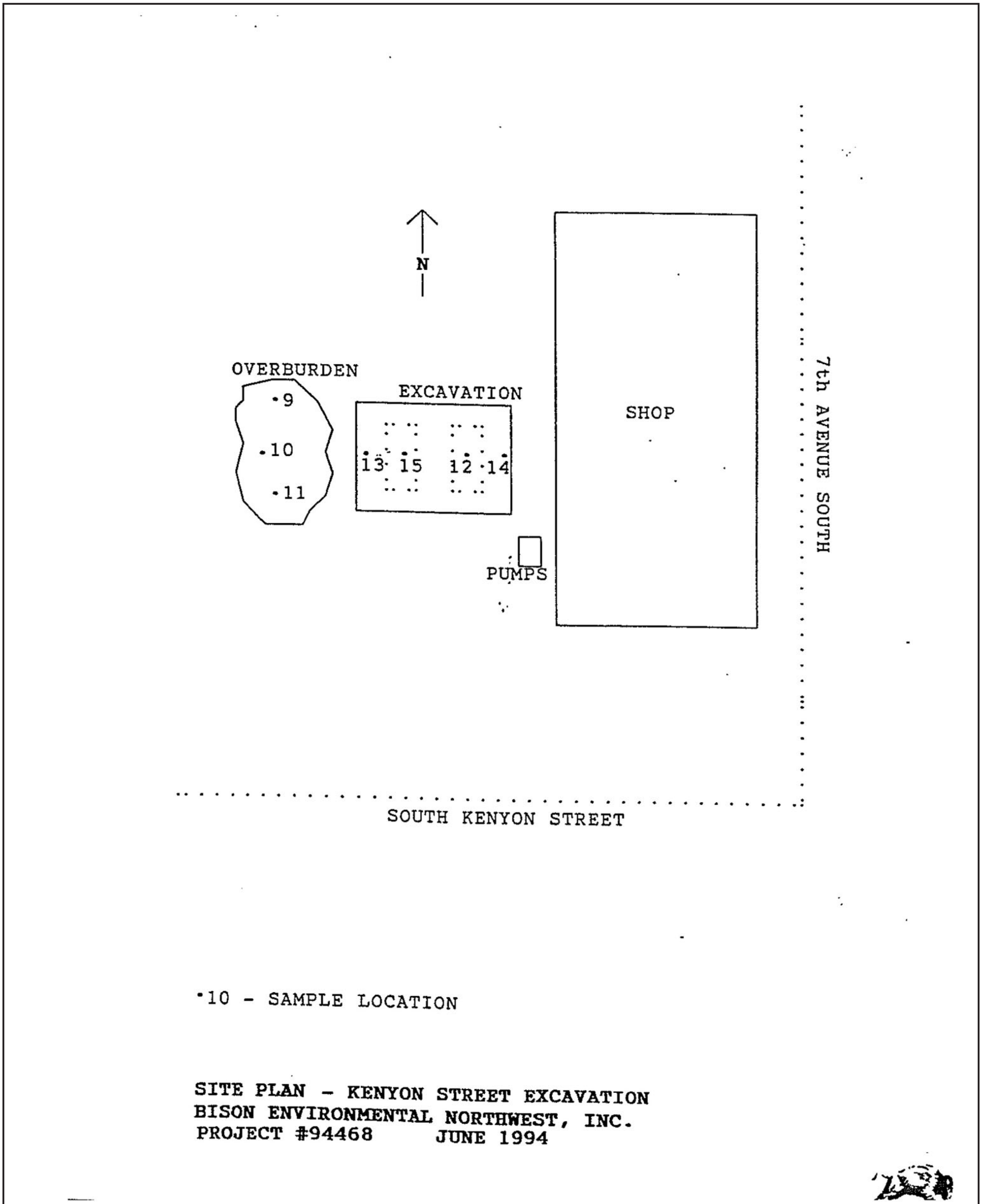
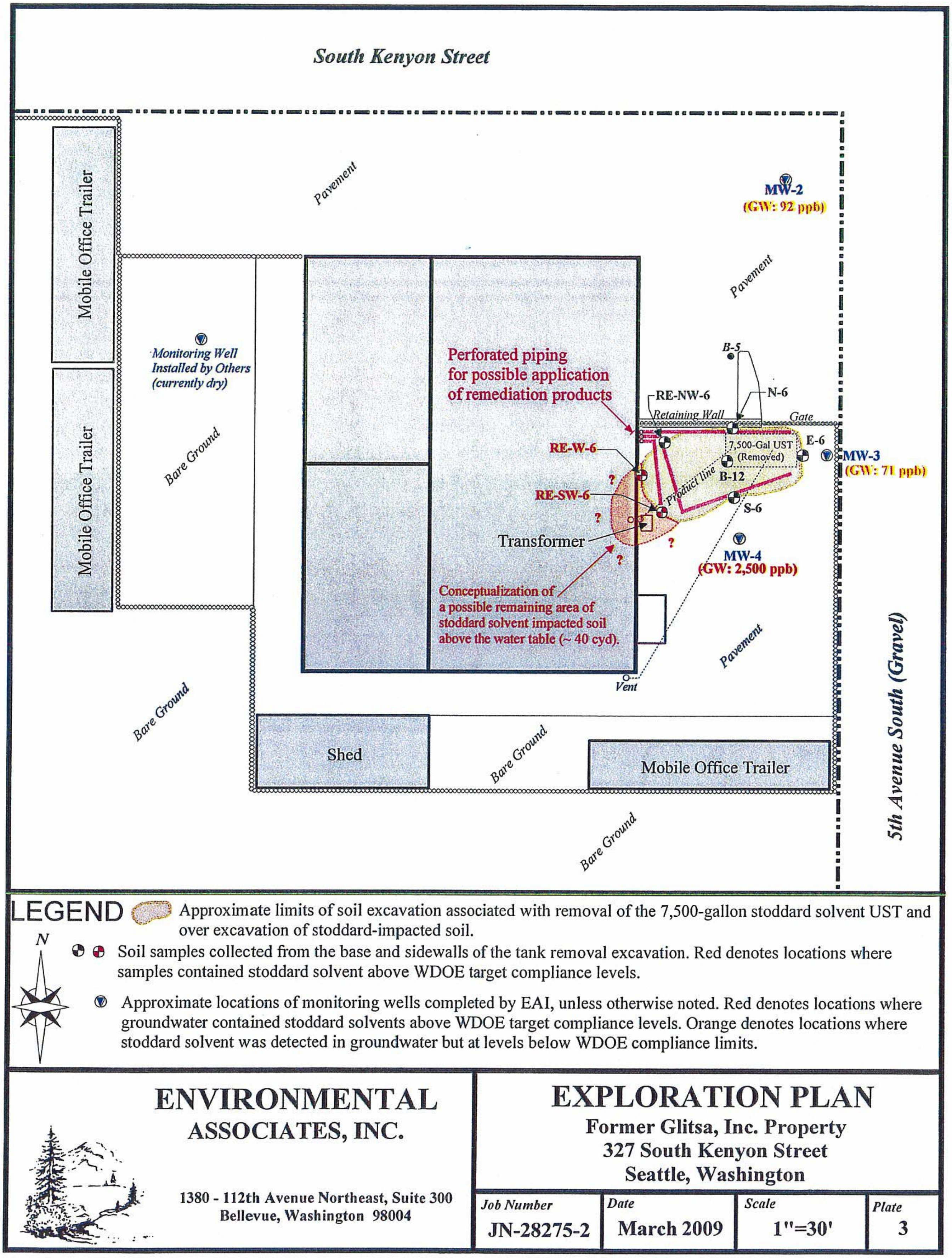


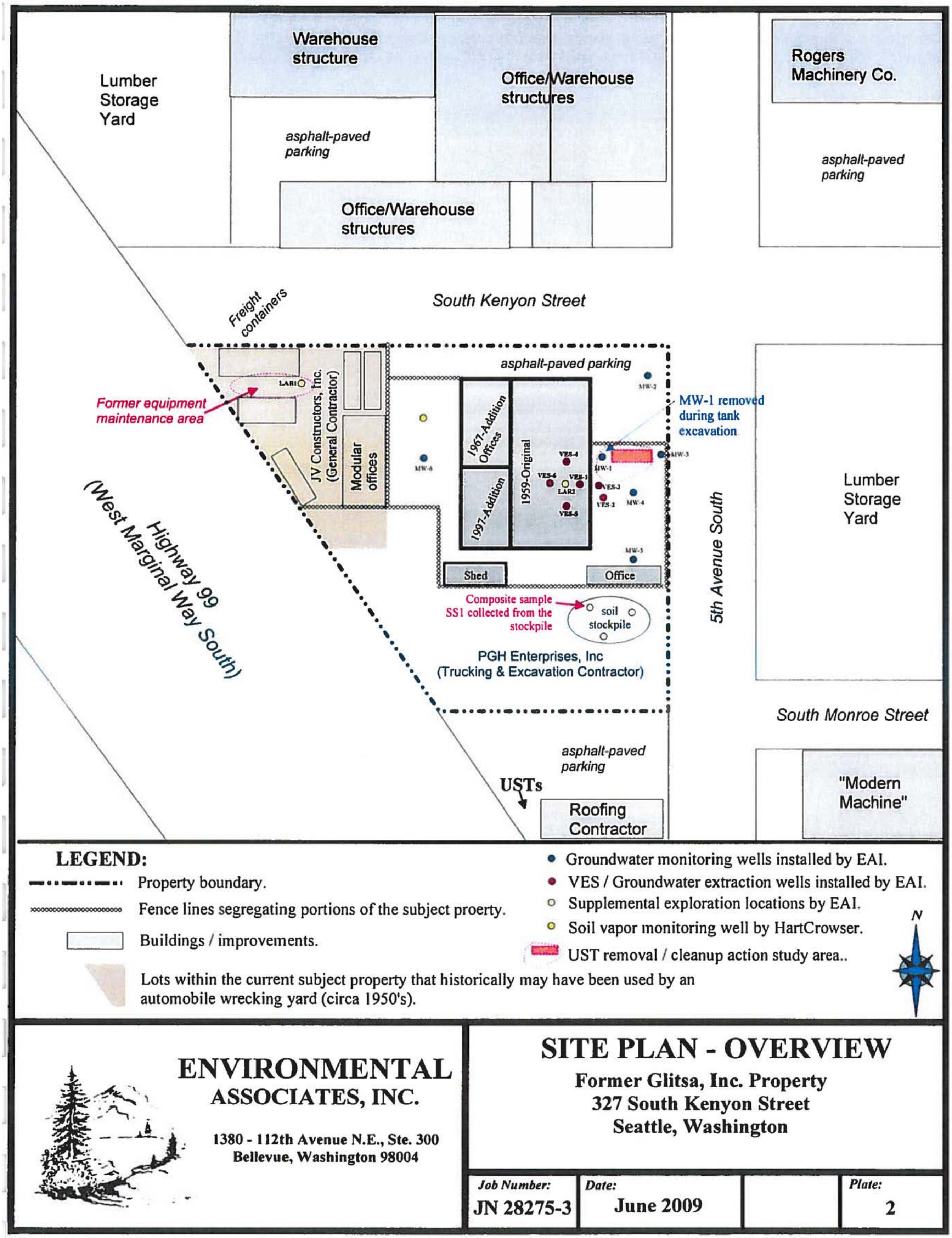
Source: Bison 1994a

Figure 23. Marine Lumber Service, Inc.
UST Site Map — East Yard



Source: Environmental Associates 2009b

Figure 24a. Former Glitsa, Inc.
Facility Map and Historical Sample Locations



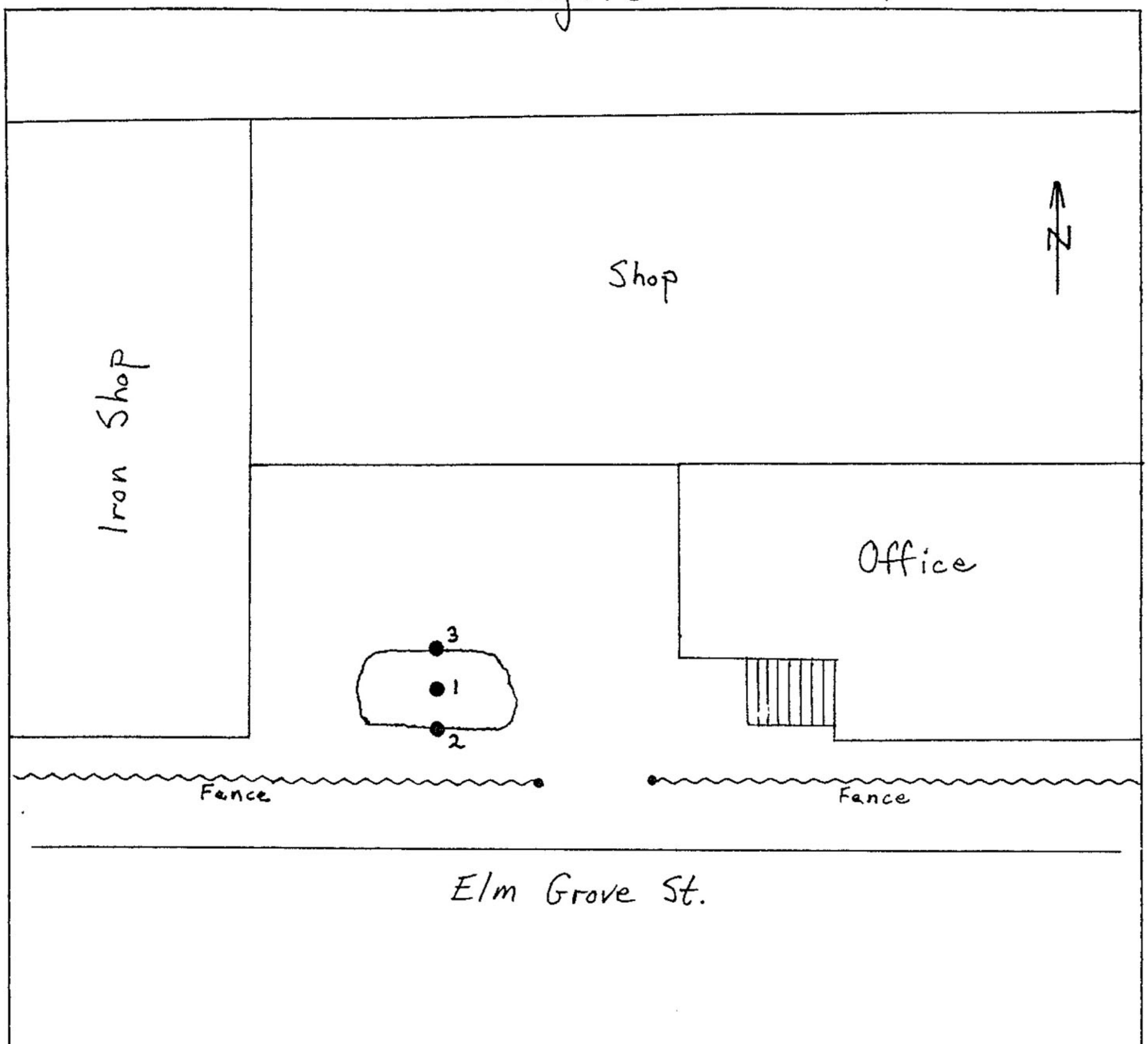
Source: Environmental Associates 2009b

Figure 24b. Former Glitsa, Inc. Facility Map and Historical Sample Locations

B & C EQUIPMENT CO.
A Divison of PEECO

20320 80th Ave. S.
Kent, Washington 98032
Office (206) 872-8890
FAX (206) 872-8987
1-800-822-0084

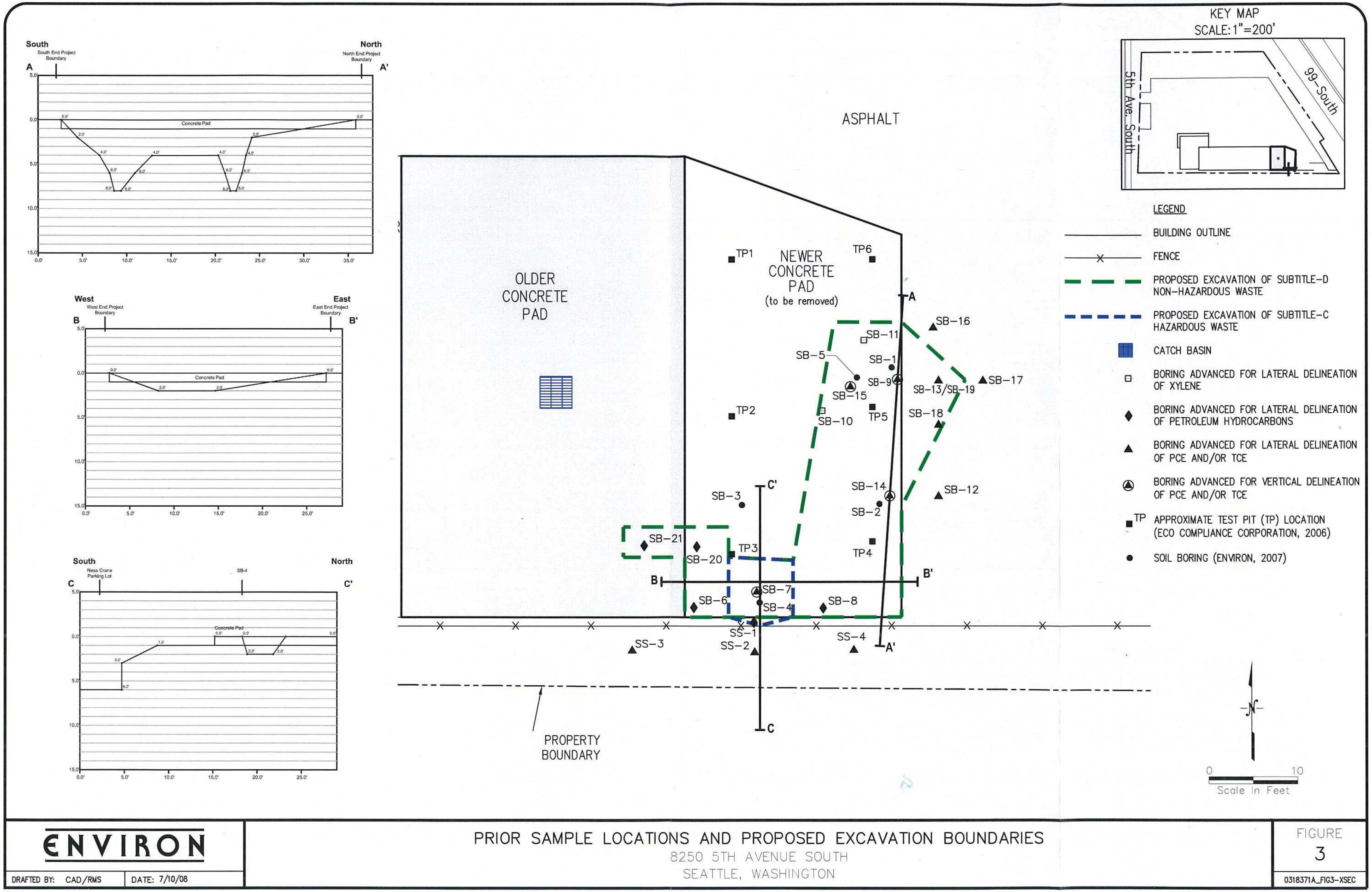
Figure 1



Job number: 1356	Sample collection date: Sept. 11, 1991
Site address: Seidlhuber Iron + Bronze 8009 Seventh Ave. So. Seattle, WA 98108	Sample location and number: • Soil samples collected 9/11/91

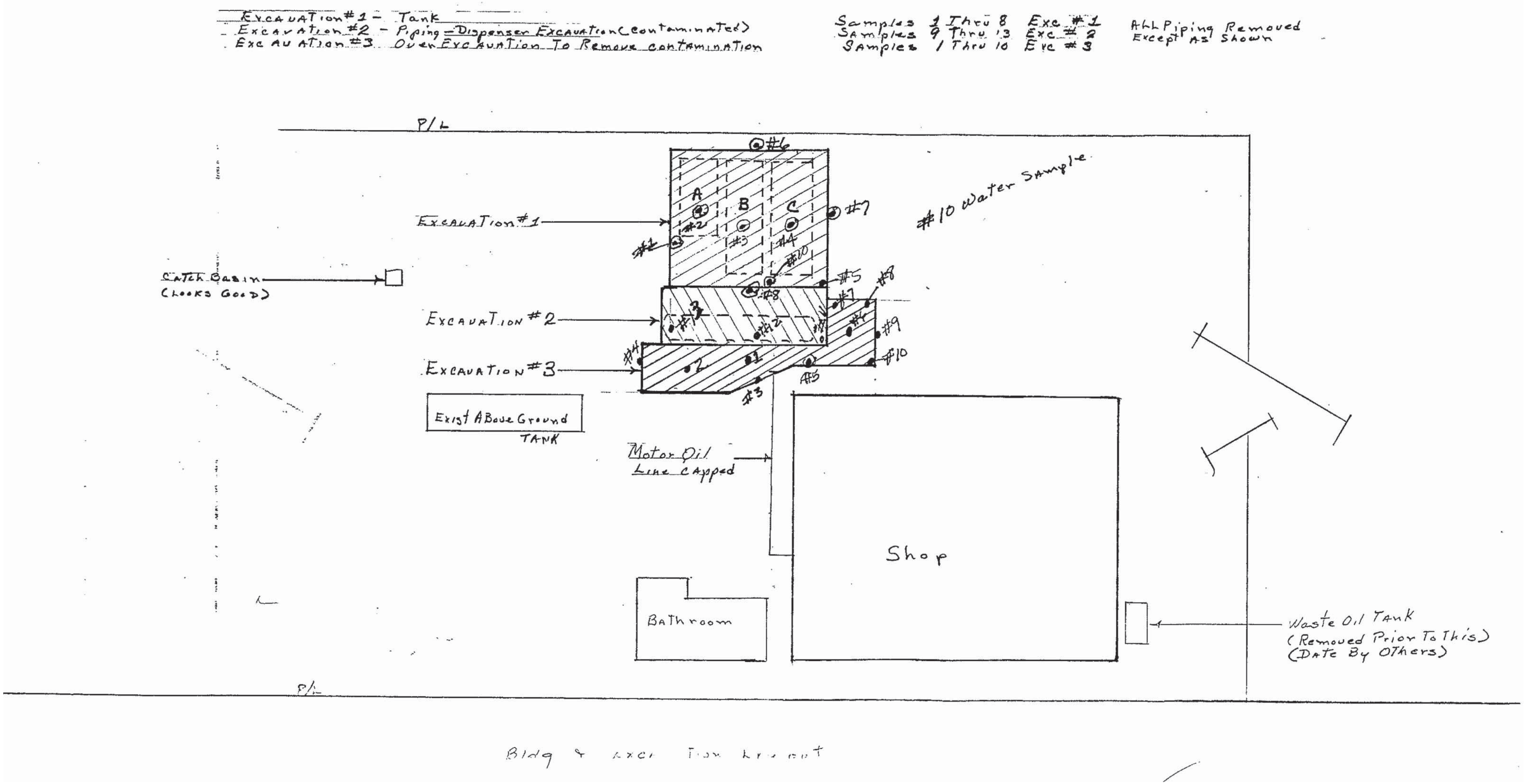
Source: B&C Equipment 1991

Figure 25. Seidelhuber Iron & Bronze Works Inc.
UST Site Map



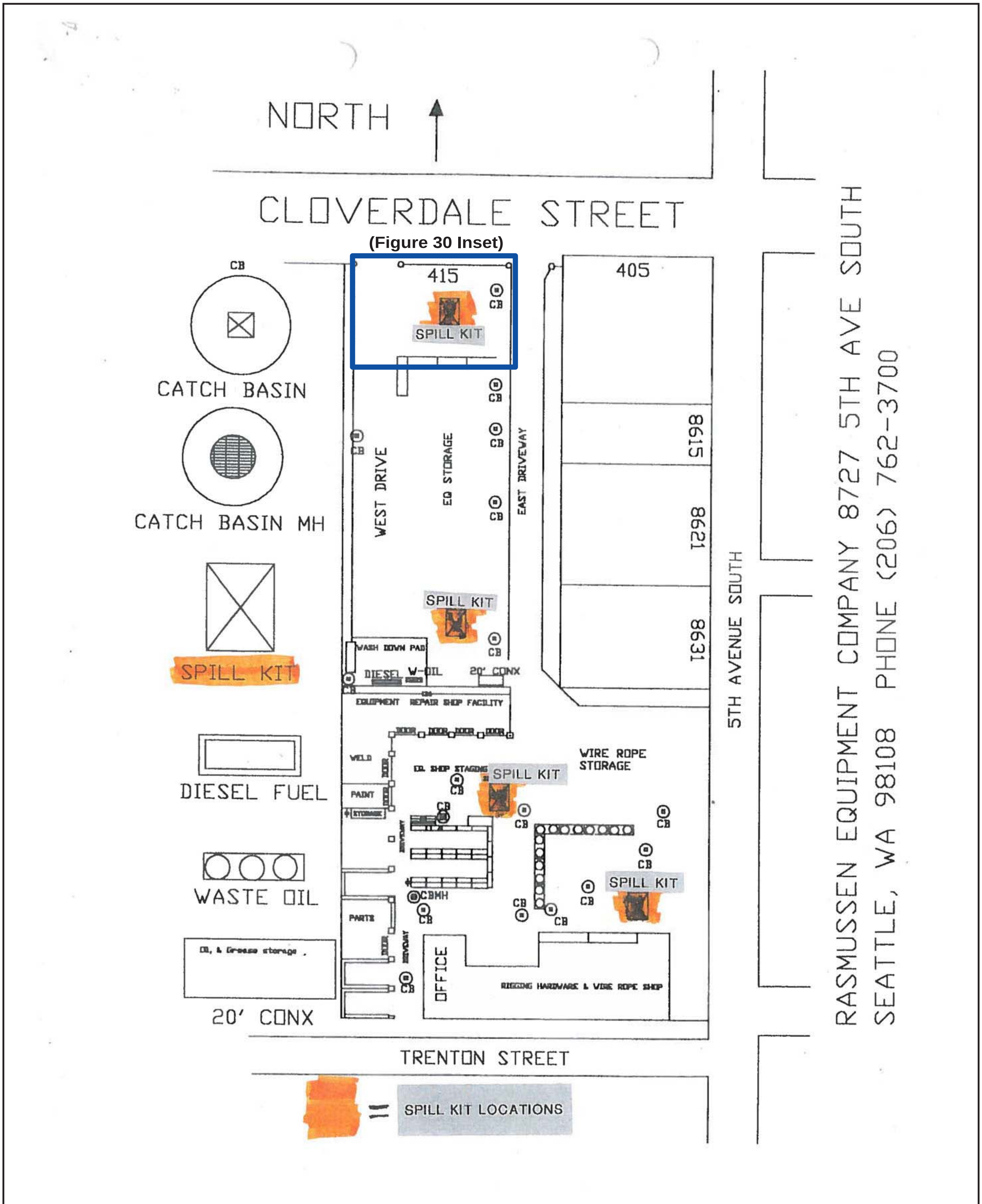
Source: Environ 2008a

Figure 26. Manitowoc Western/Coast Crane Environmental Investigation Site Map



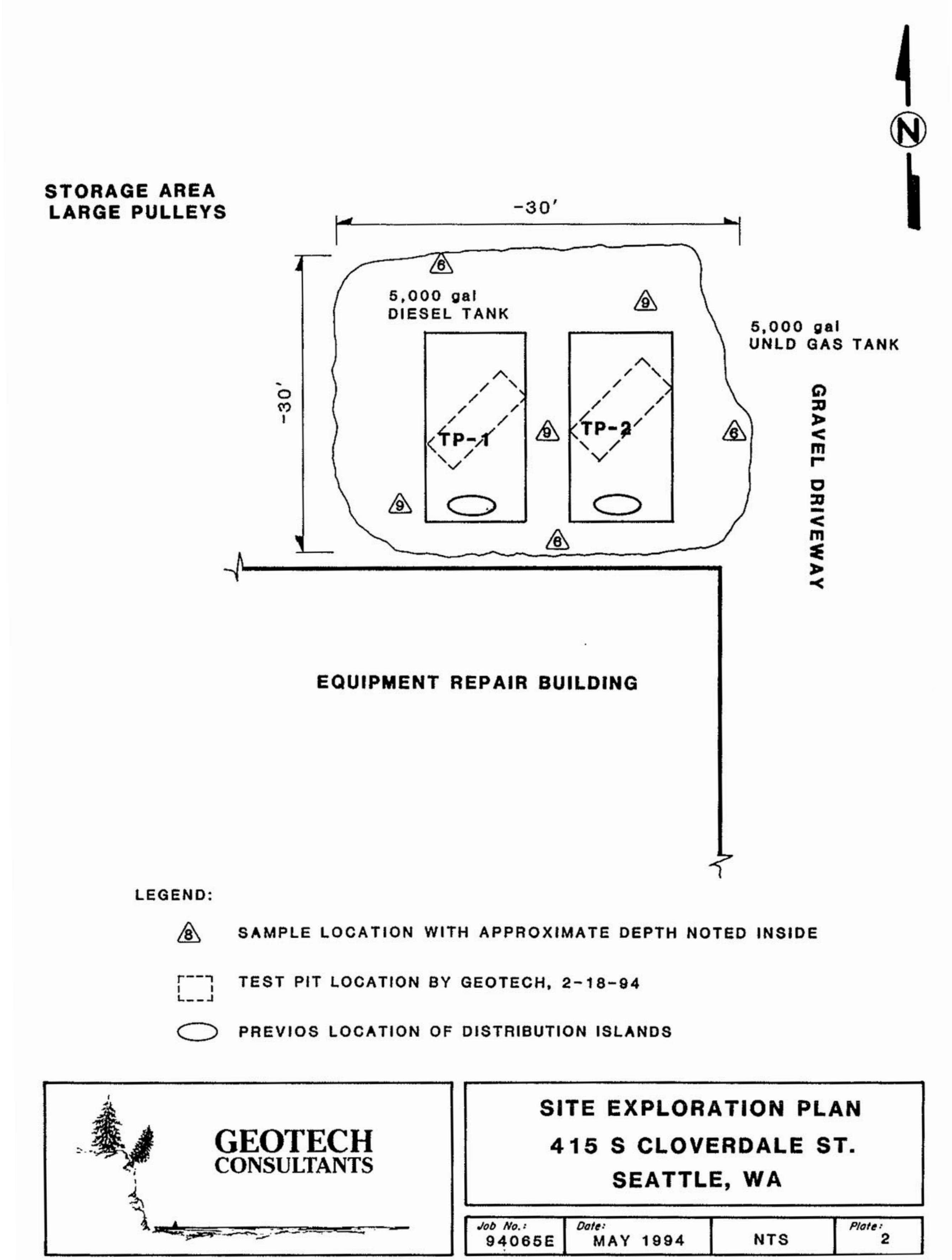
Source: Razore 1992

Figure 27. Razore Enterprises UST Site Map



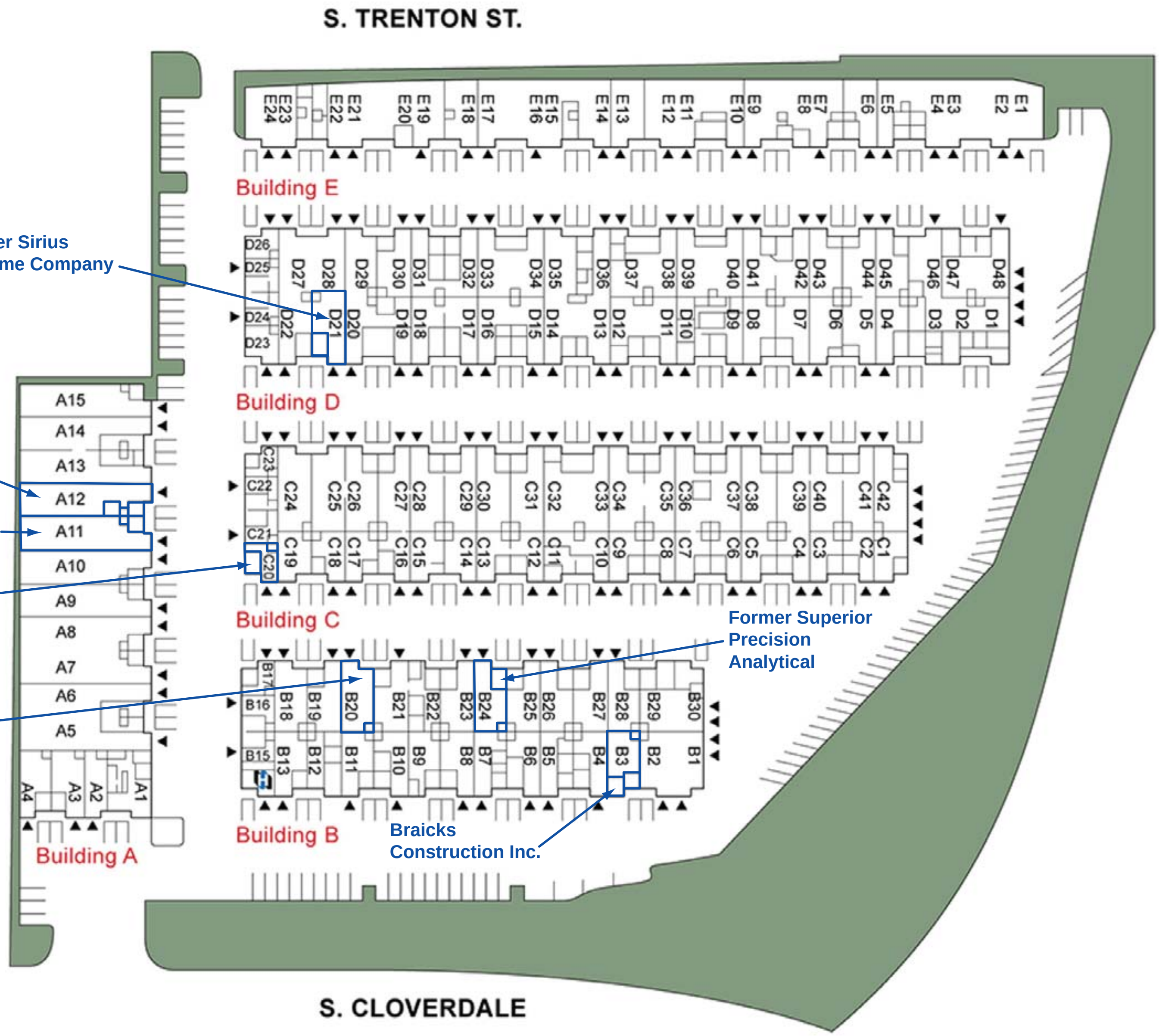
Source: Rasmussen Equipment 2002

Figure 28. Rasmussen Equipment Company Facility Map



Source: Geotech 1994a

Figure 29. Rasmussen Equipment Company UST Site Map



Source: Harsch Investments 2011

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Figure 30. Harsch Investment Properties S Cloverdale Business Park Facility Map

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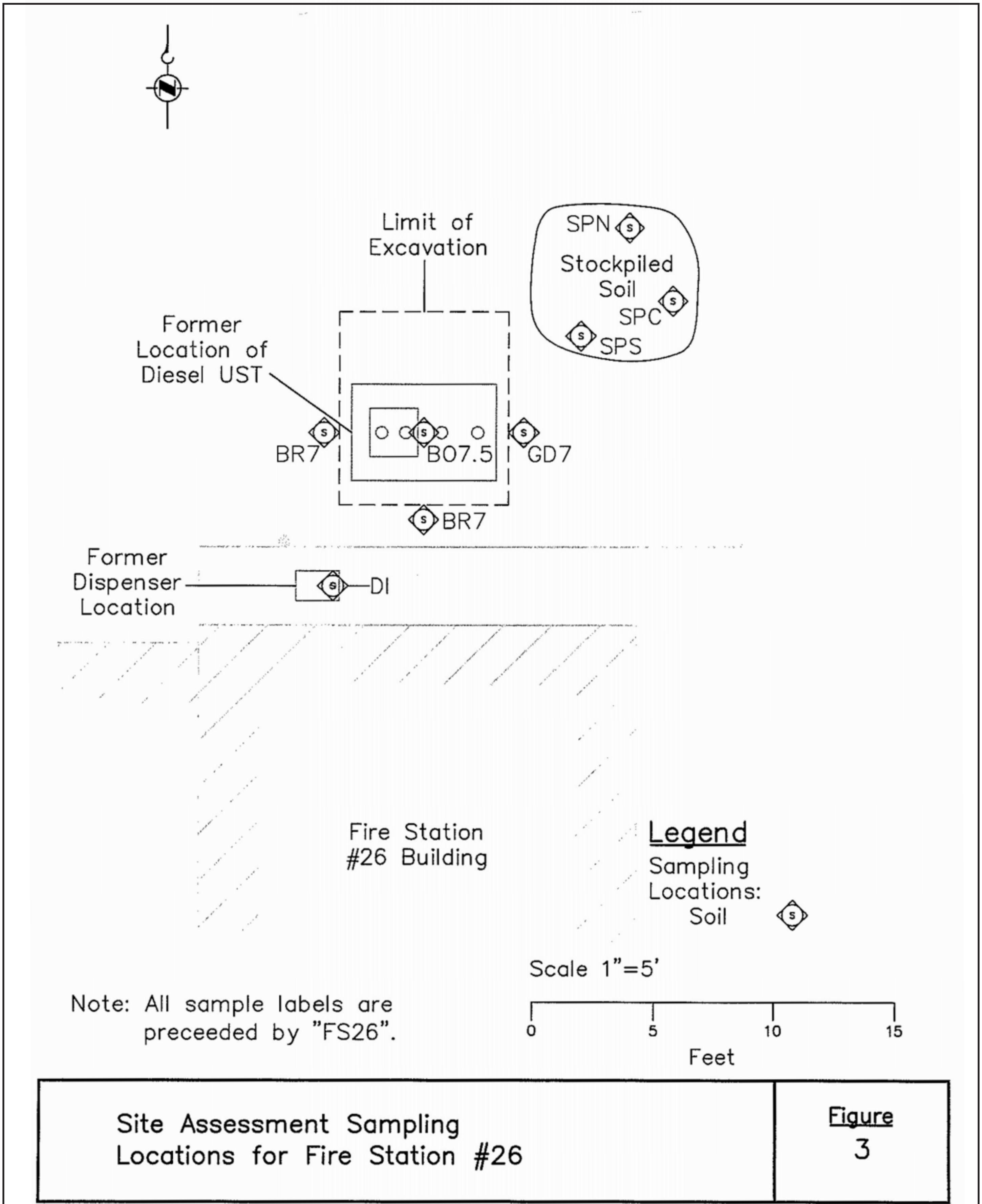
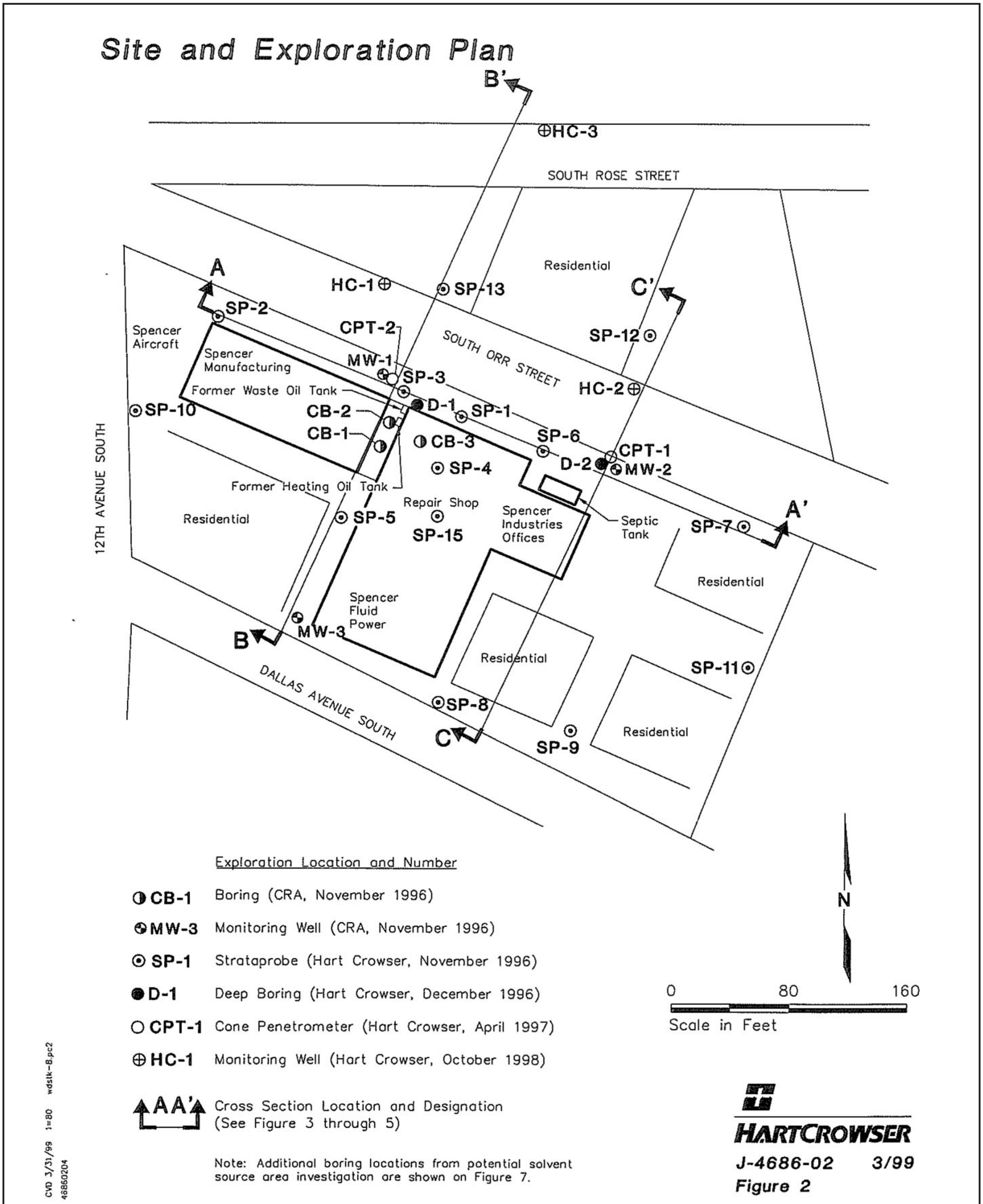


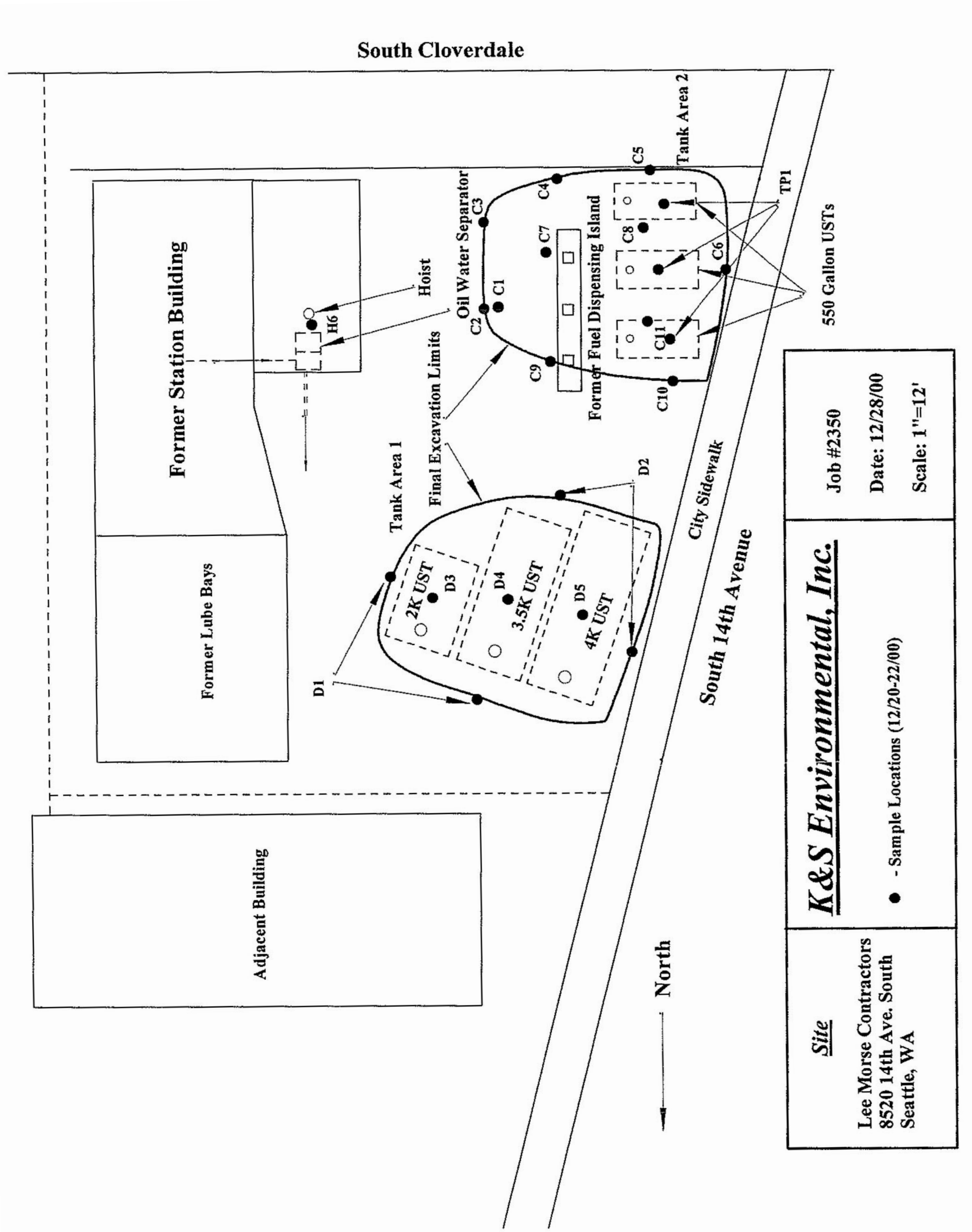
Source: Struthers 2000

Figure 31. Seattle Fire Station 26 UST Site Map



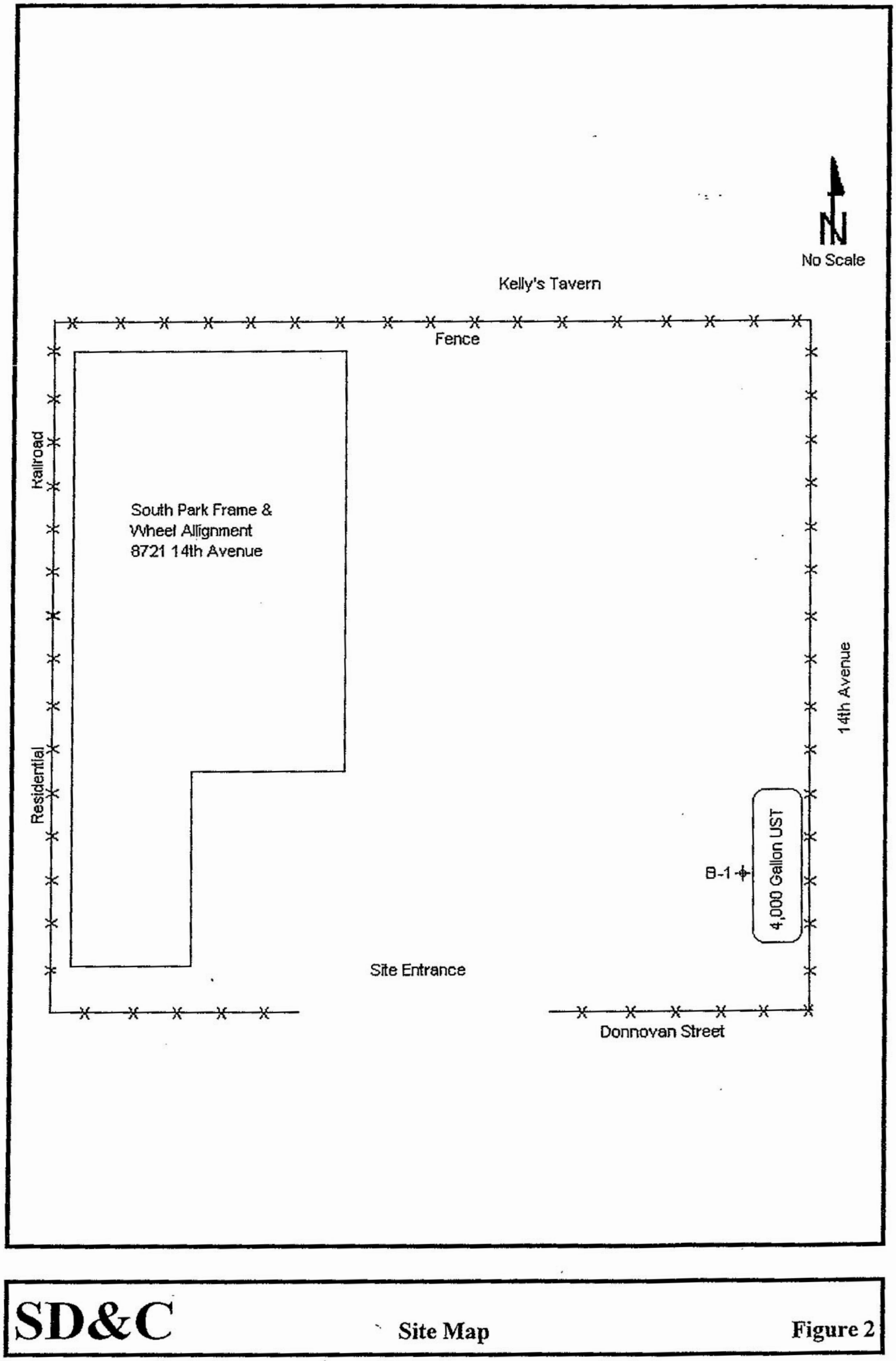
Source: HartCrowser 1999a

Figure 32. Spencer Industries Facility Map and Historical Sample Locations



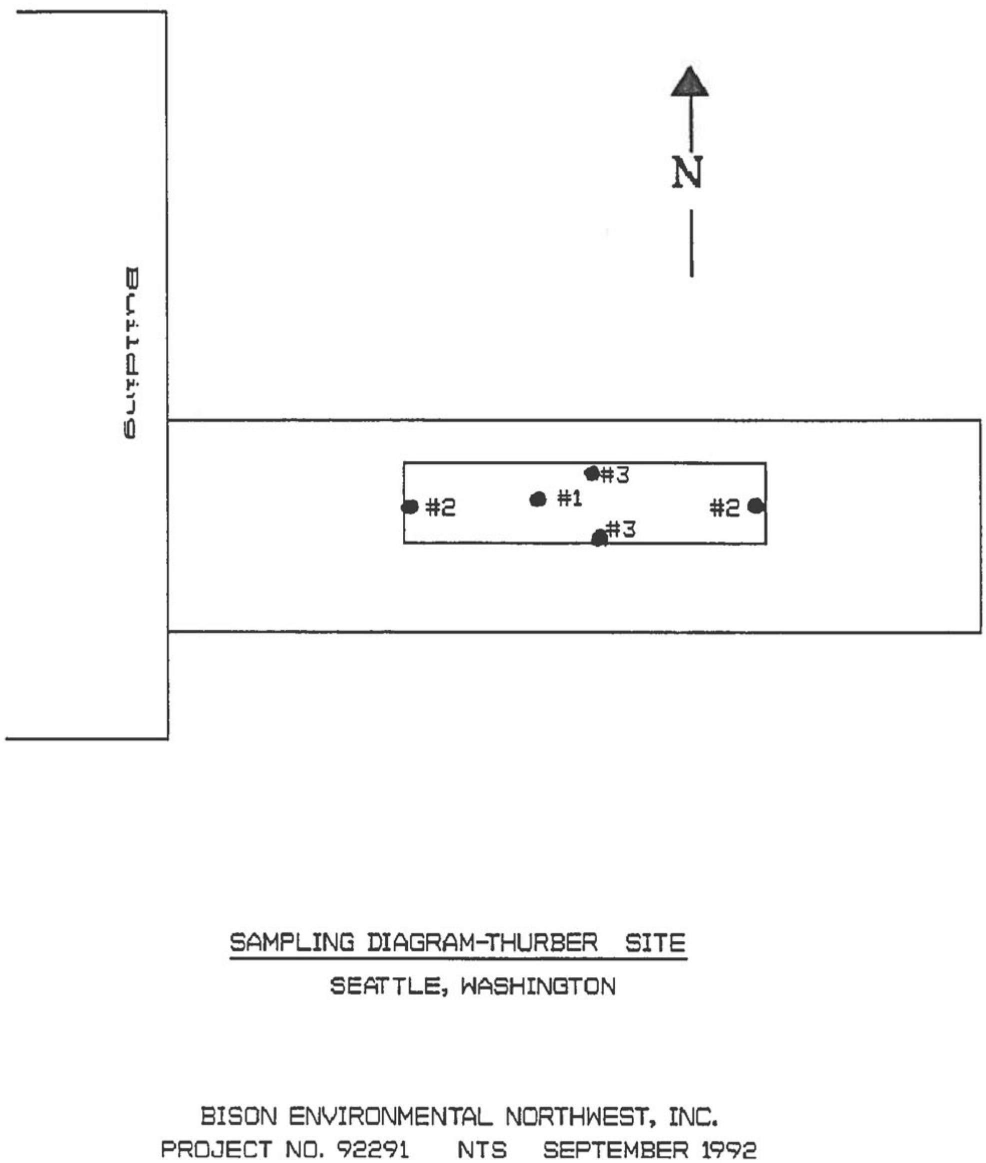
Source: K&S Environmental 2001

Figure 33. Scott Andrews Property UST Site Map



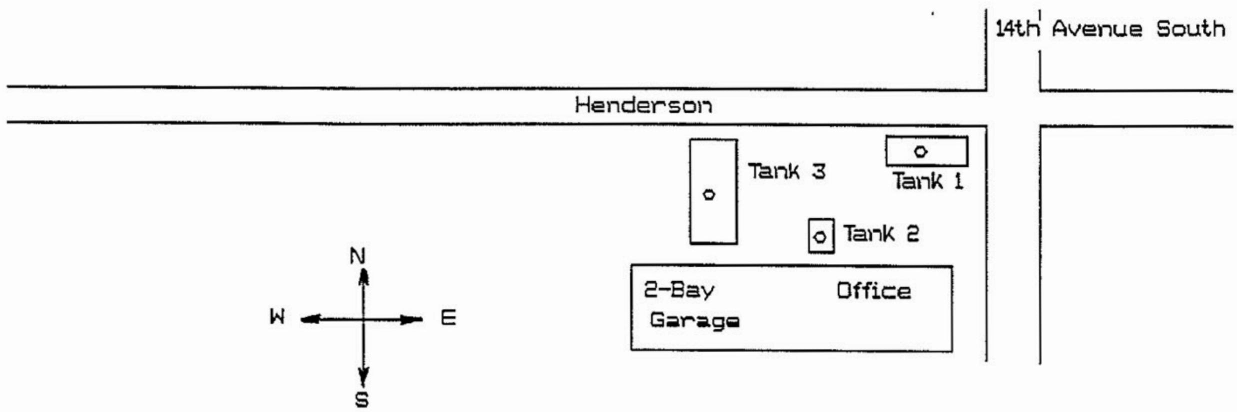
Source: SD&C 2000

Figure 34. Former Crosby Auto Repair Shop UST Site Map



Source: Bison Environmental 1992c

Figure 35. Former Tom Thurber Property UST Site Map



NOTES:

○ Indicates sample borings

Tank #1 - Sample #1 @ 8 ft/ 1000 gallon Gasoline

Tank #2 - Sample #2 @ 4 ft/ 550 gallon Waste oil

Tank #3 - Sample #3 @ 15'/ 3000 gallon Gasoline

SAMPLING DIAGRAM

WARNER'S FOREIGN AUTO REPAIR
9001 14TH Avenue South - Seattle, WA

BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT NO. 92214 NTS JANUARY 1992

Source: Bison Environmental 1992a

Figure 36. Warner's Auto Repair UST Site Map

Tables

Table 1
Facilities within the Riverside Drive Source Control Area that are listed in Ecology's Facility/Site Database

Ecology Facility/ Site ID	Facility Name	Alternate Name(s)	Facility Address	Riverside Drive Data Gaps Report	Drainage Basin	Active EPA ID No.	Ecology CSCSL	NPDES Permit	KCIW Discharge Authoriza-tion or Permit	Ecology UST/ LUST List	LUST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Parcel	Figure
3963	14th Avenue S Street Improvements	none	14th Avenue S, S Cloverdale & S Director	■	●										
15642	4th Avenue S & S Trenton Storm Drain	none	4th Avenue S & S Trenton Street	■	○										
22726	640 S Riverside Dr	Former Pro Fab Inc., Seattle Public Utilities S Riverside	640 S Riverside Drive	■	○		♦						♦	5700	4b, 5a
72668839	African Northwest, Inc.	Former Elliott Bay Ind Cons, Elliott Bay Industries Inc	470 S Kenyon Street	■	○					♦				1005, 1010, 1020, 1030	4b, 5a
6060	AIC International	none	736 S Chicago Street	■	○									3372	4b, 5a
77734273	American Plastic Manufacturing Incorporated	Former Victory Auto Bumpers Inc,	526 S Monroe Street	■	○									1990	4b, 5a
4328	Braicks Construction Inc	See Cloverdale Business Park	309 S Cloverdale Street Suite B3	■	○									9012	4d, 5a
7503	Cain Bolt & Gasket	none	7724 7th Avenue S	■	○									4170	4b, 5a
56766158	Cascade Diesel Engine Co LLC Cloverdale	Emerson Power Products, Frontier Door; See Meeco Manufacturing Co	426 S Cloverdale Street	■	□									9045	4b, 5a
43643315	Chevron 98484	none	8700 14th Avenue S		●					♦	♦				
38246778	Christian Brothers Floor Svc Inc	See Cloverdale Business Park	309 S Cloverdale Street Suite C20	■	○	♦								9012	4d, 5a
4612472	Coach Maintenance	Royal Highway Tours	255 S Holden Street	■	○					♦	♦			4510	4b, 5a
2430	Coast Crane Company	Former Manitowoc Western, Manitowoc Western Company Inc	8250 5th Avenue S	■	○		♦		♦					0350	4b, 5a
9604	Consistent Coatings, Inc.	none	719 S Riverside Drive	■	○									4110	4b, 5a
82818857	Custom Craiting	Former Besco Roofing Inc	233 S Holden Street	■	○					♦				4570	4b, 5a
11942	Fabrication Specialties Ltd Art	none	527 S Portland Street	■	○									3160	4b, 5a
68488062	Fire King of Seattle, Inc.	none	240 S Holden Street	■	○									5005, 4985	4b, 5a
14644	Former Airport Towing	none	301 S Sullivan Street	■	○									9084	4b, 5a
26135396	Former American Bathtub Refinishers Inc	none	1412 S Henderson Street	■	●	♦								8608	4c, 5b
29149762	Former Brown Engineering	none	550 S Monroe Street	■	○									1805	4b, 5a
47552226	Former Burned Laundry	none	1414 S Concord Street	■	●									8623	4c, 5b
92792171	Former Bus & Air Parcel Service Inc	none	9004 14th Avenue S	■	●		♦			♦	♦			8578	4c, 5b
93511879	Former Cascade Enterprises	none	8709 14th Avenue S	■	●									8096	4c, 5b
88237831	Former Chemithon Surface Finishing Inc	none	521 S Monroe Street	■	○									1660	4b, 5a
93927211	Former Crosby Auto Repair Shop	Stephanie Crosby Company	8621 14th Avenue S	■	●					♦	♦			7842	4c, 5b
28226866	Former Discount Drive Axle of Seattle	See Cloverdale Business Park	309 S Cloverdale Street Suite A11	■	○									9012	4d, 5a
38576231	Former Emerald Services Group	Former Razore Enterprises, US Disposal; See Ness Cranes, Inc.	500 S Sullivan Street	■	●					♦	♦	♦		7883600600	4b, 5a
63168342	Former Glitsa American Inc	Glitsa American, Glitsa American Incorporated	327 S Kenyon Street	■	○		♦			♦	♦			0740	4b, 5a
36385877	Former Guinns Automotive & Electric	none	245 S Austin Street	■	○	♦								4845	4b, 5a
42127616	Former Hurlen Construction	Amercian Civil Const West Coast, Hurlen Construction Company	700 S Riverside Drive	■	○		♦			♦	♦		♦	5725, 5350	4b, 5a
2278	Former King Auto & Truck Wrecking	none	543 S Monroe Street	■	○							♦		1605	4b, 5a
1370584	Former KJM Electric Co	none	521 S Monroe Street	■	○									1660	4b, 5a

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71678662	Former Long Painting - 10th Avenue Facility	Long Interstate A Joint Ventur, Long Painting Company	8025 10th Avenue S	■	●					♦		♦		6900, 7020, 6930, 0915, 1055, 1045, 1065, 1095, 0590, 610, 9037, 9004, 9002, 1215	4c, 5b
12724197	Former Magnetic Penetrant Services Co Inc	See Cloverdale Business Park	309 S Cloverdale Street Unit B20	■	○									9012	4d, 5a
11457	Former Mikes Truck Repair & Fabrication	none	515 S Southern Street	■	○									0360	4b, 5a
78952325	Former Mill Engineering & Supply Co	See Gear Works Seattle, Inc.	516 S Chicago Street	■	○									3180, 3210	4b, 5a
6661875	Former Pipe Specialities Inc	See Fabrication Specialties Ltd Art	531 S Portland Street	■	○									3160	4b, 5a
92291647	Former Resource Recycling Technologies	Federal Marine & Defense Services, Fraser Boil & Ship Repair, LLC	8000 5th Avenue S	■	○									0600, 1685	4b, 5a
26215242	Former Rockwell Automation	Reliance Electric; See Gear Works Seattle, Inc.	500 S Chicago Street	■	○									3180, 3210	4b, 5a
64285373	Former Schauer Northwest Inc	See Former South Park BP	8819 14th Avenue S	■	●									8370	4c, 5b
41287367	Former Scott Andrews Property	Andrews Property	8520 14th Avenue S	■	●					♦	♦			8714	4c, 5b
84435338	Former Screen Matic Arts	none	9354 4th Avenue S	■	□										
18225132	Former Seattle Refrigeration and Manufacturing Co	Seattle Refrigeration & MFG Co	1057 S Director Street	■	●									0226	4c, 5b
48968474	Former South Park BP	none	8819 14th Avenue S	■	●					♦	♦			8370	4c, 5b
13132191	Former Spencer Industries Inc	See National Products Inc.	8410 Dallas Avenue S	■	●		♦							1140, 1160, 1130, 1270	4c, 5b
78879968	Former Superior Precision Analytical	See Cloverdale Business Park	309 S Cloverdale Street Suite B24	■	○									9012	4d, 5a
23653754	Former Tom Thurber	none	1420 S Henderson Street	■	●					♦				8604	4c, 5b
45558857	Former Yale Materials Handling NW Inc	See Westec Industries, Inc.	8101 7th Avenue S	■	○									0430, 0470	4b, 5a
10128921	Global Fabricators Inc.	Former Modern Iron & Steel Inc	7619 5th Avenue S	■	○					♦				4770	4b, 5a
73412486	Graham Trucking, Inc.	South Park Truck & Trailer Repair	722 S Chicago Street	■	○								♦	3375, 3380, 2670, 2700	4b, 5a
41888934	Hansen Machine Corp Seattle	See Lukas Machine Inc	712 S Portland Street	■	○									4135, 4190, 4100	4b, 5a
73671237	Heartwood, Inc.	none	1414 S Director Street	■	●	♦								0041	4c, 5b
76764554	Hudson Bay Insulation	Former Long Painting Co 5th Ave	8230 5th Avenue S	■	○									0005	4b, 5a
9309618	Independent Metals Plant 1	Independent Metals	747 S Monroe Street	■	●				♦				♦	2045, 1355, 1345, 1335,	4c, 5b
16139	Independent Metals Plant 2	Independent Metals S Kenyon St	816 S Kenyon Street	■	●			♦					♦	3645, 2520	4b, 5a
25623222	Interstate Coatings Inc UST 9194	See Interstate Coatings, Inc.	754 S Chicago Street	■	○					♦	♦			3330, 3331	4b, 5a
2335	Interstate Coatings, Inc.	none	754 S Chicago Street	■	○		♦							3330, 3331	4b, 5a
29892767	Kenyon Drum	none	Kenyon Street S at Transfer	■	○										
39232961	Lukas Machine Inc	none	707 S Riverside Drive	■	○			♦						4135, 4190, 4100	4b, 5a
5885095	Machinist Inc Tooling Division	none	8201 7th Avenue S	■	○									0310	4b, 5a
72567932	Machinists Inc - Main Facility	See Machinists Inc.	509 S Austin Street	■	○									5170, 5070	4b, 5a
22736	Machinists Inc.	Machinists Inc 5th Avenue	7600 5th Avenue S	■	○			♦						5170, 5070	4b, 5a
15761	Manufacturing Technologies, Inc.	MTI	7709 5th Avenue S	■	○									4470	4b, 5a
38921541	Marine Lumber Service Inc	none	525 S Chicago Street	■	○			♦		♦	♦			2920, 2900, 2895, 1925	4b, 5a

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73969348	Marine Lumber Service Shop	See Marine Lumber Service Inc.	558 S Kenyon Street	■	❍					♦				2850	4b, 5a
15844	McFabco Steel Corporation	McFabco Steel	635 S Elmgrove Street	■	❍									0470	4b, 5a
71378133	Meeco Manufacturing Co.	Former Tri Emerald	432 S Cloverdale Street	■	□									9045	4b, 5a
8127	Modern Coach Modern Pattern	none	7601 5th Avenue S	■	❍									4792, 4830	4b, 5a
25678771	Modern Machine Company	Modern Machine Company	519 S Elmgrove Street	■	●									0600, 1685	4b, 5a
24615	National Products Inc.	none	8410 Dallas Avenue S	■	●									1140, 1160, 1130, 1270	4c, 5b
16838	National Products S Elmgrove	See Former Long Painting - 10th Avenue Facility	1017 S Elmgrove Street	■	●				♦					1055, 1045, 1065, 1095,	4c, 5b
4203517	Ness Cranes, Inc	none	500 S Sullivan Street	■	❍									7883600600	4b, 5a
62275925	Northern Freight Lines Inc	See Graham Trucking, Inc.	730 S Chicago Street	■	❍					♦				3375, 3380, 2670, 2700	4b, 5a
74745382	Northwest Grating Products, Inc.	Northwest Grating Products	9230 4th Avenue S	■	❍			♦						9051	4d, 5c
7221	Northwind Marine	none	605 S Riverside Drive	■	●									5775	4b, 5a
7969	Olsson Manufacturing Co	See Modern Machine Company	525 S Elmgrove Street	■	❍									0600, 1685	4b, 5a
45787437	Olympic Steel Door	none	7800 7th Avenue S	■	❍		♦			♦	♦			2710	4b, 5a
56779778	Pacific Pile & Marine	Former DC Tooling Repair	582 S Riverside Drive	■	●								♦	6755	4b, 5a
1992812	Petrocard Systems Inc	Petrocard Services Inc 14th Avenue S	9014 14th Avenue S	■	●					♦				8593	4c, 5b
7170	Phils Custom Bindery	See Cloverdale Business Park	309 S Cloverdale Street, Suite A12	■	❍									9012	4d, 5a
7936495	Portable Sheds of America	REDD, Inc.	7510 5th Avenue S	■	❍					♦				5855	4b, 5a
81158515	Rasmussen Equipment Co Inc	See Rasmussen Equipment Company	415 S Cloverdale Street	■	❍					♦	♦	♦		9061	4b, 5a
22497475	Rasmussen Equipment Company	none	8727 5th Avenue S	■	❍									9014	4b, 5a
83132785	Reamco Electronics	none	817 S Kenyon Street	■	●									6840	4c, 5b
17130	Revere Group Seattle	none	9310 4th Avenue S	■	❍	♦								0010	4d, 5c
59283333	Rogers Machinery Co Inc	none	7800 5TH Avenue S	■	❍									2960	4b, 5a
3644425	S Chicago St Dump	none	251 S Chicago Street	■	❍										
17878123	S Holden Abandoned Container	none	750 Block S Holden Street	■	❍	♦									
1852818	S Kenyon St	none	832 S Kenyon Street	■	●										
9401	Sea Mar Family Housing	none	1000 S Henderson	■	●									8720	4c, 5b
6041351	Seattle City Turkey Duck Swale	Turkey Duck Swale	9311 4th Avenue S	■	□										
13152935	Seattle Fire Station 26	none	800 S Cloverdale Street	■	❍					♦				4285	4c, 5b
6407	Seattle Heat Treaters, Inc.	none	521 S Holden Street	■	❍									4315	4b, 5a
59692187	Seidehuber Iron & Bronze Works Inc	none	8009 7th Avenue S	■	❍					♦				1775	4b, 5a
15388822	Service Specialties Inc.	WFI	800 S Kenyon Street	■	●					♦				6860	4c, 5b
29633897	Shawnee Painting Sandblastin	See Former Long Painting - 10th Avenue Facility	8107 10th Avenue S	■	●										
861945	Silver Bay Logging Inc	See Independent Metals Plant 2	7760 8th Avenue S	■	●								♦	3645	4b, 5a
6253396	Sirius Maritime Company	See Cloverdale Business Park	309 S Cloverdale D21	■	❍									9012	4d, 5a
12429	Smith Berger Marine, Inc	none	7915 10th Avenue S	■	●									7819500000	4b, 5b

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81861618	Snyder Industries Inc	See Modern Machine Company	524 S Southern Street	■	●									0600, 1685	4b, 5a
6950604	Sound Propeller Services, Inc.	none	7916 8th Avenue S	■	●									7819500000	4b, 5b
93436287	The Gear Works	The Gear Works Seattle Inc	500 S Portland Street	■	❍	♦		♦						4230, 3180, 3210	4b, 5a
12333317	Tierney Electrical Manufacturing Company	none	7901 7th Avenue S	■	❍	♦								1825	4c, 5a
9457	Tours Northwest	none	8221 7th Avenue S	■	❍									0054	4b, 5a
1661671	Warner's Foreign Auto Repair	Arthur J Warner, Waner's Auto Repair	9001 14th Avenue S	■	●	♦	♦			♦	♦			8556	4c, 5b
77384581	Washington Liftruck	Washington Liftruck Inc	700 S Chicago Street	■	❍				♦					3385	4b, 5a
18137296	West Coast Wire Rope & Rigging	West Coast Wire & Rope Rigging Inc	7777 7th Avenue S	■	❍	♦		♦						3120	4b, 5a
70748294	West Fork Nelson	See Sound Propeller Services, Inc.	7918 8th Avenue S	■	●					♦				7819500000	4b, 5b
89886819	Westec Industries, Inc.	none	8111 7th Avenue S	■	❍	♦								0430, 0470	4b, 5a
19739	Westeel Company	none	8001 7th Avenue S	■	❍									1590	4b, 5a
56738526	WestFork Nelson Inc	See Sound Propeller Services, Inc.	7916 8th Avenue S	■	●					♦				7819500000	4b, 5b
95749157	Workboats Northwest Inc	See Independent Metals Plant 2	7814 8th Avenue S	■	●									2520	4b, 5a

■ - Included in Sections 4.0, 5.0, and 6.0 in Riverside Drive Data Gaps Report
□ - Facility is located in the 7th Avenue S SD Basin Only
❍ - Facility is located in both the 7th Avenue S SD Basin and 8th Avenue S CSO Basin
● - Facility is located in the 8th Avenue S CSO Basin Only
♦ - Additional information regarding this facility is available in Appendix C

GIS - Geographic Information Systems
EPA - U.S. Environmental Protection Agency
CSCSL - Confirmed or Suspected Contaminated Sites List
NPDES - National Pollutant Discharge Elimination System
KCIW - King County Industrial Waste
UST - Underground Storage Tank
LUST - Leaking Underground Storage Tank
NFA - No Further Action
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Table 2
Sediment Samples Collected Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Collection Depth (feet)	Metals	SVOCs[a]	PCBs	Dioxins/ Furans	Organo-metals	VOCs	Pesticides	Source
RCRA Facility Investigation Duwamish Waterway Sediment Investigation, Plant 2 Phase 2b	SD-DUW74	4/2/1996	Surface			•					Windward 2003
	SD-DUW75	4/2/1996				•					
	SD-DUW76	4/2/1996				•					
	SD-DUW77	4/3/1996				•					
	SD-DUW88	4/2/1996				•					
KC CSO Water Quality Assessment	WQA8AVE	3/6/1997	Surface	•[c]	•	•					Windward 2003
	WQA8AVE	3/12/1997		•[c]	•	•					
	WQA8AVE	3/27/1997		•[c]							
	WQA8AVE	4/3/1997		•[c]	•	•					
	WQA8AVE	4/8/1997		•[c]							
	WQA8AVE	4/17/1997		•[c]	•	•					
	WQA8AVE	4/24/1997		•[c]							
	WQA8AVE	5/1/1997		•[c]	•	•					
	WQA8AVE	5/8/1997		•[c]							
	WQASOPK	5/15/1997		•[c]	•	•					
	WQASOPK	5/20/1997		•[c]	•	•					
	WQASOPK	5/28/1997		•[c]	•	•					
	WQASOPK	6/3/1997		•[c]	•	•					
NOAA Site Characterization[b]	WST322	10/21/1997	Surface			•					Windward 2003
	WST325	10/3/1997				•					
	WST326	10/3/1997				•					
	WST327	11/12/1997				•					
	WST328	10/3/1997				•					
	WST329	10/3/1997				•					
	WST330	10/3/1997				•					
	WST331	10/3/1997				•					
	WST332	10/3/1997				•					
	WST333	11/13/1997				•					
	WST334	10/24/1997				•					
	WST335	10/24/1997				•					
	WST337	10/22/1997				•					
	WST338	10/22/1997				•					
	WST340	11/13/1997				•					
	CH0013	10/15/1997				•					
	CH0019	10/20/1997				•					
	CH0022	10/15/1997				•					
	WIT269	11/4/1997				•					

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NOAA Site Characterization[b], continued	WIT270	11/4/1997	Surface			•					Windward 2003
	WIT271	10/3/1997				•					
	WIT272	11/4/1997				•					
	WIT273	11/13/1997				•					
	WIT274	11/4/1997				•					
	WIT275	11/12/1997				•					
	WIT276	10/3/1997				•					
	WIT279	10/17/1997				•					
EPA Site Investigation	DR190	8/13/1998	Surface	•	•	•					Weston 1999
	DR193	8/13/1998		•	•	•					
	DR194	8/20/1998		•	•	•		•			
	DR195	8/20/1998		•	•	•					
	DR196	8/20/1998		•	•	•					
	DR197	8/20/1998		•	•	•					
	DR199	8/20/1998		•	•	•		•			
	DR200	8/20/1998		•	•	•					
	DR201	8/27/1998		•	•	•					
	DR203	8/27/1998		•	•	•	•	•	•	•	
	DR204	8/27/1998		•	•	•					
	DR205	8/27/1998		•	•	•					
	DR221	8/13/1998		•	•	•	•	•	•	•	
	DR222	8/13/1998		•	•	•					
	DR223	8/20/1998		•	•	•					
	DR224	8/20/1998		•	•	•	•	•	•	•	
	DR224	9/21/1998		•	•	•		•		•	
	DR225	8/20/1998		•	•	•					
	DR226	8/27/1998		•	•	•					
	DR227	8/27/1998		•	•	•					
	DR232	8/13/1998		•	•	•		•			
	DR233	8/19/1998		•	•	•					
LDWRI-Benthic	B7a	8/30/2004	Surface	•	•	•		•		•	Windward 2005a
	C9	8/25/2004		•	•	•		•		•	
LDW RI Phase 2 Round 1	LDW-SS99	1/19/2005	Surface	•	•	•				•	Windward 2005a, 2005b, 2007b
	LDW-SS101	1/20/2005		•	•	•					
	LDW-SS97	1/21/2005		•	•	•					
	LDW-SS102	1/24/2005		•	•	•					
	LDW-SS104	1/25/2005		•	•	•				•	

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Sediment Samples Collected Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Collection Depth (feet)	Metals	SVOCs[a]	PCBs	Dioxins/ Furans	Organo-metals	VOCs	Pesticides	Source
LDW RI Phase 2 Round 2	LDW-SS103	3/7/2005	Surface	•	•	•					Windward 2005a, 2005b, 2007b
	LDW-SS91	3/7/2005		•	•	•					
	LDW-SS105	3/8/2005		•	•	•					
	LDW-SS106	3/8/2005		•	•	•					
	LDW-SS95	3/9/2005		•	•	•					
	LDW-SS108	3/10/2005		•	•	•		•		•	
	LDW-SS100	3/11/2005		•	•	•					
	LDW-SS107	3/14/2005		•	•	•		•			
	LDW-SS90	3/14/2005		•	•	•					
	LDW-SS93	3/15/2005		•	•	•				•	
	LDW-SS98	3/15/2005		•	•	•					
	LDW-SSB7a	3/18/2005		•	•	•				•	
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	•	•	•					Windward 2007a
		2/24/2006	1 - 2	•	•	•					
		2/24/2006	2 - 4	•	•	•					
		2/24/2006	4 - 6.8			•					
	LDW-SC47	2/23/2006	0 - 1	•	•	•					
		2/23/2006	1 - 2	•	•	•					
		2/23/2006	2 - 3	•	•	•					
		2/23/2006	3 - 4	•	•	•					
Ecology SPI	TRI-095T	8/11/2006	Surface	•	•	•		•			AECOM 2010
LDW RI Phase 2 Round 3	LDW-SS336	10/3/2006	Surface	•	•	•					Windward 2005a, 2005b, 2007b
	LDW-SS335	10/4/2006		•	•	•					
LDW Dioxin Sampling	LDW-SS530	12/16/2009	Surface	•	•	•	•				Windward 2010a
LDW Outfall Sampling	SS2106-A	3/4/2011	Surface	•	•	•	•				SAIC 2011b
	SS2106-D	3/4/2011		•	•	•					
	SS2106-U	3/7/2011		•	•	•					
	SS2108-A	3/7/2011		•	•	•					
	SS2108-U	3/7/2011		•	•	•					
	SS2112-A	4/8/2011		•	•	•					
	SS2113-A	3/7/2011		•	•	•					
	SS2113-U	3/7/2011		•	•	•					
	SS3037-A	3/3/2011		•	•	•	•				
	SS3037-D	3/3/2011		•	•	•					
	SS3037-U	3/3/2011		•	•	•					

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Sediment Samples Collected Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Collection Depth (feet)	Metals	SVOCs[a]	PCBs	Dioxins/ Furans	Organo-metals	VOCs	Pesticides	Source

SVOCs - Semi-volatile organic compounds
PCBs - Polychlorinated biphenyls
VOCs - Volatile organic compounds
PAHs - Polycyclic aromatic hydrocarbons

a - SVOCs includes PAHs and phthalates
b - Samples also analyzed for polychlorinated terphenyls
c - Samples also analyzed for methylmercury

Table 3
Chemicals Detected Above Screening Levels in Surface Sediment Samples
Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Metals											
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Mercury	6.50E+00	4.53		0.41	0.59	mg/kg dw	16	11
PAHs											
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2-Methylnaphthalene	6.60E-01	1.56	4.20E+01	38	64	mg/kg OC	1.1	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Acenaphthene	4.60E+00	2.65	1.74E+02	16	57	mg/kg OC	11	3.0
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Acenaphthene	9.70E-01	1.56	6.20E+01	16	57	mg/kg OC	3.9	1.1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Anthracene	1.00E+01	2.65	3.77E+02	220	1200	mg/kg OC	1.7	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(a)anthracene	3.10E+00	1.56	2.00E+02	110	270	mg/kg OC	1.8	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Benzo(a)anthracene	4.00E+00	2.65	1.51E+02	110	270	mg/kg OC	1.4	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(a)pyrene	3.20E+00	1.56	2.10E+02	99	210	mg/kg OC	2.1	1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(g,h,i)perylene	2.30E+00	1.56	1.50E+02	31	78	mg/kg OC	4.8	1.9
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Chrysene	3.80E+00	1.56	2.40E+02	110	460	mg/kg OC	2.2	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Chrysene	5.70E+00	2.65	2.15E+02	110	460	mg/kg OC	2.0	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Dibenzo(a,h)anthracene	5.80E-01	1.56	3.70E+01	12	33	mg/kg OC	3.1	1.1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Dibenzofuran	4.00E+00	2.65	1.51E+02	15	58	mg/kg OC	10	2.6
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Dibenzofuran	4.60E-01	1.56	2.90E+01	15	58	mg/kg OC	1.9	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Fluoranthene	1.70E+01	2.65	6.42E+02	160	1200	mg/kg OC	4.0	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Fluoranthene	8.10E+00	1.56	5.20E+02	160	1200	mg/kg OC	3.3	<1
EPA Site Investigation	DR221	8/13/1998	Fluoranthene	4.20E+00	1.57	2.68E+02	160	1200	mg/kg OC	1.7	<1
LDW RI Phase 2 Round 3	LDW-SS335	10/4/2006	Fluoranthene	7.50E+00	2.89	2.60E+02	160	1200	mg/kg OC	1.6	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Fluorene	6.80E+00	2.65	2.57E+02	23	79	mg/kg OC	11	3.2
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Fluorene	8.20E-01	1.56	5.30E+01	23	79	mg/kg OC	2.3	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Indeno(1,2,3-cd)pyrene	1.60E+00	1.56	1.00E+02	34	88	mg/kg OC	2.9	1.1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Indeno(1,2,3-cd)pyrene	9.70E-01	2.65	3.66E+01	34	88	mg/kg OC	1.1	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Phenanthrene	2.20E+01	2.65	8.30E+02	100	480	mg/kg OC	8.3	1.7
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Phenanthrene	7.10E+00	1.56	4.60E+02	100	480	mg/kg OC	4.6	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total benzofluoranthenes	4.40E+00 J	1.56	2.80E+02	230	450	mg/kg OC	1.2	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HPAH (calc'd)	3.45E+01 J	1.56	2.21E+03	960	5300	mg/kg OC	2.3	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Total HPAH (calc'd)	4.26E+01 J	2.65	1.61E+03	960	5300	mg/kg OC	1.7	<1
LDW RI Phase 2 Round 2	LDW-SS95	3/9/2005	Total LPAH (calc'd)	4.40E+01	2.65	1.66E+03	370	780	mg/kg OC	4.5	2.1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total LPAH (calc'd)	1.18E+01	1.56	7.56E+02	370	780	mg/kg OC	2	<1
Phthalates											
LDW RI Phase 2 Round 3	LDW-SS335	10/4/2006	Bis(2-ethylhexyl)phthalate	2.60E+00	2.89	9.00E+01	47	78	mg/kg OC	1.9	1.2
LDW RI Phase 2 Round 3	LDW-SS335	10/4/2006	Butyl benzyl phthalate	2.00E-01	2.89	6.90E+00	4.9	64	mg/kg OC	1.4	<1
Other SVOCs											
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	1,4-Dichlorobenzene	1.50E-01	2.26	6.60E+00	3.1	9	mg/kg OC	2.1	<1
Ecology SPI	TRI-095T	8/11/2006	2,4-Dimethylphenol	6.40E-02	2.39		29	29	ug/kg dw	2.2	2.2
LDW RI Phase 2 Round 3	LDW-SS336	10/3/2006	Benzoic acid	1.60E+00	2.09		650	650	ug/kg DW	2.5	2.5
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzyl alcohol	6.50E-01	3.55	1.80E+01	57	73	ug/kg DW	11	8.9
LDW RI Phase 2 Round 3	LDW-SS336	10/3/2006	Benzyl alcohol	5.40E-01 J	2.09		57	73	ug/kg DW	9.5	7.4

Table 3
Chemicals Detected Above Screening Levels in Surface Sediment Samples
Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzyl alcohol	5.40E-01	4.53		57	73	ug/kg DW	9.5	7.4
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzyl alcohol	3.50E-01	2.61	1.30E+01	57	73	ug/kg DW	6.1	4.8
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzyl alcohol	3.30E-01 J	2.81	1.20E+01	57	73	ug/kg DW	5.8	4.5
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzyl alcohol	2.10E-01	2.26	9.30E+00	57	73	ug/kg DW	3.7	2.9
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzyl alcohol	1.70E-01	2.35	7.20E+00	57	73	ug/kg DW	3.0	2.3
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzyl alcohol	1.20E-01 J	1.59	7.50E+00	57	73	ug/kg DW	2.1	1.6
Ecology SPI	TRI-095T	8/11/2006	Benzyl alcohol	7.10E-02	2.39		57	73	ug/kg DW	1.2	<1
LDWRI-Benthic	B7a	8/30/2004	Hexachlorobenzene	6.30E-02 J	1.64	3.84E+00	0.38	2.3	mg/kg OC	10	1.7
EPA Site Investigation	DR194	8/20/1998	Hexachlorobenzene	2.00E-02	3.06	6.54E-01	0.38	2.3	mg/kg OC	1.7	<1
EPA Site Investigation	DR203	8/27/1998	Phenol	7.10E-01	1.06	6.70E+01	420	1200	ug/kg DW	1.7	<1
PCBs											
NOAA Site Characterization	WST334	10/24/1997	PCBs	1.20E-01	0.95	1.26E+01	12	65	mg/kg OC	1.1	<1
NOAA Site Characterization	WIT276	10/3/1997	PCBs	1.20E-01	0.91	1.32E+01	12	65	mg/kg OC	1.1	<1
KC WQA	WQASOPK	5/20/1997	PCBs	2.25E-01	1.73	1.30E+01	12	65	mg/kg OC	1.1	<1
NOAA Site Characterization	WIT275	11/12/1997	PCBs	2.00E-01	1.4	1.43E+01	12	65	mg/kg OC	1.2	<1
EPA SI	DR222	8/13/1998	PCBs	1.32E-01	0.95	1.40E+01	12	65	mg/kg OC	1.2	<1
KC WQA	WQASOPK	5/28/1997	PCBs	2.49E-01	1.77	1.41E+01	12	65	mg/kg OC	1.2	<1
Plant 2 RFI-2b	SD-DUW75	4/2/1996	PCBs	2.70E-01	1.7	1.60E+01	12	65	mg/kg OC	1.3	<1
NOAA Site Characterization	WIT270	11/4/1997	PCBs	1.00E-01	0.52	1.92E+01	12	65	mg/kg OC	1.6	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	PCBs	2.10E-01	0.945	2.20E+01	12	65	mg/kg OC	1.8	<1
KC WQA	WQASOPK	5/15/1997	PCBs	3.81E-01	1.67	2.28E+01	12	65	mg/kg OC	1.9	<1
NOAA Site Characterization	CH0019	10/20/1997	PCBs	4.30E-01	1.5	2.87E+01	12	65	mg/kg OC	2.4	<1
EPA SI	DR201	8/27/1998	PCBs	6.55E-01	1.7	3.85E+01	12	65	mg/kg OC	3.2	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	PCBs	1.20E+00	2.61	4.60E+01	12	65	mg/kg OC	3.8	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	PCBs	8.60E-01	1.56	5.50E+01	12	65	mg/kg OC	4.6	<1

mg/kg - Milligrams per kilogram
DW - Dry weight
TOC - Total organic carbon
OC - Organic carbon normalized
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards
PAHs - Polycyclic aromatic hydrocarbons

J - Estimated value between the method detection limit and the laboratory reporting limit
Total HPAH - Total high molecular weight PAH
Total LPAH - Total low molecular weight PAH
SVOCs - Semi-volatile organic compounds
PCBs - Polychlorinated biphenyls

Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentrations to the CSL or SQS; exceedance factors are shown only if they are greater than 1.
Sampling Events are listed in Table 1.

Table 4
Chemicals Detected Above Screening Levels in Subsurface Sediment Samples
Near the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
PAHs												
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Chrysene	1.50E+00	1.42	1.10E+02	110	460	mg/kg OC	1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Fluoranthene	3.90E+00	1.81	2.20E+02	160	1200	mg/kg OC	1.4	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Fluoranthene	2.90E+00	1.42	2.00E+02	160	1200	mg/kg OC	1.3	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Total HPAH (calc'd)	1.37E+01	1.42	9.60E+02	960	5300	mg/kg OC	1	<1
Other SVOCs												
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzyl alcohol	6.40E-02 J	1.42		57	73	ug/kg dw	1.1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Hexachlorobenzene	1.00E-02	1.42	7.00E-01	0.38	2.3	mg/kg OC	1.8	<1
PCBs												
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	PCBs	2.00E+00	1.75	1.10E+02	12	65	mg/kg OC	9.2	1.7
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	PCBs	4.90E-01 J	1.61	3.00E+01	12	65	mg/kg OC	2.5	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	PCBs	2.70E-01	1.94	1.40E+01	12	65	mg/kg OC	1.2	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	PCBs	1.85E-01	1.42	1.30E+01	12	65	mg/kg OC	1.1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	PCBs	2.14E-01	1.81	1.20E+01	12	65	mg/kg OC	1	<1

mg/kg - Milligrams per kilogram
DW - Dry weight
TOC - Total organic carbon
OC - Organic carbon normalized
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards

J - Estimated value between the method detection limit and the laboratory reporting limit
PAH - Polycyclic aromatic hydrocarbons
Total HPAH - Total high molecular weight PAH
SVOCs - Semi-volatile organic compounds
PCBs - Polychlorinated biphenyls

Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentrations to the CSL or SQS; exceedance factors are shown only if they are greater than 1.
Sampling events are listed in Table 1.

Table 5
CSO/EOF Discharges to the Lower Duwamish Waterway

Outfall	Type (Owner)	Discharge Serial Number	Location	Average Overflow Frequency (events/year) 2000 to 2007	Annual Average Volume (mgy) 2000 to 2007
Diagonal Avenue S.[a]	CSO (SPU) SD (SPU)	NA	RM 0.5 E	20.1	15.8[b]
Hanford No. 1[c]	CSO (King County)	031	RM 0.5 E	9	18.75
Duwamish pump station East	CSO (King County)	035	RM 0.5 E	<1.0	0.51
Duwamish pump station West	CSO (King County)	034	RM 0.5 W	<1.0	0.60
S. Brandon Street	CSO (King County)	041	RM 1.1 E	23	31.63
Terminal 115	CSO (King County)	038	RM 1.9 W	3	3.52
S. Brighton Street	CSO (SPU) SD (SPU)	NA	RM 2.1 E	NA[g]	NA
King County Airport SD#3/PS44 EOF[d]	SD (King County) EOF (SPU)	NA	RM 2.8 E	NA	NA
E. Marginal Way S. pump station	EOF (King County)	043	RM 2.8 E	None recorded	NA
8th Avenue S.	CSO (King County)	040	RM 2.8 W	0	0
King County Airport SD#2/PS78 EOF[e]	SD (King County) EOF (SPU)	NA	RM 3.8 E	NA	NA
Michigan Street	CSO (King County)	039	RM 1.9 E	11	17.58
W. Michigan	CSO (King County)	042	RM 2.0 W	4	1.23
Norfolk	CSO (King County) SD (King County) EOF (SPU)[f]	044	RM 4.8 E	4	0.28

Source: King County 2008

a - The Diagonal Avenue S. SD outfall is shared by stormwater and seven separate overflow points, including the City's Diagonal CSOs and the County's Hanford No. 1 CSO. The overflow frequency and volume listed are for the Diagonal CSOs only.

b - This average volume does not include the contribution from King County's Hanford No. 1 CSO, but does include the remaining seven overflow points that discharge through the Diagonal Avenue S. CSO/SD.

c - Hanford No. 1 discharges to the LDW through the Diagonal Avenue S. SD.

d – SPU Pump Station 44 discharges via EOF No. 117 to King County Airport SD#3 at Slip 4.

e – SPU Pump Station 78 discharges via EOF No. 156 to King County Airport SD#2, near Boeing Isaacson.

f – SPU Pump Station 17 discharges to the Norfolk CSO/SD.

g – Has not overflowed since monitoring began in March 2000.

mgy – million gallons per year

NA – Not available

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	7th-ST1 09/10/08 Inline SD	7th-ST1 03/17/09 Inline SD	7th-ST1 04/29/10 Inline SD	7th-ST1 12/01/10 Inline SD	7th-ST1 03/17/09 Trap SD	7th-ST1 12/01/10 Trap SD	7th-ST2 09/16/08 Inline SD	7th-ST2 11/11/10 Inline SD	7th-ST2 03/17/09 Trap SD	7th-ST2 11/11/10 Trap SD	7th-ST3 08/28/08 Inline SD	7th-ST3 03/12/09 Inline SD	7th-ST3 04/29/10 Inline SD	7th-ST3 11/11/10 Inline SD	7th-ST3 03/12/09 Trap SD
Metals (mg/kg)																	
Arsenic	57	93	20	20	20	16	20	20	<6	<6	30	30	20	18	20	<8	20
Copper	390	390	251	223	208	211	193	198	19.2	8.9	27.7	28.9	159	176	154	37.5	126
Lead	450	530	188	189	157	180	149	127	3	4	27	33	173	190	160	35	104
Mercury	0.41	0.59	0.26	0.2	0.19	0.19	0.18	0.18	<0.05	<0.02	<0.1	0.09	0.26	0.28	0.23	<0.03	0.2
Zinc	410	960	**735**	**674**	**678**	**787**	**918**	**776**	84	50	229	216	**654**	**738**	**775**	160	**619**
Total petroleum hydrocarbons (mg/kg)																	
TPH-diesel	2,000	--	240	930	330	490	--	890	<59	<64	<140	<130	<110	1,000	260	<79	--
TPH-oil	2,000	--	1,300	**4,800**	1,300	**2,800**	--	**5,000**	<120	<130	600	<270	220	**3,700**	1,300	600	--
LPAH (mg/kg DW)																	
Acenaphthene	0.5	0.73	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.021	<0.079	<0.17
Acenaphthylene	1.3	1.3	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.02 J	<0.079	<0.17
Anthracene	0.96	4.4	<0.14	<0.2	0.13 J	<0.15	--	0.15 J	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.057	<0.079	<0.17
Fluorene	0.54	1.0	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.021 J	<0.079	<0.17
Naphthalene	2.1	2.4	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.024 J	<0.079	<0.17
Phenanthrene	1.5	5.4	0.24	0.42	0.59	0.28	--	0.37	<0.019	<0.02	<0.02	0.032 J	0.11	0.28	0.29	0.14	0.11 J
LPAH	5.2	13	0.24	0.42	0.72	0.28	--	0.52 J	<0.019	<0.02	<0.02	0.032 J	0.11	0.28	0.433	0.14	0.11 J
HPAH (mg/kg DW)																	
2-Methylnaphthalene	0.67	1.4	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.023 J	<0.079	<0.17
Benzo(a)anthracene	1.3	1.6	0.24	0.36	0.68	0.29	--	0.30	<0.019	<0.02	<0.02	<0.059	0.089	0.27	0.22	0.078 J	<0.17
Benzo(a)pyrene	1.6	3.0	0.42	0.46	0.78	0.44	--	0.40	<0.019	<0.02	<0.02	0.033 J	0.14	0.44	0.41	0.092	0.11 J
Benzo(g,h,i)perylene	0.67	0.72	0.27	0.33	0.40	***0.93***	--	***1.1***	<0.019	<0.02	<0.02	0.06	0.059	0.38	0.27	0.20	0.12 J
Total benzofluoranthenes	3.2	3.6	1.18	1.06	1.78	0.33	--	0.40	<0.019	<0.02	0.02	<0.059	0.41	1.03	0.82	0.056 J	0.26 J
Chrysene	1.4	2.8	0.52	0.56	1.2	0.50	--	0.85	<0.019	<0.02	0.02	0.043 J	0.14	0.45	0.45	0.14	0.20
Dibenzo(a,h)anthracene	0.23	0.54	<0.14	<0.2	0.17 J	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.086	<0.079	<0.17
Fluoranthene	1.7	2.5	0.80	0.85	**1.9**	0.80	--	1.2	<0.019	<0.02	0.03	0.06	0.25	0.66	0.90	0.27	0.22
Indeno(1,2,3-cd)pyrene	0.6	0.69	0.19	0.28	0.36	0.23	--	0.26	<0.019	<0.02	<0.02	<0.059	0.047	0.27	0.21	<0.079	<0.17
Pyrene	2.6	3.3	1.0	0.92	1.2	0.70	--	1.0	<0.019	<0.02	0.029	<0.059	0.21	0.64	0.54	0.22	0.30
HPAH	12	17	5.8	5.88	10.25	4.22	--	5.51	<0.019	<0.02	0.119	0.255 J	1.76	5.17	4.73	1.06 J	1.47 J
Phthalates (mg/kg DW)																	
Bis(2-ethylhexyl)phthalate	1.3	1.9	***3.4***	**1.5 B**	***7.3***	***2.1 B***	--	***9.3 B***	<0.019	0.017 J	0.19 B	0.15	0.51	**1.5**	***2.1***	**1.4**	***3.4***
Butyl benzyl phthalate	0.063	0.9	**0.27**	**0.22**	**0.4 J**	**0.24**	--	<0.22	<0.019	<0.02	0.029	0.038 J	**0.10**	**0.20**	**0.32**	<0.079	**0.12 J**
Diethylphthalate	0.2	1.2	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	<0.079	<0.17
Dimethylphthalate	0.071	0.16	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	0.032	**0.091 J**	0.056	<0.079	<0.17
Di-n-butylphthalate	1.4	5.1	<0.14	<0.2	0.13 J	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	0.04	0.12 J	0.11	<0.079	0.17 J
Di-n-octylphthalate	6.2	NV	<0.14	<0.2	0.21	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	0.046	<0.079	0.17

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	7th-ST1 09/10/08 Inline SD	7th-ST1 03/17/09 Inline SD	7th-ST1 04/29/10 Inline SD	7th-ST1 12/01/10 Inline SD	7th-ST1 03/17/09 Trap SD	7th-ST1 12/01/10 Trap SD	7th-ST2 09/16/08 Inline SD	7th-ST2 11/11/10 Inline SD	7th-ST2 03/17/09 Trap SD	7th-ST2 11/11/10 Trap SD	7th-ST3 08/28/08 Inline SD	7th-ST3 03/12/09 Inline SD	7th-ST3 04/29/10 Inline SD	7th-ST3 11/11/10 Inline SD	7th-ST3 03/12/09 Trap SD
PCBs (mg/kg DW)																	
Total PCBs	0.13	1.0	***2.4***	**0.188**	**0.236**	**0.42**	**0.264**	**0.31**	<0.02	<0.019	<0.02	<0.019	0.114	0.06	0.082	<0.02	0.031
Other organic compounds (mg/kg DW)																	
Phenol	0.42	1.2	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	0.13	<0.059	<0.02	<0.15	0.069 B	<0.079	<0.17
2-Methylphenol	0.063	0.063	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	<0.079	<0.17
4-Methylphenol	0.67	0.67	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	0.059 J	<0.17
Benzoic acid	0.65	0.65	<1.4	<2	<1.7	<1.5	--	<2.2	<0.19	<0.2	***0.81***	0.14 J	<0.2	<1.5	0.12 J	<0.79	<1.7
Benzyl alcohol	0.057	0.073	<0.14	<0.2	<0.17	<0.77	--	<1.1	<0.019	<0.02	***0.25***	<0.059	<0.02	<0.15	0.041	0.43	<0.17
Dibenzofuran	0.54	0.7	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	<0.079	<0.17
Hexachlorobenzene	0.022	0.07	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	<0.079	<0.17
N-Nitrosodiphenylamine	0.028	0.04	<0.14	<0.2	<0.17	<0.15	--	<0.22	<0.019	<0.02	<0.02	<0.059	<0.02	<0.15	<0.034	<0.079	<0.17
Dioxins/furans (ng/kg) TEQ																	
Dioxins/furans TEQ	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: Ecology 2011

SPU - Seattle Public Utilities
SD - Storm Drain
CS - Combined sewer
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET
mg/kg - Milligrams per kilogram
DW - Dry weight
ng/kg - Nanograms per kilogram

TEQ - toxic equivalency
J - Estimated value between the method detection limit & the laboratory reporting limit
B- the analyte was detected in the method blank
N - tentative identification
-- - Not analyzed
TPH - Total petroleum hydrocarbons
LPAH - Low molecular weight polycyclic aromatic hydrocarbon
HPAH - High molecular weight polycyclic aromatic hydrocarbon
PCBs - Polychlorinated biphenyls
MTCA - Model Toxics Control Act

738 Exceeds the SQS/LAET, MTCA, LDW dioxin/furan background
0.74 Exceeds CSL/2LAET

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	7th-ST3 11/11/10 Trap SD	MH20 04/13/05 Inline SD	MH21B 04/13/05 Inline SD	MH22 04/13/05 Inline SD	MH203 11/17/08 Inline SD	MH228 05/26/09 Inline SD	MH229 05/26/09 Inline SD	MH230 05/27/09 Inline SD	CB154 11/18/09 CB SD	CB154-D 11/18/09 CB SD	RCB129 01/18/08 RCB SD	RCB131 02/15/08 RCB SD	RCB132 03/12/08 RCB SD	RCB137 03/25/08 RCB SD	RCB157 10/24/08 RCB SD
Metals (mg/kg)																	
Arsenic	57	93	30	20	30	20	<8	20 J	20 J	13 J	<8	<8	5.4	50	8.5	<6	<7
Copper	390	390	139	175	148	129	111	135 J	137 J	59.4 J	274 J	267 J	135	166	***701***	9.1	36.1
Lead	450	530	110	151	130	119	116	121 J	124 J	30 J	17 J	17 J	54	***548***	110	4	16
Mercury	0.41	0.59	0.19	0.17	0.2	0.2	0.11	0.22 J	0.19 J	<0.03	<0.03	<0.03	<0.05	0.11	<0.06	<0.05	<0.05
Zinc	410	960	**724**	**547**	**515**	**575**	**562**	**477 J**	**426 J**	147 J	176 J	175 J	***3,650***	**827**	***1,650***	123	119
Total petroleum hydrocarbons (mg/kg)																	
TPH-diesel	2,000	--	<170	720	560	380	780	680	350	380	920	980	1,300	360	1,500	230	<67
TPH-oil	2,000	--	640	**2,900**	**3,100**	1,900	**3,900**	**2,600**	1,300	**2,100**	970	980	**4,200**	**2,200**	**6,300**	1,200	400
LPAH (mg/kg DW)																	
Acenaphthene	0.5	0.73	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	0.10
Acenaphthylene	1.3	1.3	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	0.066
Anthracene	0.96	4.4	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	0.16	<0.35	<0.034	0.07
Fluorene	0.54	1.0	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	0.16
Naphthalene	2.1	2.4	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	0.19
Phenanthrene	1.5	5.4	0.29	<0.35	<0.29	0.59	0.64	0.21 J	<0.34	<0.13	0.068 J	<0.089	0.31	0.70	<0.35	0.034 J	**3.1**
LPAH	5.2	13	0.29	0.35	0.29	0.59	0.64	0.21 J	<0.34	<0.13	0.068 J	<0.089	0.31	0.86	<0.35	0.034 J	3.69
HPAH (mg/kg DW)																	
2-Methylnaphthalene	0.67	1.4	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.89	<0.25	<0.06	<0.35	<0.034	0.072
Benzo(a)anthracene	1.3	1.6	0.24	0.39	<0.29	0.56	0.50	0.25 J	0.22 J	<0.13	<0.089	<0.089	<0.25	1.2	<0.35	<0.034	0.07
Benzo(a)pyrene	1.6	3.0	0.30	0.50	0.31	0.76	0.56	0.38 J	0.32 J	0.076 J	<0.089	<0.089	<0.25	**2.2**	<0.35	<0.034	0.068
Benzo(g,h,i)perylene	0.67	0.72	***0.76***	<0.35	<0.29	0.29	0.35	0.34 J	0.28 J	0.07 J	<0.089	<0.089	<0.25	***0.80***	<0.35	<0.034	0.035 J
Total benzofluoranthenes	3.2	3.6	0.31	1.45	0.84	1.99	1.41	0.84	0.72	0.14 J	0.074 J	<0.089	<0.25	***5.1***	<0.35	0.041	0.51
Chrysene	1.4	2.8	0.55	0.72	0.38	0.94	0.77	0.53	0.43	0.13	0.068 J	0.065 J	0.27	**1.6**	<0.35	0.058	0.58
Dibenzo(a,h)anthracene	0.23	0.54	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	**0.44**	<0.35	<0.034	<0.058
Fluoranthene	1.7	2.5	0.75	1.4	0.57	**1.9**	1.5	0.65	0.56	0.1 J	0.19	0.18	0.98	***2.5***	<0.35	0.058 J	***3.2***
Indeno(1,2,3-cd)pyrene	0.6	0.69	0.19 J	0.35	<0.29	0.24	0.26	0.24 J	0.19 J	<0.13	<0.089	<0.089	<0.25	***1.0***	<0.35	<0.034	<0.058
Pyrene	2.6	3.3	0.69	1.0	0.43	1.2	1.3	0.60	0.52	0.1 J	0.14	0.12	0.73	1.6	<0.35	0.10	1.7
HPAH	12	17	3.79 J	6.91	3.37	9.87	8.06	4.67 J	3.96 J	0.756 J	0.472 J	0.365 J	1.98	***22***	<0.35	0.298 J	6.67 J
Phthalates (mg/kg DW)																	
Bis(2-ethylhexyl)phthalate	1.3	1.9	***7.0***	***6.4***	***3.8***	***6.1***	***8.3***	***4.9***	***4.0***	0.63	***33***	***36***	***3.6***	0.31	***4.2 B***	***2.7***	1.1
Butyl benzyl phthalate	0.063	0.9	**0.41**	<0.35	<0.29	**0.68**	***2.6***	<0.38	**0.44**	<0.13	**0.095 J**	**0.12**	**0.25**	**0.13**	**0.54**	**0.17**	**0.074**
Diethylphthalate	0.2	1.2	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	<0.058
Dimethylphthalate	0.071	0.16	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	***0.295***	***0.3***	<0.25	<0.06	<0.35	<0.034	<0.058
Di-n-butylphthalate	1.4	5.1	<0.22	<0.35	<0.29	<0.28	1.0	<0.38	<0.34	<0.13	0.245	0.23	<0.25	<0.06	<0.35	<0.034	<0.058
Di-n-octylphthalate	6.2	NV	<0.22	<0.35	<0.29	<0.24	0.66	0.31 J	<0.34	0.08 J	0.955	0.91	<0.25	<0.06	<0.35	0.052	0.045 J

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	7th-ST3 11/11/10 Trap SD	MH20 04/13/05 Inline SD	MH21B 04/13/05 Inline SD	MH22 04/13/05 Inline SD	MH203 11/17/08 Inline SD	MH228 05/26/09 Inline SD	MH229 05/26/09 Inline SD	MH230 05/27/09 Inline SD	CB154 11/18/09 CB SD	CB154-D 11/18/09 CB SD	RCB129 01/18/08 RCB SD	RCB131 02/15/08 RCB SD	RCB132 03/12/08 RCB SD	RCB137 03/25/08 RCB SD	RCB157 10/24/08 RCB SD
PCBs (mg/kg DW)																	
Total PCBs	0.13	1.0	0.07	**0.44**	**0.274 J**	0.119 J	**0.182**	**0.45**	**0.44**	0.11	**0.23 J**	**0.226 J**	0.075	**0.139**	0.076	<0.02	<0.019
Other organic compounds (mg/kg DW)																	
Phenol	0.42	1.2	<0.22	<0.35	<0.29	<0.28	0.36	<0.38	<0.34	<0.13	0.245	0.24	<0.25	<0.06	<0.35	<0.034	0.069
2-Methylphenol	0.063	0.063	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	***0.14***	***0.14***	<0.25	<0.06	<0.35	<0.034	<0.058
4-Methylphenol	0.67	0.67	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	0.098	0.1	<0.25	<0.06	<0.35	<0.034	0.23
Benzoic acid	0.65	0.65	<2.2	<3.5	<2.9	<2.4	<1.7	<3.8	<3.4	<1.3	0.34 J	0.36 J	<2.5	<0.6	<3.5	<0.34	<0.58
Benzyl alcohol	0.057	0.073	<0.22	<0.35	<0.29	<0.24	0.30	<0.38	<0.34	<0.13	***5.05***	***5.5***	0.25	<0.06	<0.35	<0.034	<0.058
Dibenzofuran	0.54	0.7	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	0.22
Hexachlorobenzene	0.022	0.07	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	<0.058
N-Nitrosodiphenylamine	0.028	0.04	<0.22	<0.35	<0.29	<0.24	<0.17	<0.38	<0.34	<0.13	<0.089	<0.089	<0.25	<0.06	<0.35	<0.034	<0.058
Dioxins/furans (ng/kg) TEQ																	
Dioxins/furans TEQ	1.6	--	--	**23 J**	--	--	--	--	--	--	--		--	--	--	--	--

Source: Ecology 2011

SPU - Seattle Public Utilities
SD - Storm Drain
CS - Combined sewer
SQS - Sediment Quality Standard from
Washington Sediment Management Standards
CSL - Cleanup Screening Level from
Washington Sediment Management Standards
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET
mg/kg - Milligrams per kilogram
DW - Dry weight
ng/kg - Nanograms per kilogram

TEQ - toxic equivalency
J - Estimated value between the method detection limit & the laboratory reporting limit
B- the analyte was detected in the method blank
N - tentative identification
-- - Not analyzed
TPH - Total petroleum hydrocarbons
LPAH - Low molecular weight polycyclic aromatic hydrocarbon
HPAH - High molecular weight polycyclic aromatic hydrocarbon
PCBs - Polychlorinated biphenyls
MTCA - Model Toxics Control Act

738	Exceeds the SQS/LAET, MTCA, LDW dioxin/furan background
0.74	Exceeds CSL/2LAET

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	RCB165 03/27/09 RCB SD	RCB170 05/28/09 RCB SD	RCB203 03/17/09 RCB SD	RCB213 05/27/09 RCB SD	RCB214 05/27/09 RCB SD	RCB223 06/03/09 RCB SD	RCB227 03/11/11 RCB SD	RCB228 03/11/11 RCB SD	RCB239 04/01/11 RCB SD	RCB240 04/01/11 RCB SD	RCB263 04/29/11 RCB SD
Metals (mg/kg)													
Arsenic	57	93	21 J	36 J	11	17 J	15 J	11 J	10	7	<10	<10	10
Copper	390	390	99.6 J	161 J	131	127 J	98 J	48.8 J	***406***	81.6	37	88.9	27.7
Lead	450	530	45 J	200 J	**521**	116 J	91 J	25 J	363	45	26	74	15
Mercury	0.41	0.59	<0.06	0.08 J	0.22	0.09 J	0.08 J	0.07 J	**0.56**	0.04	<0.04	0.10	<0.02
Zinc	410	960	**517 J**	289 J	**521**	249 J	230 J	214 J	**823**	217	147	**458**	116
Total petroleum hydrocarbons (mg/kg)													
TPH-diesel	2,000	--	440	480	440	840	700	100	**2,600**	<64	330	1,000	160
TPH-oil	2,000	--	**2,800**	**3,200**	**3,200**	**4,000**	**3,600**	510	**11,000**	280	1,700	**6,300**	760
LPAH (mg/kg DW)													
Acenaphthene	0.5	0.73	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Acenaphthylene	1.3	1.3	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Anthracene	0.96	4.4	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	0.35 J	0.073 J	<0.089	<0.24	<0.056
Fluorene	0.54	1.0	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	0.16 J	0.018 J	<0.089	<0.24	<0.056
Naphthalene	2.1	2.4	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	0.11 J	0.012 J	<0.089	<0.24	<0.056
Phenanthrene	1.5	5.4	0.057 J	0.18 J	0.34	0.21	0.12 J	0.054	0.68	0.14	0.075 J	0.32	0.087
LPAH	5.2	13	0.057 J	0.18 J	0.34	0.21	0.12 J	0.054	1.3 J	0.243 J	0.075 J	0.32	0.087
HPAH (mg/kg DW)													
2-Methylnaphthalene	0.67	1.4	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	0.21	0.14 J	<0.089	<0.24	<0.056
Benzo(a)anthracene	1.3	1.6	0.051 J	0.14 J	0.22	0.13 J	0.12 J	0.065	0.49	0.056	<0.089	<0.24	<0.056
Benzo(a)pyrene	1.6	3.0	0.086	0.18 J	0.27	0.14 J	0.12 J	0.085	1.2	0.044	<0.089	<0.24	<0.056
Benzo(g,h,i)perylene	0.67	0.72	0.087	0.14 J	0.14	0.082 J	0.072 J	0.041	***1.4 J***	0.12 J	0.078 J	0.22 J	0.092
Total benzofluoranthenes	3.2	3.6	0.27	0.4 J	0.66	0.36	0.30	0.20	0.55	0.036	<0.089	0.19 J	0.05 J
Chrysene	1.4	2.8	0.25	0.51	0.39	0.38	0.32	0.11	**1.4 J**	0.12 J	0.076 J	0.24 J	0.084
Dibenzo(a,h)anthracene	0.23	0.54	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Fluoranthene	1.7	2.5	0.15	0.38	0.57	0.64	0.32	0.15	1.6	0.28	0.13	0.44	0.11
Indeno(1,2,3-cd)pyrene	0.6	0.69	0.046 J	<0.23	<0.12	<0.16	<0.14	0.032 J	0.29	0.027	0.089	<0.24	<0.056
Pyrene	2.6	3.3	0.21	0.26	0.58	0.43	0.29	0.11	1.7 J	0.16 J	0.08 J	0.27 J	0.10
HPAH	12	17	1.42 J	2.41 J	3.49	2.5 J	1.8 J	0.993 J	8.63 J	0.843 J	0.364 J	1.36 J	0.436 J
Phthalates (mg/kg DW)													
Bis(2-ethylhexyl)phthalate	1.3	1.9	**1.4**	***2.2 B***	***5.3 B***	***2.2***	***2.6***	0.20	***1,400***	0.74	1.2	***4.9***	**1.4 B**
Butyl benzyl phthalate	0.063	0.9	**0.11**	<0.23	**0.45**	**0.22**	**0.39**	**0.17**	***1.4 J***	**0.16 J**	**0.18 J**	**0.19 J**	**0.092 J**
Diethylphthalate	0.2	1.2	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Dimethylphthalate	0.071	0.16	<0.059	***0.31***	**0.12**	***0.40***	***0.18***	<0.039	***0.17 J***	0.014 J	<0.089	<0.24	<0.056
Di-n-butylphthalate	1.4	5.1	<0.059	<0.23	**0.17**	<0.16	<0.14	<0.039	<0.19	0.054 J	<0.089	<0.24	0.092
Di-n-octylphthalate	6.2	NV	0.077	0.34	**0.59**	0.34	0.20	0.029 J	<0.19	<0.021	<0.089	<0.24	<0.056

Table 6a
Chemicals Detected Above Screening Levels at
Storm Drain Sample Locations in the 7th Avenue S SD Basin

Chemical	SQS/ LAET	CSL/ 2LAET	RCB165 03/27/09 RCB SD	RCB170 05/28/09 RCB SD	RCB203 03/17/09 RCB SD	RCB213 05/27/09 RCB SD	RCB214 05/27/09 RCB SD	RCB223 06/03/09 RCB SD	RCB227 03/11/11 RCB SD	RCB228 03/11/11 RCB SD	RCB239 04/01/11 RCB SD	RCB240 04/01/11 RCB SD	RCB263 04/29/11 RCB SD
PCBs (mg/kg DW)													
Total PCBs	0.13	1.0	0.061 J	**0.209 J**	**0.202**	**0.251**	**0.195**	0.02	**0.54 J**	0.102 J	<0.02	0.02	<0.019
Other organic compounds (mg/kg DW)													
Phenol	0.42	1.2	<0.059	<0.23	0.13	<0.16	<0.14	<0.039	<0.19	0.042	0.19	0.14 J	0.056
2-Methylphenol	0.063	0.063	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
4-Methylphenol	0.67	0.67	<0.059	<0.23	<0.12	<0.16	0.1 J	<0.039	***1.4***	0.48	***2.7***	0.21 J	0.61
Benzoic acid	0.65	0.65	<0.59	<2.3	<1.2	<1.6	<1.4	<0.39	<1.9	0.18 J	***1.1***	***1.3 J***	0.14 J
Benzyl alcohol	0.057	0.073	<0.059	<0.23	***0.55***	<0.16	<0.14	<0.039	<0.95	***0.85***	***0.089 J***	<1.2	<0.056
Dibenzofuran	0.54	0.7	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Hexachlorobenzene	0.022	0.07	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	0.018 J	<0.089	<0.24	<0.056
N-Nitrosodiphenylamine	0.028	0.04	<0.059	<0.23	<0.12	<0.16	<0.14	<0.039	<0.19	<0.021	<0.089	<0.24	<0.056
Dioxins/furans (ng/kg) TEQ													
Dioxins/furans TEQ	1.6	--	--	--	--	--	--	--	--	--	**10.1 J**	**7.09 J**	--

Source: Ecology 2011

SPU - Seattle Public Utilities
SD - Storm Drain
CS - Combined sewer
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET
mg/kg - Milligrams per kilogram
DW - Dry weight
ng/kg - Nanograms per kilogram

TEQ - toxic equivalency
J - Estimated value between the method detection limit & the laboratory reporting limit
B- the analyte was detected in the method blank
N - tentative identification
-- - Not analyzed
TPH - Total petroleum hydrocarbons
LPAH - Low molecular weight polycyclic aromatic hydrocarbon
HPAH - High molecular weight polycyclic aromatic hydrocarbon
PCBs - Polychlorinated biphenyls
MTCA - Model Toxics Control Act

738	Exceeds the SQS/LAET, MTCA, LDW dioxin/furan background
0.74	Exceeds CSL/2LAET

Table 6b
Chemicals Detected Above Screening Levels at
Catch Basin Sample Locations in the 8th Avenue S CSO Basin

Chemical	SQS/ LAET	CSL/ 2LAET	CB113[1] 12/05/07 CB CS	CB206[2] 06/03/09 CB SD	CB206[2] 04/13/11 CB SD	RCB181 03/10/10 RCB CS	RCB182 03/10/10 RCB CS	RCB183 03/10/10 RCB CS	RCB184 03/10/10 RCB CS	RCB229 03/11/11 RCB CS	SD14 03/10/10 RCB CS
Metals (mg/kg)											
Arsenic	57	93	<6	<18.1	12.2	9	8 J	10	10	<30	<8
Copper	390	390	285 J	***590***	***557***	105	116	85.5	103	***641***	112
Lead	450	530	40 J	***1,280***	400	83 J	101 J	***719 J***	61 J	280	111 J
Mercury	0.41	0.59	<0.05	***2.96***	***0.74***	0.04	<0.1	***0.87***	0.08	***3.80***	0.24
Zinc	410	960	392 J	***5,830***	***4,150 J***	278	**813**	**592**	**430**	***1,640***	**602**
Total petroleum hydrocarbons (mg/kg)											
TPH-diesel	2,000	--	**67,000**	**9,000**	**8,800**	--	860	1,000	530	1,500	580
TPH-oil	2,000	--	**390,000**	**28,000**	**38,000**	--	**3,100**	**2,200**	1,700	**5,900**	**2,700**
LPAH (mg/kg DW)											
Acenaphthene	0.5	0.73	<1.7	<1.5	0.39 J	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33
Acenaphthylene	1.3	1.3	<1.7	<1.2	<0.56	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33
Anthracene	0.96	4.4	<1.7	<3.8	0.87	<0.17	0.16 J	<0.1	<0.23	<0.088	0.38
Fluorene	0.54	1.0	<1.7	<1.9	**0.96**	<0.17	0.21	<0.1	0.14 J	<0.088	0.45
Naphthalene	2.1	2.4	<1.7	<0.67	1.4	<0.17	0.1 J	<0.1	<0.23	0.54	0.63
Phenanthrene	1.5	5.4	**1.9**	***19***	**5.0**	0.36	1.3	<0.1	0.75	0.51	**1.9**
LPAH	5.2	13	1.9	***26.9***	**8.62 J**	0.36	1.77 J	<0.1	0.89 J	1.05	3.36
HPAH (mg/kg DW)											
2-Methylnaphthalene	0.67	1.4	<1.7	<1.0	***3***	<0.17	0.32	<0.1	0.25	**0.7**	0.24 J
Benzo(a)anthracene	1.3	1.6	<1.7	***8.3***	***2.2***	0.3	0.34	<0.1	0.39	0.45	0.62
Benzo(a)pyrene	1.6	3.0	<1.7	***7.3***	**1.8**	0.42	0.58	0.11	0.45	0.43	0.65
Benzo(g,h,i)perylene	0.67	0.72	<1.7	***1.9***	***4.4***	0.18	0.44	0.11	0.33	***1.9 J***	0.37
Total benzofluoranthenes	3.2	3.6	<1.7	***19.2***	1.7 J	0.9	1.3	0.28	1.1	0.46	1.44
Chrysene	1.4	2.8	<1.7	***16***	***3.5***	0.6	**1.5**	0.28	0.87	1.0 J	1.1
Dibenzo(a,h)anthracene	0.23	0.54	<1.7	<1.2	**0.34 J**	<0.17	0.058 J	<0.1	<0.23	<0.088	<0.33
Fluoranthene	1.7	2.5	<1.7	***32***	***7.0***	0.85	**1.7**	0.28	0.92	1.3	**1.9**
Indeno(1,2,3-cd)pyrene	0.6	0.69	<1.7	***2.1***	***1.4 J***	0.14 J	0.2	0.053 J	0.19 J	0.37	0.23 J
Pyrene	2.6	3.3	2.7 Y	***22***	***5.8***	0.78	2.5	0.56	1.2	1.1 J	1.9
HPAH	12	17	2.7 Y	***128***	***28.1 J***	5.07 J	9.92 J	1.95 J	6.55 J	7.01 J	9.65 J
Phthalates (mg/kg DW)											
Bis(2-ethylhexyl)phthalate	1.3	1.9	***440***	***99***	***41***	***5.2***	***27***	***7.3***	***12***	***14***	***24***
Butyl benzyl phthalate	0.063	0.9	<1.7	***5.2***	***6.4 J***	**0.43**	<0.19	<0.1	***73***	***4.4 J***	***1.6***
Diethylphthalate	0.2	1.2	<1.7	<1.2	<0.56	<0.17	**0.65**	**0.2**	<0.23	<0.088	<0.33
Dimethylphthalate	0.071	0.16	<1.7	***0.60***	<0.56	<0.17	***1.2***	<0.1	<0.23	***0.28***	<0.33
Di-n-butylphthalate	1.4	5.1	<1.7	***5.8***	***32***	0.17 J	***0.33***	<0.1	<0.23	<0.088	0.35
Di-n-octylphthalate	6.2	NV	4.9 NJ	3.9	2.0	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33

Table 6b
Chemicals Detected Above Screening Levels at
Catch Basin Sample Locations in the 8th Avenue S CSO Basin

Chemical	SQS/ LAET	CSL/ 2LAET	CB113[1] 12/05/07 CB CS	CB206[2] 06/03/09 CB SD	CB206[2] 04/13/11 CB SD	RCB181 03/10/10 RCB CS	RCB182 03/10/10 RCB CS	RCB183 03/10/10 RCB CS	RCB184 03/10/10 RCB CS	RCB229 03/11/11 RCB CS	SD14 03/10/10 RCB CS
PCBs (mg/kg DW)											
Total PCBs	0.13	1.0	<0.81	***5.93 J***	***2.46***	**0.67 NJ**	**0.49 NJ**	***1.3 NJ***	**0.34**	**0.71 J**	**0.28 NJ**
Other organic compounds (mg/kg DW)											
Phenol	0.42	1.2	<1.7	<1.4	***9.3***	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33
2-Methylphenol	0.063	0.063	<1.7	<1.2	<0.56	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33
4-Methylphenol	0.67	0.67	<1.7	***1.8***	0.34 J	***2***	***1.9***	0.14	0.23	0.068 J	0.3 J
Benzoic acid	0.65	0.65	<17	***12***	<5.6	<1.7	***0.8 J***	0.32 J	<2.3	0.36 J	<3.3
Benzyl alcohol	0.057	0.073	<1.7	<1.2	***0.39 J***	<0.17	<0.19	<0.1	<0.23	***0.2 J***	<0.33
Dibenzofuran	0.54	0.7	<1.7	<1.0	0.42 J	<0.17	<0.19	<0.1	<0.23	<0.088	0.24 J
Hexachlorobenzene	0.022	0.07	<1.7	<1.2	<0.56	<0.17	<0.19	<0.1	<0.23	<0.088	***0.22 J***
N-Nitrosodiphenylamine	0.028	0.04	<1.7	<1.2	***0.99***	<0.17	<0.19	<0.1	<0.23	<0.088	<0.33
Dioxins/furans (ng/kg) TEQ											
Dioxins/furans TEQ	1.6	--	--	--	--	--	--	--	--	--	--

[1] - Private Property Catch Basin (National Products)
[2] - Private Property Catch Basin (Independent Metals Plant 2)
SPU - Seattle Public Utilities
SD - Storm Drain
CS - Combined sewer
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET
mg/kg - Milligrams per kilogram
DW - Dry weight

ng/kg - Nanograms per kilogram
TEQ - toxic equivalency
J - Estimated value between the method detection limit & the laboratory reporting limit
B- the analyte was detected in the method blank
N - tentative identification
-- - Not analyzed
TPH - Total petroleum hydrocarbons
LPAH - Low molecular weight polycyclic aromatic hydrocarbon
HPAH - High molecular weight polycyclic aromatic hydrocarbon
PCBs - Polychlorinated biphenyls
MTCA - Model Toxics Control Act

813	Exceeds the SQS/LAET, MTCA, LDW dioxin/furan background
641	Exceeds CSL/2LAET

Table 6c
Chemicals Detected Above Screening Levels at
Storm DrainSample Locations Near Marine Lumber Service

Chemical	SQS/ LAET	CSL/ 2LAET	CB137 03/27/09 Soil SD	RCB165 03/27/09 RCB SD	RCB159 12/05/08 Soil SD	RCB159-0 05/20/11 Soil SD	RCB159-3 05/20/11 Soil SD	RCB159-12 05/20/11 Soil SD	RCB273-0 05/20/11 Soil SD	RCB273-3 05/20/11 Soil SD	RCB273-12 05/20/11 Soil SD	RCB275-0 05/20/11 Soil SD	RCB275-3 05/20/11 Soil SD	RCB275-12 05/20/11 Soil SD
Metals (mg/kg)														
Arsenic	57	93	***710 J***	21 J	***750***	***474***	***950***	***260***	***204.5***	***245***	16	***544***	***430***	38
Copper	390	390	***4,930 J***	99.6 J	***4,520***	***3,240***	***8,370***	***2,110***	***404***	218.5	22.2	***2,730***	***1,890***	***419***
Lead	450	530	118 J	45 J	280	176	105	20	59	23	5.5	***1,040***	***995***	129
Mercury	0.41	0.59	<0.22	<0.06	0.27	0.27	0.26	0.13	0.19	0.12	0.07	0.20	0.17	0.11
Zinc	410	960	***1,950 J***	**517 J**	***1,490***	**825**	***1,660***	**594**	**458**	344	48	**938**	**733**	128
Total petroleum hydrocarbons (mg/kg)														
TPH-diesel	2,000	--	640	440	440	220	230	<63	<69	<61	<55	510	560	160
TPH-oil	2,000	--	**4,900**	**2,800**	**3,000**	1,500	1,900	420	445	185	<110	**3,700**	**2,900**	610
LPAH (mg/kg DW)														
Acenaphthene	0.5	0.73	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Acenaphthylene	1.3	1.3	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Anthracene	0.96	4.4	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Fluorene	0.54	1.0	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Naphthalene	2.1	2.4	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Phenanthrene	1.5	5.4	0.13 J	0.057 J	<0.19	0.098	<0.19	<0.099	<0.094	0.015 J	0.016 J	0.1 J	<0.2	0.054 J
LPAH	5.2	13	0.13 J	0.057 J	<0.19	0.098	<0.19	<0.099	<0.094	0.015 J	0.016 J	0.1 J	<0.2	0.054 J
HPAH (mg/kg DW)														
2-Methylnaphthalene	0.67	1.4	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	0.019	<0.19	<0.2	<0.098
Benzo(a)anthracene	1.3	1.6	<0.14	0.051 J	<0.19	0.059 J	<0.19	<0.099	<0.094	<0.093	<0.019	0.17 J	<0.2	<0.098
Benzo(a)pyrene	1.6	3.0	<0.14	0.086	<0.19	0.078 J	0.096 J	<0.099	<0.094	0.014 J	<0.019	0.25	0.20	0.078 J
Benzo(g,h,i)perylene	0.67	0.72	0.11 J	0.087	<0.19	0.25	0.37	0.074 J	0.097	0.039	0.01 J	**0.67**	0.51	0.17
Total benzofluoranthenes	3.2	3.6	0.28 J	0.27	0.30	0.14	0.21	<0.099	0.0775 J	0.028	<0.019	0.30	0.23	0.078 J
Chrysene	1.4	2.8	0.22	0.25	0.28	0.21	0.29	0.064 J	0.071 J	0.023	0.0091 J	0.57	0.42	0.088 J
Dibenzo(a,h)anthracene	0.23	0.54	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Fluoranthene	1.7	2.5	0.28	0.15	0.19	0.16	0.15 J	<0.099	0.0585 J	0.025	<0.018	0.29	0.21	0.093 J
Indeno(1,2,3-cd)pyrene	0.6	0.69	<0.14	0.046 J	<0.19	<0.098	0.096 J	<0.099	<0.094	<0.093	<0.019	0.15 J	<0.2	0.049 J
Pyrene	2.6	3.3	0.25	0.21	<0.19	0.17	0.15 J	<0.099	0.066 J	0.025	0.0097 J	0.46	0.32	0.11
HPAH	12	17	1.42	1.42 J	1.07	1.07 J	1.36 J	0.138 J	0.40 J	0.154 J	0.0242 J	2.86 J	1.89	0.666 J
Phthalates (mg/kg DW)														
Bis(2-ethylhexyl)phthalate	1.3	1.9	***1.9***	**1.4**	0.71	0.99 B	1.2 B	0.24 B	0.295 B	0.12 B	0.027 B	***2.3 B***	**1.7 B**	0.098 B
Butyl benzyl phthalate	0.063	0.9	**0.14**	**0.11**	<0.19	**0.083 J**	<0.19	<0.099	<0.094	0.012 J	<0.019	**0.45**	***4.9***	<0.098
Diethylphthalate	0.2	1.2	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.045	<0.19	<0.2	<0.098
Dimethylphthalate	0.071	0.16	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	***0.18 J***	**0.13 J**	<0.098
Di-n-butylphthalate	1.4	5.1	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
Di-n-octylphthalate	6.2	NV	0.13 J	0.077	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098

Table 6c
Chemicals Detected Above Screening Levels at
Storm DrainSample Locations Near Marine Lumber Service

Chemical	SQS/ LAET	CSL/ 2LAET	CB137 03/27/09 Soil SD	RCB165 03/27/09 RCB SD	RCB159 12/05/08 Soil SD	RCB159-0 05/20/11 Soil SD	RCB159-3 05/20/11 Soil SD	RCB159-12 05/20/11 Soil SD	RCB273-0 05/20/11 Soil SD	RCB273-3 05/20/11 Soil SD	RCB273-12 05/20/11 Soil SD	RCB275-0 05/20/11 Soil SD	RCB275-3 05/20/11 Soil SD	RCB275-12 05/20/11 Soil SD
PCBs (mg/kg DW)														
Total PCBs	0.13	1.0	0.032	0.061 J	**0.145**	**0.171**	0.127	0.058	**0.213**	0.076	0.02	**0.280**	**0.175**	**0.148**
Other organic compounds (mg/kg DW)														
Phenol	0.42	1.2	0.27	<0.059	<0.19	0.23	0.26	<0.099	0.073 J	0.027	<0.019	0.1 J	0.15 J	<0.098
2-Methylphenol	0.063	0.063	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.019	<0.19	<0.2	<0.098
4-Methylphenol	0.67	0.67	<0.14	<0.059	<0.19	0.054 J	<0.19	<0.099	<0.094	<0.093	<0.036	<0.19	<0.2	<0.098
Benzoic acid	0.65	0.65	***1.0 J***	<0.59	<1.9	***0.94 J***	***1.7 J***	<0.99	0.405 J	0.15 J	<0.36	0.34 J	***0.69 J***	<0.98
Benzyl alcohol	0.057	0.073	<0.14	<0.059	<0.19	***3.7***	***1.6***	0.14	***1.75***	***0.285***	<0.019	***0.11 J***	***0.28***	<0.098
Dibenzofuran	0.54	0.7	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.019	<0.019	<0.019	<0.2	<0.098
Hexachlorobenzene	0.022	0.07	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.093	<0.018	<0.19	<0.2	<0.098
N-Nitrosodiphenylamine	0.028	0.04	<0.14	<0.059	<0.19	<0.098	<0.19	<0.099	<0.094	<0.019	<0.019	<0.19	<0.2	<0.098
Dioxins/furans (ng/kg) TEQ														
Dioxins/furans TEQ	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--

SPU - Seattle Public Utilities
SD - Storm Drain
CS - Combined sewer
SQS - Sediment Quality Standard from Washington Sediment Management Standards
CSL - Cleanup Screening Level from Washington Sediment Management Standards
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET
mg/kg - Milligrams per kilogram
DW - Dry weight
ng/kg - Nanograms per kilogram

TEQ - toxic equivalency
J - Estimated value between the method detection limit & the laboratory reporting limit
B- the analyte was detected in the method blank
N - tentative identification
-- - Not analyzed
TPH - Total petroleum hydrocarbons
LPAH - Low molecular weight polycyclic aromatic hydrocarbon
HPAH - High molecular weight polycyclic aromatic hydrocarbon
PCBs - Polychlorinated biphenyls
MTCA - Model Toxics Control Act

825	Exceeds the SQS/LAET, MTCA, LDW dioxin/furan background
750	Exceeds CSL/2LAET

Table 7
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/ Map ID[2]
3963	14th Avenue S Street Improvements	14th Avenue S, S Cloverdale & S Director	Riverside Drive								C2/192
46918719	1st Kenyon Drum	1st Avenue S & SW Kenyon Street	1st Avenue S SD								B2/106
15642	4th Avenue S & S Trenton Storm Drain	4th Avenue S & S Trenton Street	Riverside Drive								B2/194
64516429	5th Ave S Site	8229 5th Avenue S	1st Avenue S SD								B2/139
22726	640 S Riverside Dr	640 S Riverside Drive	Riverside Drive		●						B1/54
43565732	7 Eleven Food Store 230723931L	11657 Des Moines Way S	Restoration Areas					●			C4/311
97913617	ABC Metal Finishing	501 Elmgrove S	1st Avenue S SD								B2/146
10207	Absolute German	9510 14th Avenue S	Sea King Industrial Park			●					C3/275
2077	Ace Galvanizing Inc 96th	429 S 96th	Sea King Industrial Park	●	●	●		●		●	B3/284
2079	Advance Electroplating	9585 8th Ave S	Sea King Industrial Park	●	●					●	B3/273
82395194	Aero Lac Inc	420 S 96th Street Suite 11	Sea King Industrial Park								B2/270
72668839	African Northwest, Inc.	470 S Kenyon Street	Riverside Drive					●			B2/98
25327412	Ahrenius Manufacturing Inc	1425 S 93rd	Sea King Industrial Park								C2/233
6060	AIC International	736 S Chicago Street	Riverside Drive								B2/79
56256949	Alaska Cargo Transport Inc	6700 Marginal Way SW	Terminal 115								A1/11
22342251	All City Auto Wrecking & Sales Inc	9438 Des Moines Memorial Drive	Sea King Industrial Park						●		C3/276
5469634	Allied Body Works Inc	625 S 96th Street	Sea King Industrial Park	●							B3/285
63942573	Allied Bolt Co	8619 17th Avenue S	Terminal 117								C2/181
60993417	Aloha Cargo Transport Inc	6700 West Marginal Way SW Terminal 115	Terminal 115								A1/12
26135396	American Bathtub Refinishers Inc	1412 S Henderson Street	Riverside Drive	●							C2/201
77734273	American Plastic Manufacturing Incorporated	526 S Monroe Street	Riverside Drive								B2/125
21995	Architectural Stone Werkes	429 S 96th Street	Sea King Industrial Park			●					B3/282
73914265	ARCO Service Station 4375	11215 8th Avenue S	Sea King Industrial Park								B3/308
17746	Arrowhead Senior Housing Association	9200 2nd Avenue SW	1st Avenue S SD								B2/221
2882470	AT&T Wireless South Park	9128 10th Avenue S	Sea King Industrial Park								B2/227
8162841	ATC Distribution Group	401 S Webster	EAA-2		●			●			B1/43
16677	Atomic Fabrications	1605 S 93rd Street, Unit E R	Sea King Industrial Park								C2/245
53457146	Auto Site Automotive	11803 Des Moines Memorial Drive	Restoration Areas	●				●	●		C4/312
19959367	Bayside Automotive Storage Inc	NE Corner of 96th Street & 10th Avenue S	Sea King Industrial Park								B3/278
72626372	Beal Bucket Site	17th Place S 100 Yards E of Des Moines Way S	Restoration Areas								C3/291
82885756	BJ Truck Wrecking	7225 2nd Avenue S	EAA-2								B1/25
58835952	Boeing D & SG Oxbow Site	10700 West Marginal Way S	Restoration Areas	●							C3/294
60381981	Boeing South Park	1420 S Trenton Street	Terminal 117	●		●					C2/198
37926748	Boyer Logistics Inc	7318 4th Ave S	EAA-2	●		●				●	B1/29
15947	Boyer Towing	7318 4th Avenue S	EAA-2							●	B1/30

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4328	Braicks Construction Inc	309 S Cloverdale Street, Suite B3	Riverside Drive								B2/185
24205	Brosson Co LLC	10808 Meyers Way S	Sea King Industrial Park								B3/300
3329	Bus Yard Site Preparation CSWGP	130 S Kenyon Street	1st Avenue S SD								B2/99
7503	Cain Bolt & Gasket	7724 7th Avenue S	Riverside Drive								B1/71
1866123	Carolyn M Burke Site	9326 7th Avenue S	Sea King Industrial Park								B2/234
56766158	Cascade Diesel Engine Co LLC Cloverdale	426 S Cloverdale Street	Riverside Drive								B2/176
4914795	CB Finishing	9587 8th Avenue S	Sea King Industrial Park								B3/274
11972772	Centimark Corp Seattle Office	430 S 96th Street 5	Sea King Industrial Park								B3/272
66498524	Chevron 306536	11845 Des Moines Way S	Restoration Areas								C4/313
43643315	Chevron 98484	8700 14th Avenue S	Riverside Drive					•			C2/187
38246778	Christian Brothers Floor Svc Inc	309 S Cloverdale Suite C20	Riverside Drive	•							B2/189
3479178	Cliff Housers Automotive	806 S 112th Street	Sea King Industrial Park					•			B3/307
1852542	Clyde West Inc	9615 West Marginal Way S	Restoration Areas	•							C3/287
4612472	Coach Maintenance	255 S Holden Street	Riverside Drive					•			B1/63
2430	Coast Crane Company	8250 5th Avenue S	Riverside Drive		•		•				B2/168
9604	Consistent Coatings, Inc.	719 S Riverside Drive	Riverside Drive								B1/67
67814731	Container Care Puget Sound	9600 8th Avenue S	Sea King Industrial Park			•					B2/250
15446	Craft Built	10714 1st Avenue S	Sea King Industrial Park								B3/295
98422914	Crowley Marine Services Inc Terminal 115	6020 West Marginal Way	Terminal 115					•			A1/13
39411556	Cunningham Manufacturing Co Inc	318 S Webster Street	EAA-2								B1/39
82818857	Custom Craiting	233 S Holden Street	Riverside Drive					•			B1/65
12865	Custom Metal Spinning LLC	9330 15th Avenue S, Unit C	Sea King Industrial Park								C2/239
61231536	Custom Roofing Inc	8001 5th Avenue S	1st Avenue S SD					•			B2/130
6915930	Delta Marine Industries	1608 S 96th Street	Sea King Industrial Park			•					C2/258
22978975	Delta Marine Industries Inc	1608 S 96th Street	Sea King Industrial Park	•							C2/259
89923232	DEOX	1605 S 93rd Street Building EC	Sea King Industrial Park								C2/241
21209	Diamond Painting	1601 S 92nd Place	Sea King Industrial Park								C2/223
2544945	Diamond Painting LLC 1601	1601 S 92nd Place, Suite B	Sea King Industrial Park								C2/224
97573251	Douglas Management Dock	7100 2nd Avenue SW	1st Avenue S SD		•			•			A1/17
75318226	Duwamish Manor	15th Avenue S & S 93rd st	Sea King Industrial Park	•							C2/235
2258	Eastern Supply Company	7745 1st Avenue S	1st Avenue S SD		•						A2/93
91926231	Eastmont Transfer Station	7155 West Marginal Way SW	1st Avenue S SD								A1/40
95735434	Ecolights Northwest LLC	9411 8th Avenue S Suite 3	Sea King Industrial Park	•							B2/257
15029	Emerald City Machine	160 S 108th Street	Sea King Industrial Park								B3/296
6955180	EMJ	1231A S Director Street	Sea King Industrial Park								B2/210

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5542431	Exxon Co USA Div of Exxon Cor	7150 2nd Avenue SW	1st Avenue S SD								A1/19
11942	Fabrication Specialties Ltd Art	527 S Portland Street	Riverside Drive								B1/74
47625361	Federal Express Corp BFI	9320 15th Avenue S	Sea King Industrial Park								C2/240
3565459	Ferguson Construction	7433 5th Avenue S	EAA-2		•		•	•	•		B1/38
68488062	Fire King of Seattle, Inc.	240 S Holden Street	Riverside Drive								B1/57
90247719	First Student Seattle	130 S Kenyon Street	1st Avenue S SD			•					B2/95
1736255	Flamespray Northwest Inc	250 S Chicago Street	1st Avenue S SD								B2/80
10791	Flying Fish Express	7937 2nd Avenue S	1st Avenue S SD								B2/131
3533187	FMH Material Handling Solutions	1313 S 96th Street	Sea King Industrial Park	•	•			•			B3/280
14644	Former Airport Towing	301 S Sullivan Street	Riverside Drive								B1/70
29149762	Former Brown Engineering	550 S Monroe Street	Riverside Drive								B2/126
47552226	Former Burned Laundry	1414 S Concord Street	Riverside Drive								C2/195
92792171	Former Bus & Air Parcel Service Inc	9004 14th Avenue S	Riverside Drive		•			•			C2/203
93511879	Former Cascade Enterprises	8709 14th Avenue S	Riverside Drive								C2/188
88237831	Former Chemithon Surface Finishing Inc	521 S Monroe Street	Riverside Drive								B2/135
93927211	Former Crosby Auto Repair Shop	8621 14th Avenue S	Riverside Drive					•			C2/182
28226866	Former Discount Drive Axle of Seattle	309 S Cloverdale Street Suite A11	Riverside Drive								B2/179
38576231	Former Emerald Services Group	500 S Sullivan Street	Riverside Drive					•			B2/172
63168342	Former Glitsa American Inc	327 S Kenyon Street	Riverside Drive		•			•			B2/108
42127616	Former Hurlen Construction	700 S Riverside Drive	Riverside Drive		•			•		•	B1/59
2278	Former King Auto & Truck Wrecking	543 S Monroe Street	Riverside Drive						•		B2/132
1370584	Former KJM Electric Co	521 S Monroe Street	Riverside Drive								B2/136
71678662	Former Long Painting - 10th Avenue Facility	8025 10th Avenue S	Riverside Drive					•	•		B2/138
12724197	Former Magnetic Penetrant Services Co Inc	309 S Cloverdale Street Unit B20	Riverside Drive								B2/184
11457	Former Mikes Truck Repair & Fabrication	515 S Southern Street	Riverside Drive								B2/158
78952325	Former Mill Engineering & Supply Co	516 S Chicago Street	Riverside Drive								B2/83
6661875	Former Pipe Specialities Inc	531 S Portland Street	Riverside Drive								B2/76
92291647	Former Resource Recycling Technologies	8000 5th Avenue S	Riverside Drive								B2/140
26215242	Former Rockwell Automation	500 S Chicago Street	Riverside Drive								B2/90
64285373	Former Schauer Northwest Inc	8819 14th Avenue S	Riverside Drive								C2/196
41287367	Former Scott Andrews Property	8520 14th Avenue S	Riverside Drive					•			C2/178
84435338	Former Screen Matic Arts	9354 4th Avenue S	Riverside Drive								B2/225
18225132	Former Seattle Refrigeration and Manufacturing	1057 S Director Street	Riverside Drive								B2/213
48968474	Former South Park BP	8819 14th Avenue S	Riverside Drive					•			C2/197
13132191	Former Spencer Industries Inc	8410 Dallas Avenue S	Riverside Drive		•						B2/167
78879968	Former Superior Precision Analytical	309 S Cloverdale Street Suite B24	Riverside Drive								B2/183

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23653754	Former Tom Thurber	1420 S Henderson Street	Riverside Drive					•			C2/200
45558857	Former Yale Materials Handling NW Inc	8101 7th Avenue S	Riverside Drive								B2/153
44534539	Formula Corp	7901 2nd Avenue S	1st Avenue S SD								B2/111
24384	Frog Hollow Corp	1425 S 93rd Street	Sea King Industrial Park								C2/232
27446996	Fruehauf Trailer Inc Seattle	9426 8th Avenue S	Sea King Industrial Park	•	•						B2/269
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	•	•	•		•			B2/208
5152950	Gasoline Service Station Former	12249 8th Avenue S							•		B4/315
93436287	Gear Works Seattle, Inc.	500 S Portland Street	Riverside Drive	•		•					B1/68
23498	Gene Summy Lumber	6000 West Marginal Way SW	Terminal 115							•	A1/10
18369741	Glen Acres Home Association	1000 S 112th	Sea King Industrial Park					•			B3/305
10128921	Global Fabricators Inc.	7619 5th Avenue S	Riverside Drive					•			B1/58
86343865	Global Intermodal Systems	1818 S 93rd Street	Sea King Industrial Park							•	C2/238
54287319	Gold Co	12459 Des Moines Way S	Restoration Areas		•			•			C4/318
73412486	Graham Trucking, Inc.	722 S Chicago Street	Riverside Drive							•	B2/85
7130166	Greg Peterson Duwamish River	None	1st Avenue S SD								A2/122
36385877	Guinns Automotive & Electric	245 S Austin Street	Riverside Drive	•							B1/51
1557860	Halfon Candy Co	9229 10th Avenue S	Sea King Industrial Park		•						B2/236
41888934	Hansen Machine Corp Seattle	712 S Portland Street	Riverside Drive								B1/73
73671237	Heartwood, Inc.	1414 S Director Street	Riverside Drive	•							C2/205
82131388	HSD Highline Boulevard Park Warehouse	12833 20th Avenue S	Restoration Areas								C4/319
76764554	Hudson Bay Insulation	8230 5th Avenue S	Riverside Drive								B2/164
94892538	Hussman Corp West Marginal Way	7440 A West Marginal Way S	EAA-2								B1/36
93252843	Icon Materials Seattle Asphalt	1115 S 96th Street	Sea King Industrial Park		•			•	•		B3/286
9309618	Independent Metals Plant 1	747 S Monroe Street	Riverside Drive				•			•	B2/137
16139	Independent Metals Plant 2	816 S Kenyon Street	Riverside Drive			•				•	B2/89
23115	Industrial Battery	211 S Austin Street	EAA-2	•							B1/53
2154	Industrial Container Services WA LLC	7152 1st Avenue S	EAA-2	•	•		•			•	B1/23
99142846	International Construction Equipment	8101 Occidental Avenue S	1st Avenue S SD								B2/152
97992431	International Lubricants Inc	7930 Occidental S	1st Avenue S SD								B2/113
4154808	International Paint LLC	1541 S 92nd Place Suite C	Sea King Industrial Park	•							C2/214
25623222	Interstate Coatings Inc UST 9194	754 S Chicago Street	Riverside Drive					•			B2/87
2335	Interstate Coatings, Inc.	754 S Chicago Street	Riverside Drive		•						B2/91
2491	Jones Property	12441 20th Avenue S	Restoration Areas						•		C4/316
94931167	Jones Washington Stevedoring Co Ust2313	7245 West Marginal Way SW	1st Avenue S SD					•			A1/27

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22294	Jons Recycling	7620 2nd Avenue S	EAA-2								B1/55
13389849	Joseph B Meder	12025 Des Moines Way S	Restoration Areas					•			C4/314
11249	JV Constructors Inc	325 S Kenyon Street	EAA-2								B2/115
11797661	Karawis Inc	10723 1st Avenue S	Sea King Industrial Park					•			B3/297
2489	Kaspac Chiyoda Property	1237 S Director Street	Sea King Industrial Park					•	•		C2/209
87373824	Kelly Ryan Inc South Park	7235 2nd Avenue S	EAA-2							•	B1/26
29892767	Kenyon Drum	Kenyon Street S at Transfer	Riverside Drive								B2/103
6292538	King County DOT Road Services Division	South Park Bridge Project	Terminal 117								C2/161
2404488	King Electrical Mfg Co	9131 10th Avenue S	Sea King Industrial Park	•							B2/222
12901	Koepping & Koepping	1705 S 93rd Street, Building F7	Sea King Industrial Park								C2/243
90355185	KRS Marine	1621 S 92nd Place	Sea King Industrial Park								C2/219
2320	Laidlaw	7739 1st Avenue S	1st Avenue S SD		•			•			B2/123
2010311	LDW 2nd Ave S Outfall	South Park Basin & Orchard Street	EAA-2								B1/21
16981594	Lion Trucking Inc	8425 1st Avenue S (share w/Old Dominion Freight)	1st Avenue S SD					•			A2/171
83549384	Liquid Air Corp of N America	7500 2nd Avenue S	EAA-2					•			B1/44
58864121	Lloyd Electric Apparatus Co	7126 West Marginal Way SW	Terminal 115	•							A1/20
39232961	Lukas Machine Inc	707 S Riverside Drive	Riverside Drive			•					B1/72
23949	M & M Grinding	10846 Meyers Way S									B3/303
21626	MacDonald Miller Co Inc	7717 Detroit Avenue SW	1st Avenue S SD								A1/75
36776588	MacDonald Miller Service Inc	7707 Detroit Avenue SW	1st Avenue S SD					•			A1/69
5885095	Machinist Inc Tooling Division	8201 7th Avenue S	Riverside Drive								B2/159
72567932	Machinists Inc Plant 2	509 S Austin Street	Riverside Drive								B1/50
22736	Machinists Inc.	7600 5th Avenue S	Riverside Drive			•					B1/56
46338473	Magnetic & Penetrant Services Co Inc	8135 1st Avenue S	1st Avenue S SD			•					B2/160
15761	Manufacturing Technologies, Inc.	7709 5th Avenue S	Riverside Drive								B1/62
38921541	Marine Lumber Service Inc	525 S Chicago Street	Riverside Drive			•		•			B2/97
73969348	Marine Lumber Service Shop	558 S Kenyon Street	Riverside Drive					•			B2/100
2263	Markey Property Parcel 4	9520 10th Avenue S	Sea King Industrial Park						•		B2/261
3546421	Mason Dixon Intermodal Inc	9515 10th Avenue S	Sea King Industrial Park	•							B2/260
7747737	Mccall Oil Seattle Home Heating Burien	11441 Des Moines Way			•			•	•		C4/309
15844	McFabco Steel Corporation	635 S Elmgrove Street	Riverside Drive								B2/147
36919863	McKinstry Co S Barton St	855 S Barton Street	Sea King Industrial Park					•			B2/229
71378133	Meeco Manufacturing Co.	432 S Cloverdale Street	Riverside Drive								B2/175
9677878	Metro Holden Marginal Way	West Marginal Way SW &S Holden Street	1st Avenue S SD								B1/61
54346566	Metro Term 117	West Marginal Way S Terminal 117	1st Avenue S SD								B2/127

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12326	Meyers Way Sand Pit	9400 Meyers Way	1st Avenue S SD								A2/228
2334	Mikes Aussie Machine Shop	12441 Des Moines Memorial Drive	Restoration Areas						•		C4/317
231954	MKT Southpark LLC	9525 14th Avenue S	Sea King Industrial Park								C2/265
8127	Modern Coach Modern Pattern	7601 5th Ave S	Riverside Drive								B1/52
25678771	Modern Machine Company	519 S Elmgrove Street	Riverside Drive								B2/148
95231135	Moimoi Property	10118 Des Moines Memorial Drive S	Restoration Areas		•						C3/293
42665774	Morgan Trucking Inc Seattle	9228 10th Avenue S	Sea King Industrial Park					•			B2/254
24615	National Products Inc.	8410 Dallas Avenue S	Riverside Drive								B2/166
16838	National Products S Elmgrove	1017 S Elmgrove Street	Riverside Drive				•				B2/149
4203517	Ness Cranes, Inc	500 S Sullivan Street	Riverside Drive								B2/173
14108	Nicos Auto Service	10819 Myers Way S	Sea King Industrial Park								B3/299
66671686	Nonferrous Metals Inc	230 S Chicago Street	1st Avenue S SD								B2/77
2347	Norman Property	11603 10th Avenue S	Sea King Industrial Park						•		B4/310
25963342	North Star Ice Equipment Inc	8151 Occidental Avenue S	1st Avenue S SD					•			B2/157
62275925	Northern Freight Lines Inc	730 S Chicago Street	Riverside Drive					•			B2/88
14839	Northwest Connecting Rod	1705 S 93rd Street, Unit F7	Sea King Industrial Park								C2/244
84427474	Northwest Container Services Inc	6110 West Marginal Way SW Terminal 115	Terminal 115				•				A1/4
2536	Northwest EnviroService 2	8105 1st Avenue S	1st Avenue S SD								B2/118
74745382	Northwest Grating Products, Inc.	9230 4th Avenue S	Riverside Drive			•					B2/231
7221	Northwind Marine	605 S Riverside Drive	Riverside Drive								B1/47
24178231	NRC Environmental Sves Inc	20500 Richmond Beach Drive NW	Terminal 115	•				•			A1/18
74491434	NW Enviroservice 1st Ave Site	8105 1st Avenue S	1st Avenue S SD								B2/150
17445	Old Dominion Freight Line Inc	8425 1st Avenue S (share w/Lion Trucking)	1st Avenue S SD								A2/170
7969	Olsson Manufacturing Co	525 S Elmgrove Street	Riverside Drive								B2/145
45787437	Olympic Steel Door	7800 7th Avenue S	Riverside Drive		•			•			B2/94
72863999	Omnisource Inc	123 S Kenyon Street	1st Avenue S SD								A2/119
85495122	Omnisource Inc 121	121 1/2 S Kenyon Street	1st Avenue S SD								A2/121
82954349	Omnisource Inc 129	129 S Kenyon Street	1st Avenue S SD								A2/120
52276616	Pacific American Commercial Co	7400 2nd Avenue S	EAA-2								B1/34
9950	Pacific American Commercial Co Yard 2	7560 2nd Avenue S	EAA-2								B1/46
10293	Pacific American Commercial Co Yard 3	7601 2nd Avenue S	EAA-2								B1/49
1143511	Pacific Industrial Supply Director Street	1231 S Director Street	Sea King Industrial Park								B2/211
56779778	Pacific Pile & Marine	582 S Riverside Drive	Riverside Drive								B1/41
5151	Pacific Plumbing Supply	7115 W Marginal Way SW	Terminal 115								A1/22
86136757	Pacific Utility Equipment Co	1303 S 96th Street	Sea King Industrial Park								B3/288
79459683	Patent Construction Systems	8111 1st Avenue S	1st Avenue S SD								B2/151

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1992812	Petrocard Systems Inc	9014 14th Avenue S	Riverside Drive					•			C2/204
7170	Phils Custom Bindery	309 S Cloverdale Street, Suite A12	Riverside Drive								B2/180
3147742	Pioneer Industries Plant 2	7440 West Marginal Way S	Terminal 115								B1/37
15700	Port of Seattle Terminal 115 Berth 1	6375 West Marginal Way SW	Terminal 115								A1/9
7936495	Portable Sheds of America	7510 5th Avenue S	Riverside Drive					•			B1/48
2056	Precision Engineering Inc	1231 S Director Street	Sea King Industrial Park		•			•			B2/212
12264831	Professional Service Industries	7400 3rd Avenue S	EAA-2					•			B1/32
9246491	Progressive Fastening Inc	837 S Director Street	Sea King Industrial Park	•							B2/206
67478551	Progressive Medical Corp	1600 S 92nd Avenue Suite H	Sea King Industrial Park								C2/226
96897184	Proliance International Inc Seattle	7951 2nd Avenue S	1st Avenue S SD								B2/116
29834194	Propulsion Controls Engineering	1705 S 93rd Street F10	Sea King Industrial Park								C2/249
4210684	Protective Coating Consultants Inc	1501 S 92nd Place Suite A	Sea King Industrial Park	•							C2/220
76299717	PSF Industries Inc Field Yard	9322 14th Avenue S	Sea King Industrial Park								C2/252
18451551	PSF Mechanical Inc	9322 14th Avenue S	Sea King Industrial Park	•		•					C2/251
13397378	Puget Sound Coatings Inc	9400 8th Avenue S	Sea King Industrial Park						•	•	B2/255
97263627	Puget Sound Coatings Machinists Inc	9220 8th Avenue S	Sea King Industrial Park	•		•		•		•	B2/237
12462	Qual Fab Inc	1705 S 93rd Street, Building F Unit 11	Sea King Industrial Park								C2/242
96526349	R & J Autobody Inc	10832 Meyers Way S	Sea King Industrial Park								B3/302
78215825	Rainier Golf & Country Club	1856 S 112th	Restoration Areas		•			•			C3/304
81158515	Rasmussen Equipment Co Inc	415 S Cloverdale Street	Riverside Drive					•			B2/186
22497475	Rasmussen Equipment Company	8727 5th Avenue S	Riverside Drive								B2/190
83132785	Reamco Electronics	817 S Kenyon Street	Riverside Drive								B2/114
55695661	Recycle America	7901 1st Avenue S Clean up	1st Avenue S SD								B2/124
17130	Revere Group Seattle	9310 4th Avenue S	Riverside Drive	•							B2/253
66136556	Ricks Master Marine Inc	1411 S Thistle Street	Terminal 117	•						•	C2/169
18925	RMC Inc	10766 Myers Way S	Sea King Industrial Park								B3/298
59283333	Rogers Machinery Co Inc	7800 5TH Avenue S	Riverside Drive								B2/96
63293426	Ryder Student Transportation Services	130 S Kenyon Street	1st Avenue S SD		•			•			B2/101
2058	S 96th Street Ditch	S 96th Street & Duwamish River	Sea King Industrial Park		•						B3/277
3644425	S Chicago St Dump	251 S Chicago Street	Riverside Drive								B2/92
17878123	S Holden Abandoned Container	750 Block S Holden Street	Riverside Drive	•							B1/60
1852818	S Kenyon St	832 S Kenyon Street	Riverside Drive								B2/105
87983518	Safway Steel Products	7501 2nd Avenue S	EAA-2					•			B1/42
24041	Samson Tug & Barge Detroit Ave SW	7553 Detroit Avenue SW	1st Avenue S SD			•					A1/45
15539	Samson Tug Maintenance Shop	7739 1st Avenue S	1st Avenue S SD								A1/66

Table 7
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/ Map ID[2]
9401	Sea Mar Family Housing	1000 S Henderson	Riverside Drive								B2/199
11466114	Sea Pac Service Co	6100 West Marginal Way SW	Terminal 115								A1/3
82536515	Seafreeze Ltd Terminal 115	206 SW Michigan Street	Terminal 115	•			•	•		•	A1/15
91829569	Seattle City DOT West Seattle	9200 8th Avenue S	Sea King Industrial Park	•				•			B2/216
6041351	Seattle City Turkey Duck Swale	9311 4th Avenue S	Riverside Drive								B2/230
13152935	Seattle Fire Station 26	800 S Cloverdale Street	Riverside Drive					•			B2/177
6407	Seattle Heat Treaters, Inc.	521 S Holden Street	Riverside Drive								B1/64
4040072	Seattle Port Terminal 115	6020-6760 West Marginal Way SW	Terminal 115							•	A1/7
77377391	Seattle Public Utilities W Seattle Res	8820 3rd Avenue SW	1st Avenue S SD								A2/217
58482618	Seattle Sludge Interim Project	7417 4th Avenue S	EAA-2								B1/33
2175	Seattle South Transfer Station	8100 2nd Avenue S	1st Avenue S SD		•		•				B2/143
59692187	Seidehuber Iron & Bronze Works Inc	8009 7th Avenue S	Riverside Drive					•			B2/141
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	•	•	•		•			B3/281
15388822	Service Specialties Inc.	800 S Kenyon Street	Riverside Drive					•			B2/104
29633897	Shawnee Painting Sandblasting	8107 10th Avenue S	Riverside Drive								B2/142
39258864	Sherwin Williams Store 4317	9530 10th Ave S	Sea King Industrial Park	•							B2/262
861945	Silver Bay Logging Inc	7760 8th Avenue S	Riverside Drive								B2/86
2236438	Simplex Grinnell	9520 10th Avenue S Suite 100	Sea King Industrial Park								B2/264
6253396	Sirius Maritime Company	309 S Cloverdale D21	Riverside Drive								B2/193
21077	SKBA Buddhist Temple	8th Avenue S & S 100th Street	Sea King Industrial Park								B3/289
12429	Smith Berger Marine, Inc	7915 10th Avenue S	Riverside Drive								B2/129
81861618	Snyder Industries Inc	524 S Southern Street	Riverside Drive								B2/155
26432659	Sound Delivery Service	9999 8th Avenue S	Sea King Industrial Park	•							B3/290
6950604	Sound Propeller Services, Inc.	7916 8th Avenue S	Riverside Drive								B2/128
5776	Sound Propeller Systems Inc	9130 15th Place S	Sea King Industrial Park								C2/215
27778576	South Park Chevron	9525 14th Avenue S	Sea King Industrial Park					•			C2/266
42131353	South Park Truck Trailer Rep	7265 2nd Avenue S	EAA-2							•	B1/31
3665320	South Recycle & Disposal Station 5th Ave	8105 5th Avenue S	1st Avenue S SD								A2/163
3453	South Transfer Station	130 S Kenyon Street	1st Avenue S SD								B2/144
83597535	SPU Highline Well Boulevard Park	SW Corner of S 128th & 20th S	Restoration Areas								C4/320
81215768	SPU Highline Well Riverton Heights	NW Corner of S 148th & 24th S									C5/323
42718345	Standard Steel Fabricating Co Inc	8155 1st Avenue S	1st Avenue S SD			•		•			B2/165
48248356	Sunnydale Construction Company Inc	1119 S 96th	Sea King Industrial Park		•			•	•		B3/279
3291	Terex Utilities	9426 8th Avenue S	Sea King Industrial Park								B2/268
79578412	Teris LLC	9520 10th Avenue S Suite 150, Transfer Facility	Sea King Industrial Park	•							B2/263

Table 7
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/ Map ID[2]
74799553	Terrel Sommers Inc	9508 8th Avenue S	Sea King Industrial Park								B3/271
69951382	Thomas Equipment Rental	827 S Director Street									B2/207
12333317	Tierney Electrical Manufacturing Company	7901 7th Avenue S	Riverside Drive	•							B2/110
86979859	Tnemec Co Inc	7929 2nd Avenue S	1st Avenue S SD								B2/117
9457	Tours Northwest	8221 7th Avenue S	Riverside Drive								B2/162
2329	ToxGon Corp Seattle	631 S 96th Street	Sea King Industrial Park	•							B3/283
39937726	Transfer Sta Barrel	8100 Occidental Ave S 033	1st Avenue S SD								B2/156
4401006	Ultrapak Printing Inc Former Tenant	1600 S 92nd Place	Sea King Industrial Park	•							C2/218
78714998	United Iron Works Inc	7421 5th Avenue S	EAA-2	•		•		•		•	B1/35
7327447	United States Seafoods	1605 S 93rd Business Park Unit EH	Sea King Industrial Park	•							C2/246
14193	Urban Hardwoods Sawmill	8427 1st Avenue S	1st Avenue S SD								A2/174
73123528	US DOJ DEA Kent Training	2450 S 142nd									C5/322
21141463	US EPA Technical Assistance Team Whse	1605 S 93rd Building E Unit R	Sea King Industrial Park								C2/248
9037205	US EPA Warehouse	1620 S 92nd Place Unit B	Sea King Industrial Park								C2/247
89337496	WA Argirculture King 2	8100 B 2nd Avenue S	1st Avenue S SD								B2/107
23821	Warner Transmission	10851 Meyers Way S									B3/301
1661671	Warner's Foreign Auto Repair	9001 14th Avenue S	Riverside Drive	•	•			•			C2/202
77384581	Washington Liftruck	700 S Chicago Street	Riverside Drive				•				B2/78
4709	Waste Management Cng Upgrades	149 SW Kenyon & 8111 1st Avenue S	1st Avenue S SD								B2/133
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD		•	•	•	•			A1/24
12494	West Coast Equipment 2	7746 Detroit Avenue SW	1st Avenue S SD								A2/81
2262	West Coast Equipment Inc	7777 Detroit Avenue SW	1st Avenue S SD		•						A2/84
18137296	West Coast Wire Rope & Rigging	7777 7th Avenue S	Riverside Drive	•		•					B2/82
70748294	West Fork Nelson	7918 8th Avenue S	Riverside Drive					•			B2/112
26116543	West Seattle Reservoir		1st Avenue S SD								A2/191
89886819	Westec Industries, Inc.	8111 7th Avenue S	Riverside Drive	•							B2/154
19739	Westeel Company	8001 7th Avenue S	Riverside Drive								B2/134
17467	Western Marine Construction	7245 2nd Avenue S	EAA-2							•	B1/28
2463219	Western United Fish Company	9411 8th Avenue S	Sea King Industrial Park				•				B2/256
56738526	WestFork Nelson Inc	7916 8th Avenue S	Riverside Drive					•			B2/109
95749157	Workboats Northwest Inc	7814 8th Avenue S	Riverside Drive								B2/102
18788836	YRC Inc Seattle	600 S 96th	Sea King Industrial Park								B2/267

Table 7
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/ Map ID[2]

[1] This Column indicates that a facility is discussed in the Data Gaps report associated with the listed source control area:

	RM 1.6-2.1 West: Terminal 115
	RM 2.1 West: 1st Avenue S SD (pending)
	EAA-2: RM 2.1-2.2 West: Trotsky Inlet
	RM 2.2-3.4: Riverside Drive
	EAA-5: RM 3.4-3.8 West: Terminal 117
	RM 3.8-4.2 West: Sea King Industrial Park
	RM 4.2-4.8 West: Restoration Areas
	Facility not located within a source control area

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

•- Additional information regarding this facility is available in Appendix C

CSO - Combined sewer overflow

EPA - U.S. Environmental Protection Agency

CSCSL - Confirmed or Suspected Contaminated Sites List

NPDES - National Pollutant Discharge Elimination System

KCIW - King County Industrial Waste

UST - Underground Storage Tank

NFA - No Further Action

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

EAA - Early Action Area

RM - River Mile

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/16/2009	PS1-6	6	Acenaphthene	1.9	4,800	0.06	32
PGG 2008	1/17/2008	B-2A	2	Acenaphthene	19	4,800	1.2	16
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthene	17 D	4,800	1.2	14
PGG 2009a	4/17/2009	WQ8-2	2	Acenaphthene	8.7	4,800	1.2	7.3
PGG 2009a	4/16/2009	OY2-4	4	Acenaphthene	6.8	4,800	1.2	5.7
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthylene	12 D		1.4	8.6
PGG 2009a	4/17/2009	WQ8-2	2	Acenaphthylene	4		1.4	2.9
PGG 2008	1/17/2008	B-2A	2	Acenaphthylene	2.8		1.4	2.0
PGG 2009a	4/16/2009	PS1-6	6	Anthracene	3.4	24,000	1.2	2.8
PGG 2008	1/17/2008	B-2A	2	Anthracene	28	24,000	24	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Anthracene	27 D	24,000	24	1.1
PGG 2009a	4/17/2009	WQ9-2	2	Arsenic	32	0.67	12,000	48
PGG 2009a	4/16/2009	OY2-2	2	Arsenic	11	0.67	12,000	16
PGG 2009a	4/16/2009	OY2-4	4	Arsenic	11	0.67	12,000	16
PGG 2009a	4/17/2009	WQ7-4	4	Arsenic	11	0.67	12,000	16
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	8.2 D	0.67	12,000	12
PGG 2009a	4/17/2009	OY3-2	2	Arsenic	7.9	0.67	12,000	12
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	7.8	0.67	12,000	12
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	7.4	0.67	12,000	11
PGG 2009a	4/16/2009	WQ5-1	1	Arsenic	6.9	0.67	12,000	10
PGG 2009a	4/17/2009	WQ8-2	2	Arsenic	6.9	0.67	12,000	10
PGG 2009a	4/17/2009	WQ9-4	4	Arsenic	6.7	0.67	12,000	10
PGG 2009a	4/16/2009	WQ1-2	2	Arsenic	5.8 D	0.67	12,000	8.7
PGG 2009a	4/16/2009	OY1-2	2	Arsenic	5.2	0.67	12,000	7.8
PGG 2008	1/17/2008	B-8S	2-3	Arsenic	5	0.67	12,000	7.0
PGG 2010	12/10/2009	CS-24-9	9	Benzo(a)anthracene	68	1.37	0.27	252
PGG 2010	12/10/2009	CS-2-3	3	Benzo(a)anthracene	259	1.37	5.4	189
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)anthracene	56 D	1.37	5.4	41
PGG 2010	12/9/2009	CS-7-3	3	Benzo(a)anthracene	51	1.37	5.4	37
PGG 2010	12/10/2009	CS-24-6	6	Benzo(a)anthracene	43	1.37	5.4	31
PGG 2008	1/17/2008	B-2A	2	Benzo(a)anthracene	28	1.37	5.4	20

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640 S Riverside Drive

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PGG 2009a	4/17/2009	WQ8-2	2	Benzo(a)anthracene	22	1.37	5.4	16
PGG 2009a	4/16/2009	OY2-4	4	Benzo(a)anthracene	19	1.37	5.4	14
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)anthracene	15	1.37	5.4	11
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)anthracene	15 D	1.37	5.4	11
PGG 2010	12/10/2009	CS-1-3	3	Benzo(a)anthracene	7.1	1.37	5.4	5
PGG 2010	12/10/2009	CS-6-3	3	Benzo(a)anthracene	5	1.37	5.4	4
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(a)anthracene	4.8	1.37	5.4	4
PGG 2009a	4/16/2009	OY2-2	2	Benzo(a)anthracene	4.7	1.37	5.4	3
PGG 2009a	4/16/2009	PS1-6	6	Benzo(a)anthracene	0.86	1.37	0.27	3
PGG 2010	12/10/2009	CS-5-3	3	Benzo(a)anthracene	4.3	1.37	5.4	3
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)anthracene	3.6	1.37	5.4	3
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(a)anthracene	1.7	1.37	5.4	1.2
PGG 2010	12/10/2009	CS-2-3	3	Benzo(a)pyrene	74	0.1	4.2	740
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)pyrene	57 D	0.1	4.2	570
PGG 2010	12/10/2009	CS-24-6	6	Benzo(a)pyrene	36	0.1	0.21	360
PGG 2010	12/10/2009	CS-24-9	9	Benzo(a)pyrene	35	0.1	0.21	350
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(a)pyrene	22	0.1	4.2	220
PGG 2009a	4/16/2009	OY2-4	4	Benzo(a)pyrene	19	0.1	4.2	190
PGG 2008	1/17/2008	B-2A	2	Benzo(a)pyrene	18	0.1	4.2	180
PGG 2010	12/9/2009	CS-7-3	3	Benzo(a)pyrene	11	0.1	4.2	110
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(a)pyrene	4.8	0.1	4.2	48
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)pyrene	3.6	0.1	4.2	36
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)pyrene	3.6 D	0.1	4.2	36
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)pyrene	3.3	0.1	4.2	33
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(a)pyrene	2	0.1	4.2	20
PGG 2010	12/10/2009	CS-1-3	3	Benzo(a)pyrene	1.9	0.1	4.2	19
PGG 2009a	4/16/2009	OY2-2	2	Benzo(a)pyrene	0.92	0.1	4.2	9.2
PGG 2010	12/10/2009	CS-6-3	3	Benzo(a)pyrene	0.43	0.1	4.2	4.3
PGG 2009a	4/16/2009	PS1-6	6	Benzo(a)pyrene	0.33	0.1	0.21	3.3
PGG 2009a	4/16/2009	PS1-3	3	Benzo(a)pyrene	0.27	0.1	4.2	2.7
PGG 2010	12/9/2009	CS-12-3	3	Benzo(a)pyrene	0.24	0.1	4.2	2.4

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Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/16/2009	PS2-6	6	Benzo(a)pyrene	0.23	0.1	0.21	2.3
PGG 2010	12/10/2009	CS-5-3	3	Benzo(a)pyrene	0.12 D	0.1	4.2	1.2
PGG 2010	12/10/2009	CS-24-9	9	Benzo(b)fluoranthene	35	1.4	0.45	78
PGG 2010	12/10/2009	CS-24-6	6	Benzo(b)fluoranthene	32	1.4	0.45	71
PGG 2010	12/10/2009	CS-2-3	3	Benzo(b)fluoranthene	68	1.4	9	49
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(b)fluoranthene	56 D	1.4	9	40
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(b)fluoranthene	23	1.4	9	16
PGG 2009a	4/16/2009	OY2-4	4	Benzo(b)fluoranthene	20	1.4	9	14
PGG 2010	12/9/2009	CS-7-3	3	Benzo(b)fluoranthene	9.3	1.4	9	7
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(b)fluoranthene	5.4	1.4	9	3.9
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(b)fluoranthene	3.7	1.4	9	2.6
PGG 2010	12/9/2009	CS-3-3	3	Benzo(b)fluoranthene	3.1 D	1.4	9	2.2
PGG 2010	12/9/2009	CS-3-3	3	Benzo(b)fluoranthene	2.6	1.4	9	1.9
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(b)fluoranthene	2.4	1.4	9	1.7
PGG 2010	12/10/2009	CS-1-3	3	Benzo(b)fluoranthene	1.8	1.4	9	1.3
PGG 2009a	4/16/2009	PS1-6	6	Benzo(b)fluoranthene	0.51	1.4	0.45	1.1
PGG 2009a	4/16/2009	OY2-2	2	Benzo(b)fluoranthene	1.5	1.4	9	1.1
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(g,h,i)perylene	30 D		1.6	19
PGG 2008	1/17/2008	B-2A	2	Benzo(g,h,i)perylene	24		1.6	15
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(g,h,i)perylene	12		1.6	7.5
PGG 2009a	4/16/2009	OY2-4	4	Benzo(g,h,i)perylene	11		1.6	6.9
PGG 2009a	4/16/2009	PS2-6	6	Benzo(g,h,i)perylene	0.21		0.078	2.7
PGG 2009a	4/16/2009	PS1-6	6	Benzo(g,h,i)perylene	0.14		0.078	1.8
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(g,h,i)perylene	2.8		1.6	1.8
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(g,h,i)perylene	2.1		1.6	1.3
PGG 2010	12/10/2009	CS-24-9	9	Benzo(k)fluoranthene	34	14	0.45	76
PGG 2010	12/10/2009	CS-24-6	6	Benzo(k)fluoranthene	30	14	0.45	67
PGG 2010	12/10/2009	CS-2-3	3	Benzo(k)fluoranthene	85	14	9	9
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(k)fluoranthene	69 D	14	9	8
PGG 2008	1/17/2008	B-2A	2	Benzo(k)fluoranthene	41	14	9	5
PGG 2010	12/9/2009	CS-7-3	3	Benzo(k)fluoranthene	12	14	9	1.3

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Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-24-9	9	Chrysene	43	140	0.46	93
PGG 2010	12/10/2009	CS-24-6	6	Chrysene	42	140	0.46	91
PGG 2010	12/10/2009	CS-2-3	3	Chrysene	85	140	9.2	9.2
PGG 2008	1/17/2008	B-2A	2	Chrysene	44	140	9.2	4.8
PGG 2009a	4/17/2009	WQ7-2	2	Chrysene	38 D	140	9.2	4.1
PGG 2009a	4/16/2009	PS1-6	6	Chrysene	1	140	0.46	2.2
PGG 2009a	4/17/2009	WQ8-2	2	Chrysene	19	140	9.2	2.1
PGG 2009a	4/16/2009	OY2-4	4	Chrysene	15	140	9.2	1.6
PGG 2010	12/9/2009	CS-7-3	3	Chrysene	12	140	9.2	1.3
PGG 2010	12/10/2009	CS-24-6	6	Dibenzo(a,h)anthracene	3.7	0.14	0.033	112
PGG 2010	12/10/2009	CS-24-9	9	Dibenzo(a,h)anthracene	3.5	0.14	0.033	106
PGG 2010	12/10/2009	CS-2-3	3	Dibenzo(a,h)anthracene	8.9	0.14	0.66	64
PGG 2009a	4/17/2009	WQ7-2	2	Dibenzo(a,h)anthracene	5.0 D	0.14	0.66	36
PGG 2009a	4/16/2009	OY2-4	4	Dibenzo(a,h)anthracene	4.4	0.14	0.66	31
PGG 2008	1/17/2008	B-2A	2	Dibenzo(a,h)anthracene	3.4	0.14	0.66	24
PGG 2009a	4/17/2009	WQ8-2	2	Dibenzo(a,h)anthracene	1.6	0.14	0.66	11
PGG 2010	12/9/2009	CS-7-3	3	Dibenzo(a,h)anthracene	1.1	0.14	0.66	7.9
PGG 2009a	4/17/2009	WQ9-2	2	Dibenzo(a,h)anthracene	0.52	0.14	0.66	3.7
PGG 2010	12/9/2009	CS-3-3	3	Dibenzo(a,h)anthracene	0.34	0.14	0.66	2.4
PGG 2010	12/9/2009	CS-3-3	3	Dibenzo(a,h)anthracene	0.33 D	0.14	0.66	2.4
PGG 2010	12/10/2009	CS-1-3	3	Dibenzo(a,h)anthracene	0.32	0.14	0.66	2.3
PGG 2009a	4/16/2009	OY2-2	2	Dibenzo(a,h)anthracene	0.31	0.14	0.66	2.2
PGG 2009a	4/17/2009	WQ7-2	2	Dibenzo(a,h)anthracene	0.15	0.14	0.66	1.1
PGG 2009a	4/16/2009	OY2-4	4	Diesel-range hydrocarbons	25,000	2,000		13
PGG 2009a	4/16/2009	PS1-6	6	Fluoranthene	4.6	3,200	1.2	3.8
PGG 2008	1/17/2008	B-2A	2	Fluoranthene	84	3,200	24	3.5
PGG 2009a	4/17/2009	WQ7-2	2	Fluoranthene	74 D	3,200	24	3.1
PGG 2009a	4/17/2009	WQ8-2	2	Fluoranthene	52	3,200	24	2.2
PGG 2009a	4/16/2009	PS1-6	6	Fluorene	2.3	3,200	0.081	28
PGG 2009a	4/16/2009	OY2-4	4	Fluorene	40	3,200	1.6	25
PGG 2008	1/17/2008	B-2A	2	Fluorene	15	3,200	1.6	9.4

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	WQ7-2	2	Fluorene	14 D	3,200	1.6	8.8
PGG 2009a	4/17/2009	WQ8-2	2	Fluorene	7.6	3,200	1.6	4.8
PGG 2009a	4/17/2009	WQ9-2	2	Heavy oil-range hydrocarbons	7,700	2,000		3.9
PGG 2010	12/10/2009	CS-7-3	3	Heavy oil-range hydrocarbons	3,700	2,000		1.9
PGG 2009a	4/16/2009	OY2-2	2	Heavy oil-range hydrocarbons	3,000	2,000		1.5
PGG 2010	12/10/2009	CS-2-3	3	Heavy oil-range hydrocarbons	2,500	2,000		1.3
PGG 2009a	4/16/2009	OY2-4	4	Heavy oil-range hydrocarbons	2,100	2,000		1.1
PGG 2010	12/10/2009	CS-2-3	3	Indeno(1,2,3-c,d)pyrene	324	1.4	1.8	231
PGG 2010	12/10/2009	CS-24-9	9	Indeno(1,2,3-c,d)pyrene	20	1.4	0.088	227
PGG 2010	12/10/2009	CS-24-6	6	Indeno(1,2,3-c,d)pyrene	18	1.4	0.088	205
PGG 2008	1/17/2008	B-2A	2	Indeno(1,2,3-c,d)pyrene	73	1.4	1.8	52
PGG 2009a	4/17/2009	WQ7-2	2	Indeno(1,2,3-c,d)pyrene	41 D	1.4	1.8	29
PGG 2009a	4/17/2009	WQ8-2	2	Indeno(1,2,3-c,d)pyrene	17	1.4	1.8	12
PGG 2009a	4/16/2009	OY2-4	4	Indeno(1,2,3-c,d)pyrene	15	1.4	1.8	11
PGG 2010	12/10/2009	CS-1-3	3	Indeno(1,2,3-c,d)pyrene	13	1.4	1.8	9.3
PGG 2010	12/9/2009	CS-7-3	3	Indeno(1,2,3-c,d)pyrene	12	1.4	1.8	8.6
PGG 2010	12/10/2009	CS-5-3	3	Indeno(1,2,3-c,d)pyrene	6.4	1.4	1.8	4.6
PGG 2009a	4/16/2009	PS2-6	6	Indeno(1,2,3-c,d)pyrene	0.29	1.4	0.088	3.3
PGG 2010	12/9/2009	CS-3-3	3	Indeno(1,2,3-c,d)pyrene	4.3	1.4	1.8	3.1
PGG 2010	12/9/2009	CS-3-3	3	Indeno(1,2,3-c,d)pyrene	4.1 D	1.4	1.8	2.9
PGG 2009a	4/16/2009	PS1-6	6	Indeno(1,2,3-c,d)pyrene	0.18	1.4	0.088	2.0
PGG 2009a	4/17/2009	WQ7-2	2	Indeno(1,2,3-c,d)pyrene	2.7	1.4	1.8	1.9
PGG 2009a	4/17/2009	WQ9-2	2	Lead	57,000	250	1,300	228
PGG 2009a	4/16/2009	OY2-2	2	Lead	23,000	250	1,300	92
PGG 2010	12/9/2009	CS-3-3	3	Lead	11,000 D	250	1,300	44
PGG 2010	12/10/2009	CS-2-6	6	Lead	2,200	250	67	33
PGG 2010	12/9/2009	CS-3-3	3	Lead	7,600	250	1,300	30
PGG 2009a	4/17/2009	PS1-6	6	Lead	1,200	250	67	18
PGG 2010	12/10/2009	CS-1-3	3	Lead	4,200	250	1,300	17
PGG 2010	12/9/2009	CS-7-3	3	Lead	3,500	250	1,300	14
PGG 2010	12/10/2009	CS-6-3	3	Lead	3,300	250	1,300	13

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	PS2-6	6	Lead	830	250	67	12
PGG 2009a	4/17/2009	PS1-3	3	Lead	2,900	250	1,300	12
PGG 2010	12/10/2009	CS-5-3	3	Lead	2,900	250	1,300	12
PGG 2009a	4/17/2009	PS3-6	6	Lead	470	250	67	7.0
PGG 2009a	4/16/2009	OY2-4	4	Lead	1,400	250	1,300	5.6
PGG 2010	12/10/2009	CS-1-6	6	Lead	370	250	67	5.5
PGG 2010	12/10/2009	CS-2-3	3	Lead	800	250	1,300	3.2
PGG 2010	12/10/2009	CS-24-6	6	Lead	180	250	67	2.7
PGG 2010	12/10/2009	CS-2-9	9	Lead	110	250	67	1.6
PGG 2009a	4/17/2009	WQ7-2	2	Lead	350	250	1,300	1.4
PGG 2009a	4/17/2009	WQ9-4	4	Lead	340	250	1,300	1.4
PGG 2009a	4/17/2009	WQ8-2	2	Lead	310	250	1,300	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Lead	300 D	250	1,300	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Lead	280	250	1,300	1.1
PGG 2008	1/17/2008	B-2A	2	Naphthalene	21	5	3.8	5.5
PGG 2008	1/17/2008	B-2A	1.5-2	Naphthalene	21	5	3.8	5.5
PGG 2009a	4/17/2009	WQ7-2	2	Naphthalene	21 D	5	3.8	5.5
PGG 2009a	4/17/2009	WQ8-2	2	Naphthalene	12	5	3.8	3.2
PGG 2009a	4/16/2009	OY2-4	4	Naphthalene	8.7	5	3.8	2.3
PGG 2009a	4/18/2009	WQ9-4	4	Naphthalene	4.5	5	3.8	1.2
PGG 2009a	4/16/2009	PS1-6	6	Phenanthrene	7.2		0.49	15
PGG 2009a	4/17/2009	WQ7-2	2	Phenanthrene	89 D		9.7	9.2
PGG 2008	1/17/2008	B-2A	2	Phenanthrene	86		9.7	8.9
PGG 2009a	4/17/2009	WQ8-2	2	Phenanthrene	61		9.7	6.3
PGG 2009a	4/16/2009	OY2-4	4	Phenanthrene	45		9.7	4.6
PGG 2009a	4/16/2009	PS2-6	6	Phenanthrene	0.54		0.49	1.1
PGG 2008	1/17/2008	B-2A	2	Pyrene	82	2,400	28	2.9
PGG 2009a	4/17/2009	WQ7-2	2	Pyrene	78 D	2,400	28	2.8
PGG 2009a	4/16/2009	PS1-6	6	Pyrene	2.6	2,400	1.4	1.9
PGG 2009a	4/17/2009	WQ8-2	2	Pyrene	51	2,400	28	1.8
PGG 2009a	4/16/2009	OY2-4	4	Pyrene	40	2,400	28	1.4

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-4-12	12	Tetrachloroethene (PCE)	1.9	0.05		38
PGG 2010	12/10/2009	CS-4-6	6	Tetrachloroethene (PCE)	1.4	0.05		28
PGG 2010	12/10/2009	CS-4-9	9	Tetrachloroethene (PCE)	1.4	0.05		28
PGG 2010	2/1/2010	CS-30-9	9	Tetrachloroethene (PCE)	1.3	0.05		26
PGG 2010	2/1/2010	CS-33-6	6	Tetrachloroethene (PCE)	0.76	0.05		15
PGG 2009a	4/17/2009	WQ7-2	2	Tetrachloroethene (PCE)	0.41	0.05		8.2
PGG 2010	2/2/2010	CS-40-9	9	Tetrachloroethene (PCE)	0.37	0.05		7.4
PGG 2010	2/1/2010	CS-30-6	6	Tetrachloroethene (PCE)	0.33	0.05		6.6
PGG 2010	12/11/2009	CS-16-9	9	Tetrachloroethene (PCE)	0.32	0.05		6.4
PGG 2010	2/1/2010	CS-32-9	9	Tetrachloroethene (PCE)	0.3	0.05		6.0
PGG 2009a	4/16/2009	YP6-3	3	Tetrachloroethene (PCE)	0.25	0.05		5.0
PGG 2009a	4/17/2009	WQ7-2	2	Tetrachloroethene (PCE)	0.25 D	0.05		5.0
PGG 2010	2/2/2010	CS-36-6	6	Tetrachloroethene (PCE)	0.25	0.05		5.0
PGG 2009a	4/17/2009	WQ7-4	4	Tetrachloroethene (PCE)	0.24	0.05		4.8
PGG 2010	2/1/2010	CS-29-6	6	Tetrachloroethene (PCE)	0.23	0.05		4.6
PGG 2010	12/11/2009	CS-16-7	7	Tetrachloroethene (PCE)	0.21	0.05		4.2
PGG 2010	2/2/2010	CS-36-9	9	Tetrachloroethene (PCE)	0.21	0.05		4.2
PGG 2009a	4/16/2009	YP5-6	6	Tetrachloroethene (PCE)	0.17	0.05		3.4
PGG 2010	2/2/2010	CS-42-9	9	Tetrachloroethene (PCE)	0.17	0.05		3.4
PGG 2010	2/1/2010	CS-31-6	6	Tetrachloroethene (PCE)	0.13	0.05		2.6
PGG 2010	2/1/2010	CS-39-9	9	Tetrachloroethene (PCE)	0.13	0.05		2.6
PGG 2010	12/11/2009	CS-16-6	6	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	2/1/2010	CS-33-9	9	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	2/1/2010	CS-38-9	9	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	12/11/2009	CS-16-12	12	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/1/2010	CS-39-6	6	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/2/2010	CS-41-9	9	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/1/2010	CS-29-9	9	Tetrachloroethene (PCE)	0.1	0.05		2.0
PGG 2010	2/2/2010	CS-42-6	6	Tetrachloroethene (PCE)	0.095 D	0.05		1.9
PGG 2010	2/2/2010	CS-41-6	6	Tetrachloroethene (PCE)	0.08	0.05		1.6
PGG 2009a	4/16/2009	OY2-2	2	Tetrachloroethene (PCE)	0.072	0.05		1.4

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	WQ8-2	2	Tetrachloroethene (PCE)	0.066	0.05		1.3
PGG 2010	2/2/2010	CS-37-6	6	Tetrachloroethene (PCE)	0.055	0.05		1.1
PGG 2010	2/2/2010	CS-37-9	9	Tetrachloroethene (PCE)	0.053	0.05		1.1
PGG 2010	12/10/2009	CS-4-12	12	Trichloroethene (TCE)	4.7	0.03		157
PGG 2010	2/1/2010	CS-30-9	9	Trichloroethene (TCE)	0.37	0.03		12
PGG 2010	2/2/2010	CS-42-6	6	Trichloroethene (TCE)	0.36	0.03		12
PGG 2010	12/10/2009	CS-5-12	12	Trichloroethene (TCE)	0.26	0.03		8.7
PGG 2010	2/1/2010	CS-33-12	12	Trichloroethene (TCE)	0.18	0.03		6.0
PGG 2010	2/1/2010	CS-31-9	9	Trichloroethene (TCE)	0.16	0.03		5.3
PGG 2010	12/11/2009	CS-20-6	6	Trichloroethene (TCE)	0.13	0.03		4.3
PGG 2010	2/2/2010	CS-36-6	6	Trichloroethene (TCE)	0.098	0.03		3.3
PGG 2010	2/2/2010	CS-42-9	9	Trichloroethene (TCE)	0.09	0.03		3.0
PGG 2009a	4/16/2009	YP6-3	3	Trichloroethene (TCE)	0.084	0.03		2.8
PGG 2010	12/11/2009	CS-11-6	6	Trichloroethene (TCE)	0.084	0.03		2.8
PGG 2010	12/11/2009	CS-16-9	9	Trichloroethene (TCE)	0.081	0.03		2.7
PGG 2010	2/2/2010	CS-36-9	9	Trichloroethene (TCE)	0.081	0.03		2.7
PGG 2010	2/1/2010	CS-39-6	6	Trichloroethene (TCE)	0.08	0.03		2.7
PGG 2010	2/2/2010	CS-42-6	6	Trichloroethene (TCE)	0.071	0.03		2.4
PGG 2009a	4/17/2009	WQ7-4	4	Trichloroethene (TCE)	0.065	0.03		2.2
PGG 2010	2/1/2010	CS-39-9	9	Trichloroethene (TCE)	0.06	0.03		2.0
PGG 2010	2/2/2010	CS-41-9	9	Trichloroethene (TCE)	0.06	0.03		2.0
PGG 2010	12/10/2009	CS-5-3	3	Trichloroethene (TCE)	0.058 D	0.03		1.9
PGG 2010	12/10/2009	CS-4-9	9	Trichloroethene (TCE)	0.054	0.03		1.8
PGG 2010	12/11/2009	CS-16-6	6	Trichloroethene (TCE)	0.054	0.03		1.8
PGG 2010	12/11/2009	CS-16-7	7	Trichloroethene (TCE)	0.051	0.03		1.7
PGG 2010	2/1/2010	CS-38-9	9	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	2/2/2010	CS-41-6	6	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	2/2/2010	CS-40-9	9	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	12/11/2009	CS-21-6	6	Trichloroethene (TCE)	0.049	0.03		1.6
PGG 2010	2/2/2010	CS-40-6	6	Trichloroethene (TCE)	0.04	0.03		1.3
PGG 2009a	4/16/2009	YP5-6	6	Trichloroethene (TCE)	0.037	0.03		1.2

Table 8
Chemicals Detected Above Screening Levels in Soil
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	WQ7-2	2	Trichloroethene (TCE)	0.036	0.03		1.2
PGG 2010	12/11/2009	CS-15-9	9	Trichloroethene (TCE)	0.036	0.03		1.2
PGG 2010	12/10/2009	CS-5-3	3	Trichloroethene (TCE)	0.033	0.03		1.1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
D - Duplicate sample
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Groundwater encountered at 6 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 9
Chemicals Detected Above Screening Levels in Groundwater
640 S Riverside Drive

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
PGG 2008	1/17/2008	B-3	1,1,2,2-Tetrachloroethane	3.4	0.22		15.5
PGG 2009a	4/17/2009	YP6-GW	1,1,2-Trichloroethane	1.4	1		1.8
Herrera 2008	11/21/2007	EB-2	1-Methylnaphthalene	19	1.50		13
PGG 2009a	4/17/2009	WQ8-GW	Arsenic	12	0.06	370	200
PGG 2009a	4/17/2009	WQ8-GW	Arsenic	10 D	0.06	370	167
PGG 2009a	4/17/2009	PS2-GW	Arsenic	9.3	0.06	370	155
PGG 2009a	4/17/2009	YP6-GW	Arsenic	4.3	0.06	370	72
Herrera 2008	11/21/2007	EB-3	Arsenic	3.3	0.06	370	55
PGG 2009a	4/17/2009	PS1-GW	Arsenic	2.3 D	0.06	370	38
PGG 2009a	4/17/2009	PS1-GW	Arsenic	2.1	0.06	370	35
PGG 2008	1/17/2008	B-9	Benzene	1.0	0.8		1.3
Herrera 2008	11/21/2007	EB-3	Benzene	0.81	0.8		1.0
PGG 2008	1/17/2008	B-2	Lead	37	15	13	2.8
PGG 2010	2/1/2010	CS-16-GW	Tetrachloroethene (PCE)	73	5		15
PGG 2009a	4/17/2009	YP6-GW	Tetrachloroethene (PCE)	36	5		7.2
PGG 2009a	4/17/2009	WQ8-GW	Tetrachloroethene (PCE)	25 D	5		5.0
PGG 2010	2/2/2010	CS-36-GW	Tetrachloroethene (PCE)	17	5		3.4
PGG 2008	1/17/2008	B-3	Tetrachloroethene (PCE)	5.9	5		1.2
PGG 2009a	4/17/2009	YP6-GW	Trichloroethene (TCE)	600	5		120
PGG 2009a	4/17/2009	WQ8-GW	Trichloroethene (TCE)	15 D	5		3.0
PGG 2010	2/2/2010	CS-36-GW	Trichloroethene (TCE)	13	5		2.6
PGG 2010	2/1/2010	CS-16-GW	Trichloroethene (TCE)	6.3	5		1.3
Herrera 2008	11/21/2007	EB-3	Vinyl chloride	40	0.2		200
PGG 2010	2/2/2010	CS-36-GW	Vinyl chloride	18	0.2		90
PGG 2009a	4/17/2009	WQ8-GW	Vinyl chloride	11 D	0.2		55
PGG 2009a	4/17/2009	YP6-GW	Vinyl chloride	3.9	0.2		20
PGG 2009a	4/17/2009	WQ8-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2009a	4/17/2009	PS2-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2009a	4/17/2009	PS1-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2010	2/1/2010	CS-16-GW	Vinyl chloride	1.0	0.2		5.0

Table 9
Chemicals Detected Above Screening Levels in Groundwater
640 S Riverside Drive

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor

GW - Groundwater
ug/L - Micrograms per liter
MTCA - Model Toxics Control Act
D - Duplicate sample
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - Based on CSL (SAIC 2006).
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Table 10
Chemicals Detected Above Screening Levels in Soil
Former Hurlen Construction Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
A1 Pump Service 1993	3/9/1993	N End Gas Tank	unknown	Gasoline-range hydrocarbons	183	100	1.8
A1 Pump Service 1993	3/9/1993	Bottom Center Gas Tank	unknown	Gasoline-range hydrocarbons	256	100	2.6

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

Depth to groundwater unknown at this property. Groundwater was not encountered during the environmental investigations.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 11
Chemicals Detected Above Screening Levels in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
AGRA 1997b	8/25/1997	B-7	Surface	Arsenic	82	0.67	12,000	122
Kleinfelder 2000c	7/18/2000	SB-3	4	Arsenic	21	0.67	12,000	31
Kleinfelder 2000c	7/18/2000	SB-14	4	Arsenic	11	0.67	12,000	16
Kleinfelder 2000c	7/18/2000	SB-6	4	Arsenic	8.1	0.67	12,000	12
Kleinfelder 2000c	7/18/2000	SB-5	4	Arsenic	6.8	0.67	12,000	10
Kleinfelder 2000c	7/18/2000	SB-9	4	Arsenic	5.8	0.67	12,000	8.7
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Arsenic	5.2	0.67	12,000	7.8
Kleinfelder 2000c	7/18/2000	SB-15	4	Arsenic	4.6	0.67	12,000	6.9
Kleinfelder 2000c	7/18/2000	SB-10	4	Arsenic	4.2	0.67	12,000	6.3
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Arsenic	4	0.67	12,000	6.0
Kleinfelder 2000c	7/18/2000	SB-16	4	Arsenic	3.8	0.67	12,000	5.7
Kleinfelder 2000c	7/18/2000	SB-1	4	Arsenic	3.6	0.67	12,000	5.4
Kleinfelder 2000c	7/18/2000	SB-7	4	Arsenic	3	0.67	12,000	5.1
Kleinfelder 2000c	7/18/2000	SB-12	4	Arsenic	3.4	0.67	12,000	5.1
Kleinfelder 2000c	7/18/2000	SB-8	4	Arsenic	2.7	0.67	12,000	4.0
Kleinfelder 2000c	7/18/2000	SB-13	4	Arsenic	2.3	0.67	12,000	3.4
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Arsenic	1.9	0.67	12,000	2.8
Kleinfelder 2000c	7/18/2000	SB-2	4	Arsenic	1.7	0.67	12,000	2.5
AGRA 1997b	8/26/1997	B-4	3	Methylene chloride	0.24	0.02		12
AGRA 1997b	8/25/1997	B-5	8	Methylene chloride	0.2	0.02		10
AGRA 1997b	8/25/1997	B-8	7	Methylene chloride	0.17	0.02		8.5
Kleinfelder 2000c	7/18/2000	SB-4	4	Tetrachloroethene (PCE)	1.1	0.05		22
Kleinfelder 2000c	7/18/2000	SB-12	4	Tetrachloroethene (PCE)	0.11	0.05		2.2
Kleinfelder 2000c	7/18/2000	SB-15	4	Tetrachloroethene (PCE)	0.081	0.05		1.6
Kleinfelder 2000c	7/18/2000	SB-12	4	Trichloroethene (TCE)	1	0.03		33
Kleinfelder 2000c	7/18/2000	SB-12	11	Trichloroethene (TCE)	0.087	0.03		2.9

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Depth to groundwater is approximately 10 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 12
Chemicals Detected Above Screening Levels in Groundwater
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Kleinfelder 2000c	7/19/2000	MW-8	Arsenic	8.4	0.058	370	145
AGRA 1997b	8/26/1997	MW-5	Arsenic	15	0.058	370	259
Kleinfelder 2000c	7/19/2000	MW-5	Arsenic	21	0.058	370	362
Kleinfelder 2000c	7/19/2000	MW-1	Arsenic	28	0.058	370	483
Kleinfelder 2000c	7/19/2000	MW-2	Arsenic	29	0.058	370	500
Kleinfelder 2000c	7/19/2000	MW-3	Arsenic	45	0.058	370	776
AGRA 1997b	8/26/1997	MW-5	Arsenic	180	0.058	370	3,103
RETEC 2003a	6/24/2003	Excavwater	Benzene	370	0.8		463
Kleinfelder 2000c	7/19/2000	MW-1	Chromium	77	50	320	1.5
Kleinfelder 2000c	7/19/2000	MW-3	Chromium	83	50	320	1.7
RETEC 2003a	6/24/2003	Excavwater	Gasoline-range hydrocarbons	7,000	800		8.8
Kleinfelder 2000c	7/19/2000	MW-2	Lead	31	15	13	2.4
Kleinfelder 2000c	7/19/2000	MW-3	Lead	33	15	13	2.5
AGRA 1997b	8/26/1997	MW-5	Lead	41	15	13	3.2
Kleinfelder 2000c	7/19/2000	MW-5	Lead	45	15	13	3.5
Kleinfelder 2000c	7/19/2000	MW-1	Lead	76	15	13	5.8
RETEC 2003a	6/24/2003	Excavwater	Lead	5,500	15	13	423
RETEC 2003a	6/24/2003	Excavwater	MTBE	59	20		3.0

GW - Groundwater
ug/L - Micrograms per liter
MTCA - Model Toxics Control Act
D - Duplicate sample
MTBE - Methyl tertiary butyl ether
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
b - Based on CSL (SAIC 2006).
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Table 13
Chemicals Detected Above Screening Levels in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#14		Arsenic	24	0.67	12,000	36
Ecology 2000d	10/17/2000	LPN#9		Arsenic	25	0.67	12,000	37
Ecology 2000d	10/17/2000	LPN#11		Arsenic	38	0.67	12,000	57
Ecology 2000d	10/17/2000	LPN#25		Arsenic	48	0.67	12,000	72
Ecology 2000d	10/17/2000	LPN#22		Lead	350	250	1,300	1.4
Ecology 2000d	10/17/2000	LPN#9		Lead	410	250	1,300	1.6

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Depth to groundwater is approximately 10 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 14
Chemicals Detected Above Screening Levels in Soil
Fire King of Seattle, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison Environmental 1995	6/16/1995	HA3-1	0.25	Arsenic	55	0.67	12,000	82
Bison Environmental 1995	6/16/1995	HA3-1	0.25	Cadmium	4.0	2	34	2.0
Bison Environmental 1995	6/16/1995	HA5-1	0.5	Heavy oil-range hydrocarbons	15,000	2,000		7.5
Columbia Environmental 1995	7/27/1995	HA5-1	0.5	Methylene chloride	0.085	0.02		4.3
Columbia Environmental 1995	7/27/1995	HA5-1	0.5	PCBs	4.6	0.5	1.3	9

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

PCBs - Polychlorinated biphenyls

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property. Groundwater was not encountered during the environmental investigations.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 15
Chemicals Detected Above Screening Levels in Soil
Coach Maintenance

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison Environmental 1994b	9/20/1994	Diesel Tank Overburden		Diesel-range hydrocarbons	20,000	2,000	10
Bison Environmental 1994b	9/21/1994	North Wall	5	Diesel-range hydrocarbons	6,700	2,000	3.4

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Groundwater was not encountered during the environmental investigations.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 16
Chemicals Detected Above Screening Levels in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Department of Health 1999	5/1/1998	#2	0.5	Arsenic	76	0.67	12,000	113
Department of Health 1999	5/1/1998	#3	0.5	Arsenic	73	0.67	12,000	109
EMR 1998	10/7/1998	ST-4	7	Benzene	7.84	0.03		261
EMR 1998	9/25/1998	PX-1	4	Benzene	5	0.03		160
EMR 1998	9/25/1998	PX-2	5	Benzene	2.8	0.03		93
EMR 1998	10/7/1998	ST-9	7	Benzene	1.08	0.03		36
EMR 1998	10/7/1998	ST-10	7	Benzene	0.34	0.03		11
EMR 1998	10/7/1998	ST-10	7	Benzene	0.27	0.03		9.0
EMR 1998	10/7/1998	ST-6	7	Benzene	0.17	0.03		5.7
EMR 1998	10/7/1998	ST-3	7	Benzene	0.15	0.03		5.0
EMR 1998	10/7/1998	ST-11	7	Benzene	0.1	0.03		3.3
EMR 1998	10/7/1998	ST-8	7	Benzene	0.07	0.03		2.3
EMR 1998	10/7/1998	ST-2	7	Benzene	0.06	0.03		2.0
EMR 1998	9/25/1998	PX-2	5	Ethylbenzene	26	6		4.3
EMR 1998	9/25/1998	PX-1	4	Ethylbenzene	19	6		3.2
EMR 1998	9/25/1998	PX-1	4	Gasoline-range hydrocarbons	5300	30		177
EMR 1998	9/25/1998	PX-2	5	Gasoline-range hydrocarbons	2000	30		67
Department of Health 1999	5/1/1998	#1	0.5	Lead	470	250	1,300	1.9
Department of Health 1999	5/1/1998	#2	0.5	Lead	370	250	1,300	1.5
EMR 1998	9/25/1998	PX-1	4	Toluene	46	7		6.6
EMR 1998	9/25/1998	PX-2	5	Toluene	26	7		3.7

Table 16
Chemicals Detected Above Screening Levels in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Groundwater encountered at 8 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 17
Chemicals Detected Above Screening Levels in Soil
Olympic Steel Door

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Global Environmental 2000	10/17/2000	SSW	8	Gasoline-range hydrocarbons	360	100	3.6

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Groundwater encountered at 10 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 18
Chemicals Detected Above Screening Levels in Groundwater
Olympic Steel Door

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Global Environmental 2000	10/17/2002	GW-1	Benzene	180	5	36
Global Environmental 2000	10/17/2002	GW-1	Gasoline-range hydrocarbons	6,200	800	7.8

GW - Groundwater
ug/L - Micrograms per liter
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 19
Chemicals Detected Above Screening Levels in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #2	5	Benzene	100	0.03	3,333
Bison 1994a	6/1/1994	SS #10	Stockpile	Benzene	41	0.03	1,367
Bison 1994a	6/1/1994	SS #3	6	Benzene	21	0.03	700
Bison 1994a	6/1/1994	SS #4	4.5	Benzene	19	0.03	633
Bison 1994a	6/1/1994	SS #1	10	Benzene	8.4	0.03	280
Bison 1994a	6/1/1994	SS #9	Stockpile	Benzene	5.4	0.03	180
Bison 1994a	6/1/1994	SS #12	12	Benzene	4.7	0.03	157
Bison 1994a	6/1/1994	SS #11	Stockpile	Benzene	3.6	0.03	120
Bison 1994a	6/1/1994	SS #15	12	Benzene	3.1	0.03	103
Bison 1994a	6/1/1994	WS1	6	Benzene	1.9	0.03	63
Bison 1994a	6/1/1994	SS #6	Stockpile	Benzene	1.7	0.03	57
Bison 1994a	6/1/1994	SS #5	4	Benzene	1.5	0.03	50
Bison 1994a	6/1/1994	SS #7	Stockpile	Benzene	0.86	0.03	29
Bison 1994a	6/1/1994	SS #8	Stockpile	Benzene	0.79	0.03	26
Bison 1994a	6/1/1994	SS #13	6	Benzene	0.14	0.03	4.7
Bison 1994a	6/1/1994	SS #2	5	Ethylbenzene	390	6	65
Bison 1994a	6/1/1994	SS #4	4.5	Ethylbenzene	280	6	47
Bison 1994a	6/1/1994	SS #3	6	Ethylbenzene	90	6	15
Bison 1994a	6/1/1994	SS #10	Stockpile	Ethylbenzene	49	6	8.2
Bison 1994a	6/1/1994	SS #5	4	Ethylbenzene	35	6	5.8
Bison 1994a	6/1/1994	SS #9	Stockpile	Ethylbenzene	27	6	4.5
Bison 1994a	6/1/1994	SS #1	10	Ethylbenzene	22	6	3.7
Bison 1994a	6/1/1994	SS #7	Stockpile	Ethylbenzene	13	6	2.2
Bison 1994a	6/1/1994	SS #11	Stockpile	Ethylbenzene	13	6	2.2
Bison 1994a	6/1/1994	SS #6	Stockpile	Ethylbenzene	9.7	6	1.6

Table 19
Chemicals Detected Above Screening Levels in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #4	4.5	Gasoline-range hydrocarbons	38,000	30	1,267
Bison 1994a	6/1/1994	SS #2	5	Gasoline-range hydrocarbons	36,000	30	1,200
Bison 1994a	6/1/1994	SS #5	4	Gasoline-range hydrocarbons	16,000	30	533
Bison 1994a	6/1/1994	SS #3	6	Gasoline-range hydrocarbons	13,000	30	433
Bison 1994a	6/1/1994	SS #10	Stockpile	Gasoline-range hydrocarbons	4,200	30	140
Bison 1994a	6/1/1994	SS #7	Stockpile	Gasoline-range hydrocarbons	4,100	30	137
Bison 1994a	6/1/1994	SS #1	10	Gasoline-range hydrocarbons	3,900	30	130
Bison 1994a	6/1/1994	SS #8	Stockpile	Gasoline-range hydrocarbons	3,500	30	117
Bison 1994a	6/1/1994	SS #9	Stockpile	Gasoline-range hydrocarbons	2,500	30	83
Bison 1994a	6/1/1994	SS #6	Stockpile	Gasoline-range hydrocarbons	2,200	30	73
Bison 1994a	6/1/1994	SS #11	Stockpile	Gasoline-range hydrocarbons	1,700	30	57
Bison 1994a	6/1/1994	SS #12	12	Gasoline-range hydrocarbons	750	30	25
Bison 1994a	6/1/1994	SS #15	12	Gasoline-range hydrocarbons	230	30	7.7
Bison 1994a	6/1/1994	SS #13	6	Gasoline-range hydrocarbons	180	30	6.0
Bison 1994a	6/1/1994	WS1	6	Gasoline-range hydrocarbons	33	30	1.1
Bison 1994a	6/1/1994	SS #2	5	Toluene	1,600	7	229
Bison 1994a	6/1/1994	SS #4	4.5	Toluene	770	7	110
Bison 1994a	6/1/1994	SS #3	6	Toluene	370	7	53
Bison 1994a	6/1/1994	SS #10	Stockpile	Toluene	230	7	33
Bison 1994a	6/1/1994	SS #1	10	Toluene	77	7	11
Bison 1994a	6/1/1994	SS #9	Stockpile	Toluene	76	7	11
Bison 1994a	6/1/1994	SS #5	4	Toluene	75	7	11
Bison 1994a	6/1/1994	SS #6	Stockpile	Toluene	35	7	5.0
Bison 1994a	6/1/1994	SS #11	Stockpile	Toluene	35	7	5.0
Bison 1994a	6/1/1994	SS #7	Stockpile	Toluene	18	7	2.6

Table 19
Chemicals Detected Above Screening Levels in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #2	5	Xylenes	3,600	9	400
Bison 1994a	6/1/1994	SS #4	4.5	Xylenes	3,500	9	389
Bison 1994a	6/1/1994	SS #3	6	Xylenes	1,100	9	122
Bison 1994a	6/1/1994	SS #5	4	Xylenes	680	9	76
Bison 1994a	6/1/1994	SS #10	Stockpile	Xylenes	330	9	37
Bison 1994a	6/1/1994	SS #1	10	Xylenes	290	9	32
Bison 1994a	6/1/1994	SS #7	Stockpile	Xylenes	220	9	24
Bison 1994a	6/1/1994	SS #9	Stockpile	Xylenes	190	9	21
Bison 1994a	6/1/1994	SS #6	Stockpile	Xylenes	150	9	17
Bison 1994a	6/1/1994	SS #8	Stockpile	Xylenes	110	9	12
Bison 1994a	6/1/1994	SS #11	Stockpile	Xylenes	110	9	12
Bison 1994a	6/1/1994	SS #12	12	Xylenes	37	9	4.1
Bison 1994a	6/1/1994	SS #15	12	Xylenes	9.9	9	1.1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Depth to groundwater is unknown at this property.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 20
Chemicals Detected Above Screening Levels in Groundwater
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Marine Lumber Service 2003	10/17/1996	MMW-1	Benzene	116	0.8	146
Marine Lumber Service 2003	8/1/1998	MMW-1	Benzene	21	0.8	26
Marine Lumber Service 2003	9/27/2000	MMW-1	Benzene	10	0.8	13
Marine Lumber Service 2003	10/17/1996	MMW-1	Ethylbenzene	1,530	700	2.2
Marine Lumber Service 2003	10/17/1996	MMW-1	Toluene	5,790	640	9.0
Marine Lumber Service 2003	10/17/1996	MMW-1	Xylenes	18,900	1,000	19
Marine Lumber Service 2003	8/1/1998	MMW-1	Xylenes	3,100	1,000	3.1
Marine Lumber Service 2003	9/27/2000	MMW-1	Xylenes	2,100	1,000	2.1

GW - Groundwater
ug/L - Micrograms per liter
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 21
Chemicals Detected Above Screening Levels in Soil
Former Glitsa American

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	3-4	Arsenic	2.9	0.67	12,000	4.3
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	3-4	Arsenic	2.68	0.67	12,000	4.0
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	3-4	Arsenic	1.96	0.67	12,000	2.9
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	7-8	Ethylbenzene	38	6		6.3
Environmental Associates 2009a	3/3/2009	W-4	4	Ethylbenzene	23	6		3.8
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Ethylbenzene	9.6	6		1.6
Environmental Associates 2009b	4/20/2009	LAR-2	5-6	Stoddard Solvent (mineral spirits)	92,000	100		920
Environmental Associates 2009a	3/3/2009	W-4	4	Stoddard Solvent (mineral spirits)	19,000	100		190
Environmental Associates 2010	12/9/2009	W2 (SGB7)	7-8	Stoddard Solvent (mineral spirits)	9,800	100		98
Environmental Associates 2010	12/9/2009	W3 (SGB8)	3-4	Stoddard Solvent (mineral spirits)	9,400	100		94
Environmental Associates 2010	12/9/2009	W12 (SGB1)	11-12	Stoddard Solvent (mineral spirits)	9,000	100		90
Environmental Associates 2010	12/9/2009	W3 (SGB8)	7-8	Stoddard Solvent (mineral spirits)	7,700	100		77
Environmental Associates 2010	12/9/2009	W7 (SGB5)	7-8	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2010	12/9/2009	W12 (SGB1)	7-8	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2009a	5/5/2009	RE-W-6	6	Stoddard Solvent (mineral spirits)	4,100	100		41
Environmental Associates 2010	12/9/2009	W11 (SGB2)	7-8	Stoddard Solvent (mineral spirits)	2,100	100		21
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Stoddard Solvent (mineral spirits)	2,000	100		20
Environmental Associates 2010	12/9/2009	W6 (SGB6)	7-8	Stoddard Solvent (mineral spirits)	1,700	100		17
Environmental Associates 2009b	4/27/2009	HA3 (VES-3)	3-4	Stoddard Solvent (mineral spirits)	1,500	100		15
Environmental Associates 2009b	4/24/2009	HA1 (VES-1)	3-4	Stoddard Solvent (mineral spirits)	980	100		9.8
Environmental Associates 2010	12/9/2009	W10 (SGB3)	7-8	Stoddard Solvent (mineral spirits)	318	100		3.2
Environmental Associates 2009a	3/3/2009	W-4	4	Xylenes	40	9		4.4
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	7-8	Xylenes	38	9		4.2
Environmental Associates 2009a	5/5/2009	RE-W-6	6	Xylenes	25	9		2.8
Environmental Associates 2009b	4/20/2009	LAR-2	5-6	Xylenes	20	9		2.2
Environmental Associates 2009b	4/24/2009	HA1 (VES-1)	3-4	Xylenes	18	9		2.0

Table 21
Chemicals Detected Above Screening Levels in Soil
Former Glitsa American

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Xylenes	17	9		1.9
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Xylenes	11	9		1.2

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Groundwater encountered at 9.5 feet bgs.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table 22
Chemicals Detected Above Screening Levels in Groundwater
Former Glitsa American

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Environmental Associates 2009b	4/20/2009	LAR-2	Benzene	29.0	0.8	36
Environmental Associates 2009b	5/14/2009	VES-4	Benzene	7.9	0.8	10
Environmental Associates 2009b	5/14/2009	VES-5	Benzene	4.7	0.8	5.9
Environmental Associates 2009b	5/14/2009	VES-6	Benzene	4.4	0.8	5.5
Environmental Associates 2009b	12/16/2008	MW-4	Benzene	1	0.8	1.3
Environmental Associates 2009b	4/20/2009	LAR-2	Gasoline-range hydrocarbons	170,000	800	213
Environmental Associates 2009b	5/14/2009	VES-4	Gasoline-range hydrocarbons	86,000	800	108
Environmental Associates 2009b	5/14/2009	VES-6	Gasoline-range hydrocarbons	65,000	800	81
Environmental Associates 2009b	5/14/2009	VES-5	Gasoline-range hydrocarbons	57,000	800	71
Environmental Associates 2010	4/7/2010	W1 (SGB-9)	Gasoline-range hydrocarbons	27,000	800	34
Environmental Associates 2010	12/9/2009	W6 (SGB-6)	Gasoline-range hydrocarbons	24,000	800	30
Environmental Associates 2010	12/9/2009	W7 (SGB-5)	Gasoline-range hydrocarbons	24,000	800	30
Environmental Associates 2010	4/18/2009	W7 (SGB-5)	Gasoline-range hydrocarbons	16,000	800	20
Environmental Associates 2010	4/7/2010	W4 (SGB-10)	Gasoline-range hydrocarbons	15,000	800	19
Environmental Associates 2010	4/18/2009	W6 (SGB-6)	Gasoline-range hydrocarbons	13,000	800	16
Environmental Associates 2009b	12/2/2008	MW-1	Gasoline-range hydrocarbons	11,000	800	14
Environmental Associates 2010	4/18/2009	W8 (SGB-4)	Gasoline-range hydrocarbons	6,400	800	8.0
Environmental Associates 2010	4/18/2009	W5 (VES-4)	Gasoline-range hydrocarbons	6,100	800	7.6
Environmental Associates 2010	12/9/2009	W13 (VES-6)	Gasoline-range hydrocarbons	6,100	800	7.6
Environmental Associates 2010	4/18/2009	W11 (SGB-2)	Gasoline-range hydrocarbons	4,800	800	6.0
Environmental Associates 2010	4/18/2009	W9 (VES-5)	Gasoline-range hydrocarbons	4,500	800	5.6
Environmental Associates 2010	12/9/2009	W11 (SGB-2)	Gasoline-range hydrocarbons	3,600	800	4.5
Environmental Associates 2010	12/9/2009	W2 (SGB-7)	Gasoline-range hydrocarbons	3,500	800	4.4
Environmental Associates 2010	12/9/2009	W8 (SGB-4)	Gasoline-range hydrocarbons	3,500	800	4.4
Environmental Associates 2010	12/9/2009	W10 (SGB-3)	Gasoline-range hydrocarbons	3,300	800	4.1
Environmental Associates 2009b	12/16/2008	MW-4	Gasoline-range hydrocarbons	2,500	800	3.1

Table 22
Chemicals Detected Above Screening Levels in Groundwater
Former Glitsa American

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Friedman & Bruya 2008	12/4/2008	B-1-GW	Stoddard Solvent (mineral spirits)	11,000	800	14
Friedman & Bruya 2008	12/4/2008	B-3-GW	Stoddard Solvent (mineral spirits)	3,000	800	3.8
Friedman & Bruya 2008	12/4/2008	B-2-GW	Stoddard Solvent (mineral spirits)	1,100	800	1.4
Environmental Associates 2009b	4/20/2009	LAR-2	Vinyl Chloride	4	0.2	20

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 23
Chemicals Detected Above Screening Levels in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007b	10/18/2007	SB-9	7.5	Benzene	0.172	0.03		5.7
Environ 2008a	5/28/2008	CS-1	0.5	Benzene	0.052	0.03		1.7
Environ 2007a	6/13/2007	SB-1	4	Benzo(a)pyrene	0.144	0.1	0.21	1.4
Environ 2007a	6/13/2007	SB-1	4	Dibenzo(a,h)anthracene	0.0774	0.14	0.033	2.3
Environ 2007a	6/13/2007	SB-4	1.5	Diesel-range hydrocarbons	6,370	2,000		3.2
Environ 2008a	5/29/2008	CS-27	2.5	Diesel-range hydrocarbons	3,850	2,000		1.9
Environ 2007a	6/13/2007	SB-5	1.5	Ethylbenzene	4,490	6		748
Environ 2007a	6/13/2007	SB-2	3.75	Lead	1,330	250	67	20
Environ 2007a	6/13/2007	SB-5	3.5	Lead	1,160	250	67	17
Environ 2007a	6/13/2007	SB-4	3.75	Lead	1,120	250	67	17
Environ 2007a	6/13/2007	SB-3	3.75	Lead	1,090	250	67	16
Environ 2007a	6/13/2007	SB-4	1.5	Lead	920	250	67	14
Environ 2007a	6/13/2007	SB-3	1.5	Lead	820	250	67	12
Environ 2007a	6/13/2007	SB-2	2	Lead	632	250	67	9.4
Environ 2007a	6/13/2007	SB-1	4	Lead	467	250	67	7.0
Environ 2007a	6/13/2007	SB-5	1.5	Lead	415	250	67	6.2
PNG 1995	9/11/1995	B-4	7.5	Methylene chloride	0.0258	0.02		1.3
Environ 2008a	5/28/2008	CS-9	0.5	Mineral oil	14,000	4,000		3.5
Environ 2007a	6/13/2007	SB-4	1.5	Motor oil-range hydrocarbons	28,100	2,000		14
Environ 2008a	5/28/2008	CS-1	0.5	Motor oil-range hydrocarbons	4,400 D	2,000		2.2
Environ 2008a	5/28/2008	CS-1	0.5	Motor oil-range hydrocarbons	4,300	2,000		2.2
Environ 2008a	5/28/2008	CS-3	2.5	Motor oil-range hydrocarbons	2,500	2,000		1.3
Environ 2007a	6/13/2007	SB-2	2	Motor oil-range hydrocarbons	1,910	2,000		1.0
Environ 2007a	6/13/2007	SB-5	1.5	Naphthalene	3.36	5	0.20	17
Environ 2008a	5/28/2008	CS-3	2.5	Naphthalene	0.37	5	0.20	1.9
Environ 2007b	10/18/2007	SB-9	7.5	Naphthalene	0.343	5	0.20	1.7

Table 23
Chemicals Detected Above Screening Levels in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2008a	5/28/2008	CS-4	1	Naphthalene	0.19	5	0.20	1.0
Environ 2007a	6/13/2007	SB-2	2	Tetrachloroethene (PCE)	16	0.05		320
Environ 2007b	10/18/2007	SB-7	2.5	Tetrachloroethene (PCE)	8.4	0.05		168
Environ 2007b	10/19/2007	SB-14	2.5	Tetrachloroethene (PCE)	1.87	0.05		37
Environ 2008a	5/29/2008	CS-27	2.5	Tetrachloroethene (PCE)	1.76	0.05		35
Environ 2008a	5/28/2008	CS-1	0.5	Tetrachloroethene (PCE)	1.43 D	0.05		29
Environ 2008a	5/28/2008	CS-2	2.25	Tetrachloroethene (PCE)	1.34	0.05		27
Environ 2008a	5/28/2008	CS-3	2.5	Tetrachloroethene (PCE)	1.19	0.05		24
Environ 2008a	5/28/2008	CS-11	0.5	Tetrachloroethene (PCE)	0.71	0.05		14
Environ 2008a	5/28/2008	CS-6	2.5	Tetrachloroethene (PCE)	0.52	0.05		10
Environ 2008a	5/28/2008	CS-9	0.5	Tetrachloroethene (PCE)	0.48	0.05		9.6
Environ 2008a	5/29/2008	CS-19	1	Tetrachloroethene (PCE)	0.4	0.05		8
Environ 2007a	6/13/2007	SB-2	2	Tetrachloroethene (PCE)	0.219	0.05		4.4
Environ 2007a	6/13/2007	SB-5	1.5	Tetrachloroethene (PCE)	0.174	0.05		3.5
Environ 2008a	5/28/2008	CS-7	0.5	Tetrachloroethene (PCE)	0.17	0.05		3.4
Environ 2007b	10/19/2007	SB-21	1	Tetrachloroethene (PCE)	0.161	0.05		3.2
Environ 2007b	10/18/2007	SB-9	7.5	Tetrachloroethene (PCE)	0.152	0.05		3.0
Environ 2008a	5/28/2008	CS-10	3	Tetrachloroethene (PCE)	0.14	0.05		2.8
Environ 2008a	5/29/2008	CS-17	0.33	Tetrachloroethene (PCE)	0.12	0.05		2.4
Environ 2007b	10/18/2007	SB-1	4	Tetrachloroethene (PCE)	0.105	0.05		2.1
Environ 2007b	10/18/2007	SB-6	0.5	Tetrachloroethene (PCE)	0.1	0.05		2
Environ 2007b	10/18/2007	SB-11	2	Tetrachloroethene (PCE)	0.1	0.05		2
Environ 2008a	5/28/2008	CS-1	0.5	Tetrachloroethene (PCE)	0.099	0.05		2.0
Environ 2008a	5/28/2008	CS-5	0.5	Tetrachloroethene (PCE)	0.097	0.05		1.9
Environ 2007b	10/18/2007	SS-1	0.25	Tetrachloroethene (PCE)	0.07	0.05		1.4
Environ 2007b	10/18/2007	SS-1	0.8	Tetrachloroethene (PCE)	0.07	0.05		1.4

Table 23
Chemicals Detected Above Screening Levels in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007b	10/18/2007	SB-8	0.5	Tetrachloroethene (PCE)	0.06	0.05		1.2
Environ 2007b	10/18/2007	SS-1	0.25	Tetrachloroethene (PCE)	0.06	0.05		1.2
Environ 2007a	6/13/2007	SB-5	1.5	Toluene	3,330	7		476
Environ 2007a	6/13/2007	SB-2	2	Trichloroethene	0.334	0.03		11
Environ 2007b	10/18/2007	SS-1	0.8	Trichloroethene	0.05	0.03		1.7
Environ 2008a	5/28/2008	CS-1	0.5	Trichloroethene	0.045	0.03		1.5
Environ 2007b	10/19/2007	SB-13	3.5	Trichloroethene	0.04	0.03		1.3
Environ 2007a	6/13/2007	SB-5	1.5	Xylenes	29,700	9		3,300
Environ 2007a	6/13/2007	SB-4	1.5	Xylenes	501	9		56
Environ 2007a	6/13/2007	SB-5	1.5	Xylenes	29.7	9		3.3

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 24
Chemicals Detected Above Screening Levels in Soil
Ness Cranes, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
O'Sullivan 1993	11/6/1992	No. 12	NA	2-Methylnaphthalene	2.1	320	0.073	29
Enviros 1991	8/22/1991	W-Wall	7	Arsenic	70	0.67	12,000	104
O'Sullivan 1993	11/6/1992	No. 12	NA	Dibenzofuran	0.31	80	0.059	5.3
O'Sullivan 1993	11/4/1992	No. 1	NA	Diesel-range hydrocarbons	4,799	2,000		2.4
O'Sullivan 1993	11/6/1992	No. 12	NA	Diesel-range hydrocarbons	14,579	2,000		7.3
O'Sullivan 1993	11/6/1992	No. 13	NA	Diesel-range hydrocarbons	33,588	2,000		17
O'Sullivan 1993	11/6/1992	No. 12	NA	Fluorene	0.70	3,200	0.081	8.6
O'Sullivan 1993	11/6/1992	No. 12	NA	Naphthalene	0.25	5	0.2	1.3
O'Sullivan 1993	11/6/1992	No. 12	NA	Phenanthrene	1		0.5	2.0
O'Sullivan 1993	11/6/1992	No. 13	NA	Pyrene	44	2,400	1.4	31
Enviros 1991	8/22/1991	W-Wall	7	Total petroleum hydrocarbons	690	100		6.9
Enviros 1991	8/22/1991	W-Wall	7	Total petroleum hydrocarbons	590 D	100		5.9
Enviros 1991	8/22/1991	Pit Floor	8	Total petroleum hydrocarbons	640	100		6.4

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
D - Duplicate sample
CSL - Cleanup Screening Level from Washington Sediment Management Standards
NA - Not available

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Depth to groundwater unknown at this property.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 25
Chemicals Detected Above Screening Levels in Soil
National Products Inc.

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Hart Crowser 1999a	4/11/1997	B-7-S1	0 - 2.0	Tetrachloroethene (PCE)	0.31	0.05	6.2
Hart Crowser 1999a	4/11/1997	B-10-S1	0 - 2.0	Tetrachloroethene (PCE)	0.31	0.05	6.2
Hart Crowser 1999a	4/11/1997	B-14-S1	0 - 2.0	Tetrachloroethene (PCE)	0.31	0.05	6.2
Hart Crowser 1999a	11/25/1996	SP-2	6.0 - 8.0	Tetrachloroethene (PCE)	0.19	0.05	3.8
Hart Crowser 1999a	4/11/1997	B-9-S1	0 - 2.0	Tetrachloroethene (PCE)	0.19	0.05	3.8
Hart Crowser 1999a	4/11/1997	B-12-S1	0 - 2.0	Tetrachloroethene (PCE)	0.19	0.05	3.8
Hart Crowser 1999a	4/11/1997	B-15-S1	0 - 2.0	Tetrachloroethene (PCE)	0.19	0.05	3.8
Hart Crowser 1999a	4/11/1997	B-8-S1	0 - 2.0	Tetrachloroethene (PCE)	0.15	0.05	3.0
Hart Crowser 1999a	11/25/1996	SP-1	6.0 - 8.0	Tetrachloroethene (PCE)	0.11	0.05	2.2
Hart Crowser 1999a	4/11/1997	B-13-S1	0 - 2.0	Tetrachloroethene (PCE)	0.11	0.05	2.2
Hart Crowser 1999a	11/25/1996	SP-3	10.0 -12.0	Tetrachloroethene (PCE)	0.1	0.05	2.0
Hart Crowser 1999a	4/11/1997	B-16-S1	0 - 2.0	Tetrachloroethene (PCE)	0.1	0.05	2.0
Hart Crowser 1999a	4/11/1997	B-11-S1	0 - 2.0	Tetrachloroethene (PCE)	0.085	0.05	1.7
Hart Crowser 1999a	11/25/1996	SP-6	6.0 - 8.0	Tetrachloroethene (PCE)	0.06 D	0.05	1.2
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Vanadium	28.5	5.6	5.1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Vanadium	28.5	5.6	5.1
Hart Crowser 1999a	11/12/1996	CB-1	3.0 - 5.0	Vanadium	24.90	5.6	4.4

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
D - Duplicate sample

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Depth to groundwater at this property is approximately 10 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Table 26
Chemicals Detected Above Screening Levels in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	11/13/1996	MW-3	Arsenic	7.1	0.058	370	122
Hart Crowser 1999a	11/11/1996	MW-1	Arsenic	5.4	0.058	370	93
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	cis-1,2-Dichloroethene	40	16		2.5
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	cis-1,2-Dichloroethene	36	16		2.3
Hart Crowser 1999a	11/11/1996	MW-1	Tetrachloroethene (PCE)	48.8	5		9.8
Hart Crowser 1999a	11/11/1996	MW-1	Tetrachloroethene (PCE)	48 D	5		9.6
Hart Crowser 1999a	4/18/1997	MW-1	Tetrachloroethene (PCE)	47	5		9.4
Hart Crowser 1999a	4/18/1997	MW-1	Tetrachloroethene (PCE)	47 D	5		9.4
Hart Crowser 1999a	11/26/1996	MW-1	Tetrachloroethene (PCE)	41	5		8.2
Hart Crowser 1999a	11/11/1997	MW-1	Tetrachloroethene (PCE)	39	5		7.8
Hart Crowser 1999a	2/15/1999	MW-1	Tetrachloroethene (PCE)	32	5		6.4
Hart Crowser 1999a	10/30/1998	MW-1	Tetrachloroethene (PCE)	26	5		5.2
Hart Crowser 1999a	11/25/1996	SP-1	Tetrachloroethene (PCE)	20	5		4.0
Hart Crowser 1999a	12/6/1996	D-1 (25-28.5 ft)	Tetrachloroethene (PCE)	18	5		3.6
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Tetrachloroethene (PCE)	16	5		3.2
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Tetrachloroethene (PCE)	15	5		3.0
Hart Crowser 1999a	1/22/1999	MW-2	Trichloroethene (TCE)	70	5		14
Hart Crowser 1999a	11/11/1996	MW-2	Trichloroethene (TCE)	54	5		11
Hart Crowser 1999a	11/11/1997	MW-2	Trichloroethene (TCE)	50	5		10
Hart Crowser 1999a	1/22/1999	HC-1	Trichloroethene (TCE)	49	5		9.8
Hart Crowser 1999a	1/22/1999	HC-2	Trichloroethene (TCE)	45	5		9.0
Hart Crowser 1999a	10/30/1998	MW-1	Trichloroethene (TCE)	39	5		7.8
Hart Crowser 1999a	1/22/1999	MW-3	Trichloroethene (TCE)	39	5		7.8
Hart Crowser 1999a	1/22/1999	HC-3	Trichloroethene (TCE)	38	5		7.6
Hart Crowser 1999a	4/18/1997	MW-2	Trichloroethene (TCE)	34	5		6.8
Hart Crowser 1999a	10/30/1998	MW-2	Trichloroethene (TCE)	24	5		4.8

Table 26
Chemicals Detected Above Screening Levels in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	10/30/1998	MW-2	Trichloroethene (TCE)	24 D	5		4.8
Hart Crowser 1999a	1/22/1999	MW-2	Trichloroethene (TCE)	22 D	5		4.4
Hart Crowser 1999a	11/11/1996	MW-1	Trichloroethene (TCE)	16.9	5		3.4
Hart Crowser 1999a	11/11/1996	MW-1	Trichloroethene (TCE)	16.7 D	5		3.3
Hart Crowser 1999a	11/11/1997	MW-1	Trichloroethene (TCE)	16	5		3.2
Hart Crowser 1999a	4/18/1997	MW-1	Trichloroethene (TCE)	15 D	5		3.0
Hart Crowser 1999a	11/26/1996	MW-1	Trichloroethene (TCE)	14	5		2.8
Hart Crowser 1999a	4/18/1997	MW-1	Trichloroethene (TCE)	12	5		2.4
Hart Crowser 1999a	2/15/1999	MW-1	Trichloroethene (TCE)	10	5		2.0
Hart Crowser 1999a	11/11/1996	MW-1	Vanadium	107 D	1.12		96
Hart Crowser 1999a	11/13/1996	MW-3	Vanadium	59.5	1.12		53
Hart Crowser 1999a	11/11/1996	MW-1	Vanadium	42.6	1.12		38
Hart Crowser 1999a	11/11/1996	MW-2	Vanadium	29.1	1.12		26

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL (SAIC 2006).

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Table 27
Chemicals Detected Above Screening Levels in Soil
Former Crosby Auto Repair Shop

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
SD&C 2000	9/20/2000	B1	12	Gasoline-range hydrocarbons	160	100	1.6

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Table presents detected chemicals only.
Depth to groundwater at this property is approximately 15 feet bgs.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 28
Chemicals Detected Above Screening Levels in Groundwater
Former Crosby Auto Repair Shop

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
SD&C 2000	9/20/2000	B-1	Benzene	8.1	0.8	10
SD&C 2000	9/20/2000	B-1	Gasoline-range hydrocarbons	2,400	800	3

GW - Groundwater
ug/L - Micrograms per liter
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table 29
Chemicals Detected Above Screening Levels in Soil
Warner's Foreign Auto Repair

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg DW)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison 1992a	1/9/1992	#2	5	Gasoline-range hydrocarbons	3,100	100	31

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
DW - Dry weight
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Depth to groundwater unknown at this property.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Appendix A
Sediment Sampling Data
RM 2.6 to 3.4 West

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR221	8/13/1998	1,2,3,4,6,7,8-HPCDD	1.30E-04		1.57						
EPA SI	DR224	8/20/1998	1,2,3,4,6,7,8-HPCDD	6.60E-05		1.17						
EPA SI	DR203	8/27/1998	1,2,3,4,6,7,8-HPCDD	4.80E-05		1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,4,6,7,8-HPCDD	1.03E-03		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDD	7.20E-05		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDD (TEQ ND=0)	7.20E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDD (TEQ ND=1/2 DL)	7.20E-07		2.61						
EPA SI	DR221	8/13/1998	1,2,3,4,6,7,8-HPCDF	1.80E-05		1.57						
EPA SI	DR224	8/20/1998	1,2,3,4,6,7,8-HPCDF	1.30E-05		1.17						
EPA SI	DR203	8/27/1998	1,2,3,4,6,7,8-HPCDF	8.30E-06	J	1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,4,6,7,8-HPCDF	9.55E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDF	1.61E-05		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDF (TEQ ND=0)	1.61E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,6,7,8-HPCDF (TEQ ND=1/2 DL)	1.61E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,4,7,8,9-HPCDF	6.76E-06		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8,9-HPCDF	1.21E-06	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8,9-HPCDF (TEQ ND=0)	1.21E-08		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8,9-HPCDF (TEQ ND=1/2 DL)	1.21E-08		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,4,7,8-HxCDD	1.06E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDD	1.12E-06	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDD (TEQ ND=0)	1.12E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDD (TEQ ND=1/2 DL)	1.12E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,4,7,8-HXCDF	1.08E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDF	1.84E-06	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDF (TEQ ND=0)	1.84E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,4,7,8-HXCDF (TEQ ND=1/2 DL)	1.84E-07		2.61						
EPA SI	DR221	8/13/1998	1,2,3,6,7,8-HXCDD	5.70E-06	J	1.57						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,6,7,8-HXCDD	3.92E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDD	3.49E-06	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDD (TEQ ND=0)	3.49E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDD (TEQ ND=1/2 DL)	3.49E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,6,7,8-HxCDF	5.23E-06		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDF	6.69E-07	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDF (TEQ ND=0)	6.69E-08		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,6,7,8-HXCDF (TEQ ND=1/2 DL)	6.69E-08		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,7,8,9-HXCDD	3.29E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8,9-HXCDD	3.01E-06	J	2.61						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8,9-HXCDD (TEQ ND=0)	3.01E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8,9-HXCDD (TEQ ND=1/2 DL)	3.01E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,7,8,9-HXCDF	3.65E-07	J	1.56						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,7,8-PECDD	7.19E-06		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDD	6.59E-07	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDD (TEQ ND=0)	6.59E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDD (TEQ ND=1/2 DL)	6.59E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1,2,3,7,8-PECDF	2.21E-06	J	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDF	3.15E-07	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDF (TEQ ND=0)	9.45E-09		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	1,2,3,7,8-PECDF (TEQ ND=1/2 DL)	9.45E-09		2.61						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	1,2,4-Trichlorobenzene	7.10E-03		2.26	3.10E-01	0.81	1.8	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	1,2,4-Trichlorobenzene	6.10E-03		4.53						
KC WQA	WQA8AVE	5/1/1997	1,2-Dichlorobenzene	1.70E-03	J	1.6	1.06E-01	2.3	2.3	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/6/1997	1,3-Dichlorobenzene	2.40E-03	J	1.93		170		ug/kg dw	<1	
KC WQA	WQA8AVE	4/3/1997	1,3-Dichlorobenzene	1.60E-03	J	1.58		170		ug/kg dw	<1	
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	1,3-Dichlorobenzene	2.40E-01		2.26	1.10E+01					
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	1,4-Dichlorobenzene	1.50E-01		2.26	6.60E+00	3.1	9	mg/kg OC	2.1	<1
KC WQA	WQA8AVE	3/6/1997	1,4-Dichlorobenzene	2.60E-03	J	1.93	1.35E-01	3.1	9	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	1,4-Dichlorobenzene	1.80E-03	J	1.58	1.14E-01	3.1	9	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	1,4-Dichlorobenzene	1.60E-03	J	1.67	9.58E-02	3.1	9	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	1,4-Dichlorobenzene	6.40E-02		2.89	2.20E+00	3.1	9	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	1-Methylnaphthalene	3.40E-03	J	1.64						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	1-Methylnaphthalene	5.60E-01		1.56						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	1-Methylnaphthalene	2.40E-02		4.53						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2,3,4,6,7,8-HXCDF	4.86E-06	J	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,6,7,8-HXCDF	6.19E-07	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,6,7,8-HXCDF (TEQ ND=0)	6.19E-08		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,6,7,8-HXCDF (TEQ ND=1/2 DL)	6.19E-08		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2,3,4,7,8-PECDF	4.83E-06		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,7,8-PECDF	5.26E-07	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,7,8-PECDF (TEQ ND=0)	1.58E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,3,4,7,8-PECDF (TEQ ND=1/2 DL)	1.58E-07		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2,3,7,8-TCDD	1.77E-06		1.56						
EPA SI	DR221	8/13/1998	2,3,7,8-TCDF	1.30E-06	J	1.57						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2,3,7,8-TCDF	5.37E-06		1.56						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	2,4,6-Tribromophenol	6.60E-01		2.26	2.90E+01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2,4,6-Tribromophenol	6.80E-01		2.61	2.60E+01					

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	2,4,6-Tribromophenol	5.90E-01		1.59	3.70E+01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	2,4,6-Tribromophenol	6.00E-01		1.96	3.10E+01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	2,4,6-Tribromophenol	5.90E-01		2.35	2.50E+01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	2,4,6-Tribromophenol	5.90E-01		2.81	2.10E+01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	2,4,6-Tribromophenol	5.80E-01		3.55	1.60E+01					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2,4,6-Tribromophenol	6.90E-01	J	4.53						
LDWRI-Benthic	C9	8/25/2004	2,4'-DDD	1.60E-03	JN	0.56						
LDWRI-Benthic	B7a	8/30/2004	2,4'-DDE	1.10E-02	JN	1.64						
LDWRI-Benthic	C9	8/25/2004	2,4'-DDT	1.30E-03	JN	0.56						
LDWRI-Benthic	B7a	8/30/2004	2,4'-DDT	6.30E-03	JN	1.64						
Ecology SPI	TRI-095T	8/11/2006	2,4-Dimethylphenol	6.40E-02		2.39		29	29	ug/kg dw	2.2	2.2
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2,4-Dimethylphenol	1.30E-02		4.53		29	29	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	2-Fluorobiphenyl	3.20E-01		2.26	1.40E+01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2-Fluorobiphenyl	3.20E-01		2.61	1.20E+01					
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	2-Fluorobiphenyl	3.20E-01		1.59	2.00E+01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	2-Fluorobiphenyl	3.30E-01		1.96	1.70E+01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	2-Fluorobiphenyl	3.00E-01		2.35	1.30E+01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	2-Fluorobiphenyl	3.30E-01		2.81	1.20E+01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	2-Fluorobiphenyl	2.90E-01		3.55	8.20E+00					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2-Fluorobiphenyl	3.30E-01		4.53						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	2-Fluorophenol	4.90E-01		2.26	2.20E+01					
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	2-Fluorophenol	5.00E-01		2.26	2.20E+01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2-Fluorophenol	5.00E-01		2.61	1.90E+01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2-Fluorophenol	5.00E-01		2.61	1.90E+01					
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	2-Fluorophenol	4.40E-01		1.59	2.80E+01					
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	2-Fluorophenol	4.50E-01		1.59	2.80E+01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	2-Fluorophenol	4.50E-01		1.96	2.30E+01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	2-Fluorophenol	4.50E-01		1.96	2.30E+01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	2-Fluorophenol	4.20E-01		2.35	1.80E+01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	2-Fluorophenol	4.20E-01		2.35	1.80E+01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	2-Fluorophenol	4.60E-01		2.81	1.60E+01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	2-Fluorophenol	4.50E-01		2.81	1.60E+01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	2-Fluorophenol	4.10E-01		3.55	1.20E+01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	2-Fluorophenol	4.10E-01		3.55	1.20E+01					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2-Fluorophenol	4.50E-01		4.53						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2-Fluorophenol	4.30E-01		4.53						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	2-Methylnaphthalene	6.60E-01		1.56	4.20E+01	38	64	mg/kg OC	1.1	<1
LDWRI-Benthic	C9	8/25/2004	2-Methylnaphthalene	2.80E-03	J	0.56	5.00E-01	38	64	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-Benthic	B7a	8/30/2004	2-Methylnaphthalene	4.60E-03	J	1.64	2.80E-01	38	64	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	2-Methylnaphthalene	7.70E-01		2.65	2.90E+01	38	64	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	2-Methylnaphthalene	3.40E-02	J	2.23	1.50E+00	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	2-Methylnaphthalene	1.40E-02	J	2.61	5.40E-01	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	2-Methylnaphthalene	1.20E-02	J	1.59	7.50E-01	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	2-Methylnaphthalene	1.10E-02	J	2.35	4.70E-01	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	2-Methylnaphthalene	1.10E-02	J	2.81	3.90E-01	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	2-Methylnaphthalene	1.30E-02	J	3.55	3.70E-01	38	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2-Methylnaphthalene	3.60E-02		4.53						
KC WQA	WQA8AVE	3/12/1997	2-Methylphenol	5.80E-02	J	1.94		63	63	ug/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	2-Methylphenol	2.60E-02		2.39		63	63	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	2-Methylphenol	8.60E-03		2.09		63	63	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	2-Methylphenol	9.50E-03		4.53		63	63	ug/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	4,4'-DDD	3.00E-04	JN	0.56						
LDWRI-Benthic	B7a	8/30/2004	4,4'-DDD	3.50E-03	JN	1.64						
EPA SI	DR224	8/20/1998	4,4'-DDE	1.00E-03		1.17						
LDWRI-Benthic	B7a	8/30/2004	4,4'-DDE	2.30E-03	JN	1.64						
LDWRI-Benthic	C9	8/25/2004	4,4'-DDT	1.90E-03	JN	0.56						
LDWRI-Benthic	B7a	8/30/2004	4,4'-DDT	1.20E-02	JN	1.64						
KC WQA	WQA8AVE	3/12/1997	4-Methylphenol	6.60E-02	J	1.94		670	670	ug/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	4-Methylphenol	2.40E-02		0.56		670	670	ug/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	4-Methylphenol	5.70E-02		2.39		670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	4-Methylphenol	2.00E-01		2.26	8.80E+00	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	4-Methylphenol	1.60E-01		2.61	6.10E+00	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	4-Methylphenol	5.30E-02		1.59	3.30E+00	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	4-Methylphenol	2.70E-01		1.96	1.40E+01	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	4-Methylphenol	7.30E-02		2.35	3.10E+00	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	4-Methylphenol	4.60E-01		2.81	1.60E+01	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	4-Methylphenol	2.20E-01		3.55	6.20E+00	670	670	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	4-Methylphenol	3.40E-02		4.53		670	670	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Acenaphthene	4.60E+00		2.65	1.70E+02	16	57	mg/kg OC	11	3
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Acenaphthene	9.70E-01		1.56	6.20E+01	16	57	mg/kg OC	3.9	1.1
KC WQA	WQA8AVE	3/6/1997	Acenaphthene	3.80E-02		1.93	1.97E+00	16	57	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Acenaphthene	8.90E-02	J	1.94	4.59E+00	16	57	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Acenaphthene	3.00E-02		1.58	1.90E+00	16	57	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Acenaphthene	5.33E-02		1.67	3.19E+00	16	57	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Acenaphthene	3.10E-02		1.6	1.94E+00	16	57	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Acenaphthene	2.40E-02		2.11	1.14E+00	16	57	mg/kg OC	<1	<1

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR232	8/13/1998	Acenaphthene	1.10E-01		1.37	8.00E+00	16	57	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Acenaphthene	1.10E-01		1.57	7.00E+00	16	57	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Acenaphthene	5.00E-02		1.9	2.60E+00	16	57	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Acenaphthene	4.00E-02		3.06	1.30E+00	16	57	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Acenaphthene	2.70E-03	J	0.56	4.80E-01	16	57	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Acenaphthene	2.60E-03	J	1.64	1.60E-01	16	57	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Acenaphthene	1.10E-01		2.23	4.90E+00	16	57	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Acenaphthene	3.50E-02		2.39	1.50E+00	16	57	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Acenaphthene	1.20E-01		2.09	5.70E+00	16	57	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Acenaphthene	2.10E-01		2.89	7.30E+00	16	57	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Acenaphthene	2.40E-02		2.61	9.20E-01	16	57	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Acenaphthene	1.20E-02	J	2.35	5.10E-01	16	57	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Acenaphthene	1.20E-02	J	2.81	4.30E-01	16	57	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Acenaphthene	2.30E-02		3.55	6.50E-01	16	57	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Acenaphthene	5.00E-02		4.53						
EPA SI	DR221	8/13/1998	Acenaphthylene	2.00E-02		1.57	1.30E+00	66	66	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Acenaphthylene	2.00E-02		1.9	1.10E+00	66	66	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Acenaphthylene	4.30E-03	J	0.56	7.70E-01	66	66	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Acenaphthylene	5.70E-03	J	1.64	3.50E-01	66	66	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Acenaphthylene	2.00E-01		2.65	7.50E+00	66	66	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Acenaphthylene	8.00E-02		2.23	3.60E+00	66	66	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Acenaphthylene	3.70E-02	J	2.39	1.50E+00	66	66	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Acenaphthylene	9.00E-02	J	2.89	3.10E+00	66	66	mg/kg OC	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Acenaphthylene	1.50E-01		1.56	9.60E+00	66	66	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Acenaphthylene	1.10E-02	J	1.59	6.90E-01	66	66	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Acenaphthylene	2.20E-02	J	4.53						
EPA SI	DR203	8/27/1998	Acetone	1.62E-01	J	1.06						
LDWRI-Benthic	C9	8/25/2004	alpha-Chlordane	1.00E-04	JN	0.56						
LDWRI-Benthic	C9	8/25/2004	alpha-Endosulfan	1.80E-04	JN	0.56						
KC WQA	WQA8AVE	3/6/1997	Aluminum	2.24E+04		1.93						
KC WQA	WQA8AVE	3/12/1997	Aluminum	2.03E+04		1.94						
KC WQA	WQA8AVE	3/27/1997	Aluminum	1.90E+04	J	2.03						
KC WQA	WQA8AVE	4/3/1997	Aluminum	1.80E+04	J	1.58						
KC WQA	WQA8AVE	4/8/1997	Aluminum	2.10E+04	J	1.87						
KC WQA	WQA8AVE	4/17/1997	Aluminum	2.00E+04	J	1.67						
KC WQA	WQA8AVE	4/24/1997	Aluminum	2.10E+04	J	1.77						
KC WQA	WQA8AVE	5/1/1997	Aluminum	1.70E+04	J	1.6						
KC WQA	WQA8AVE	5/8/1997	Aluminum	1.90E+04	J	1.79						

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/15/1997	Aluminum	1.70E+04	J	1.67						
KC WQA	WQASOPK	5/20/1997	Aluminum	1.50E+04	J	1.73						
KC WQA	WQASOPK	5/28/1997	Aluminum	1.70E+04	J	1.77						
KC WQA	WQASOPK	6/3/1997	Aluminum	1.70E+04	J	2.11						
EPA SI	DR222	8/13/1998	Aluminum	1.03E+04		0.95						
EPA SI	DR193	8/13/1998	Aluminum	1.17E+04		1.21						
EPA SI	DR232	8/13/1998	Aluminum	1.33E+04		1.37						
EPA SI	DR221	8/13/1998	Aluminum	1.60E+04		1.57						
EPA SI	DR190	8/13/1998	Aluminum	1.88E+04		1.9						
EPA SI	DR233	8/19/1998	Aluminum	1.89E+04		2.19						
EPA SI	DR196	8/20/1998	Aluminum	1.11E+04		1.17						
EPA SI	DR224	8/20/1998	Aluminum	1.22E+04		1.17						
EPA SI	DR197	8/20/1998	Aluminum	1.25E+04		1.3						
EPA SI	DR195	8/20/1998	Aluminum	1.35E+04		1.37						
EPA SI	DR199	8/20/1998	Aluminum	1.46E+04		1.45						
EPA SI	DR200	8/20/1998	Aluminum	1.46E+04		1.73						
EPA SI	DR225	8/20/1998	Aluminum	1.82E+04		1.73	1.05E+06					
EPA SI	DR223	8/20/1998	Aluminum	1.94E+04		2.09						
EPA SI	DR194	8/20/1998	Aluminum	2.11E+04		3.06						
EPA SI	DR203	8/27/1998	Aluminum	1.27E+04		1.06						
EPA SI	DR204	8/27/1998	Aluminum	1.46E+04		1.09						
EPA SI	DR201	8/27/1998	Aluminum	1.44E+04		1.7						
EPA SI	DR226	8/27/1998	Aluminum	1.50E+04		1.77						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Anthracene	1.00E+01		2.65	3.80E+02	220	1200	mg/kg OC	1.7	<1
KC WQA	WQA8AVE	3/6/1997	Anthracene	4.80E-02	J	1.93	2.49E+00	220	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Anthracene	6.40E-02	J	1.94	3.30E+00	220	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Anthracene	6.50E-02	J	1.67	3.89E+00	220	1200	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Anthracene	3.80E-02	J	2.11	1.80E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Anthracene	5.00E-02		1.21	4.10E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Anthracene	6.00E-02		1.37	4.40E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Anthracene	1.40E-01		1.57	8.90E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Anthracene	1.90E-01		1.9	1.00E+01	220	1200	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Anthracene	3.00E-02		2.19	1.40E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Anthracene	2.00E-02		1.17	1.70E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Anthracene	2.00E-02		1.45	1.40E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Anthracene	3.00E-02		1.73	1.73E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Anthracene	4.00E-02		2.09	1.90E+00	220	1200	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Anthracene	8.00E-02		3.06	2.60E+00	220	1200	mg/kg OC	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR201	8/27/1998	Anthracene	3.00E-02	1.7	1.80E+00	220	1200	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Anthracene	1.20E-02	0.56	2.10E+00	220	1200	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Anthracene	1.60E-02 J	1.64	9.80E-01	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Anthracene	2.40E-01	1.92	1.30E+01	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Anthracene	2.40E-02	1.26	1.90E+00	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Anthracene	6.70E-02	1.59	4.20E+00	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Anthracene	2.80E-01	2.23	1.30E+01	220	1200	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Anthracene	7.70E-02	2.39	3.20E+00	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Anthracene	1.10E-01	2.09	5.30E+00	220	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Anthracene	1.20E+00	2.89	4.20E+01	220	1200	mg/kg OC	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Anthracene	1.80E+00	1.56	1.20E+02	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Anthracene	1.60E-02 J	2.26	7.10E-01	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Anthracene	1.90E-02 J	2.61	7.30E-01	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Anthracene	2.70E-02	1.59	1.70E+00	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Anthracene	1.90E-02	2.35	8.10E-01	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Anthracene	2.20E-02	2.81	7.80E-01	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Anthracene	2.40E-02	3.55	6.80E-01	220	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Anthracene	1.10E-01	4.53						
KC WQA	WQA8AVE	3/6/1997	Antimony	3.80E+00 J	1.93		150	200	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Antimony	3.20E+00 J	1.77		150	200	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Antimony	1.00E+01 J	1.37		150	200	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Antimony	4.50E-01 J	0.56		150	200	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Antimony	2.60E-01 J	1.64		150	200	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Aroclor 1242	8.80E-02	2.65						
Ecology SPI	TRI-095T	8/11/2006	Aroclor 1242	1.30E-02 J	2.39						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Aroclor 1248	3.20E-01	1.56						
KC WQA	WQASOPK	5/28/1997	Aroclor 1248	5.40E-02	1.77						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Aroclor 1248	5.30E-02	2.89						
KC WQA	WQASOPK	5/15/1997	Aroclor 1248	5.10E-02	1.67						
KC WQA	WQASOPK	5/20/1997	Aroclor 1248	4.10E-02	1.73						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Aroclor 1248	4.00E-02	4.53						
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Aroclor 1248	2.20E-02	1.59	1.40E+00					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Aroclor 1248	2.20E-02	2.35	9.40E-01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Aroclor 1248	1.50E-02	2.81	5.30E-01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Aroclor 1248	1.20E-02	1.96	6.10E-01					
EPA SI	DR201	8/27/1998	Aroclor 1254	4.88E-01	1.7						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Aroclor 1254	3.90E-01	1.56						
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Aroclor 1254	1.70E-01	0.945						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Plant 2 RFI-2b	SD-DUW75	4/2/1996	Aroclor 1254	1.60E-01	1.7						
KC WQA	WQASOPK	5/15/1997	Aroclor 1254	1.40E-01	1.67						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Aroclor 1254	1.30E-01	2.89						
KC WQA	WQASOPK	6/3/1997	Aroclor 1254	1.20E-01	2.11						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Aroclor 1254	1.20E-01	2.09						
KC WQA	WQASOPK	5/20/1997	Aroclor 1254	1.00E-01	1.73						
Plant 2 RFI-2b	SD-DUW77	4/3/1996	Aroclor 1254	9.60E-02	1.6						
KC WQA	WQASOPK	5/28/1997	Aroclor 1254	9.50E-02	1.77						
Plant 2 RFI-2b	SD-DUW88	4/2/1996	Aroclor 1254	9.10E-02	2						
Plant 2 RFI-2b	SD-DUW76	4/2/1996	Aroclor 1254	9.00E-02	2						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Aroclor 1254	8.90E-02	2.26	3.90E+00					
EPA SI	DR194	8/20/1998	Aroclor 1254	8.00E-02	3.06						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Aroclor 1254	7.80E-02	4.53						
EPA SI	DR225	8/20/1998	Aroclor 1254	7.50E-02	1.73	4.34E+00					
EPA SI	DR222	8/13/1998	Aroclor 1254	7.40E-02	0.95						
EPA SI	DR233	8/19/1998	Aroclor 1254	7.20E-02	2.19						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Aroclor 1254	7.20E-02 J	1.36						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Aroclor 1254	7.20E-02	2.23						
Plant 2 RFI-2b	SD-DUW74	4/2/1996	Aroclor 1254	7.00E-02	1.2						
EPA SI	DR223	8/20/1998	Aroclor 1254	6.90E-02	2.09						
EPA SI	DR193	8/13/1998	Aroclor 1254	6.60E-02	1.21						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Aroclor 1254	6.50E-02	2.65						
EPA SI	DR196	8/20/1998	Aroclor 1254	5.90E-02	1.17						
EPA SI	DR226	8/27/1998	Aroclor 1254	5.60E-02	1.77						
Ecology SPI	TRI-095T	8/11/2006	Aroclor 1254	5.50E-02 J	2.39						
EPA SI	DR203	8/27/1998	Aroclor 1254	5.10E-02	1.06						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Aroclor 1254	5.00E-02	1.92						
KC WQA	WQA8AVE	3/12/1997	Aroclor 1254	4.80E-02	1.94						
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Aroclor 1254	4.60E-02	1.59	2.90E+00					
KC WQA	WQA8AVE	4/3/1997	Aroclor 1254	4.60E-02	1.58						
KC WQA	WQA8AVE	4/17/1997	Aroclor 1254	4.60E-02	1.67						
EPA SI	DR232	8/13/1998	Aroclor 1254	4.60E-02	1.37						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Aroclor 1254	4.30E-02	0.79						
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Aroclor 1254	4.00E-02	2.35	1.70E+00					
KC WQA	WQA8AVE	3/6/1997	Aroclor 1254	4.00E-02	1.93						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Aroclor 1254	4.00E-02	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Aroclor 1254	4.00E-02	2.14						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Aroclor 1254	3.80E-02	1.37						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Aroclor 1254	3.80E-02		2.52						
EPA SI	DR221	8/13/1998	Aroclor 1254	3.60E-02		1.57						
EPA SI	DR197	8/20/1998	Aroclor 1254	3.60E-02		1.3						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Aroclor 1254	3.20E-02		1.35						
EPA SI	DR200	8/20/1998	Aroclor 1254	3.00E-02		1.73						
EPA SI	DR224	8/20/1998	Aroclor 1254	2.90E-02		1.17						
EPA SI	DR190	8/13/1998	Aroclor 1254	2.80E-02		1.9						
EPA SI	DR195	8/20/1998	Aroclor 1254	2.80E-02	J	1.37						
EPA SI	DR199	8/20/1998	Aroclor 1254	2.80E-02		1.45						
LDWRI-Benthic	B7a	8/30/2004	Aroclor 1254	2.60E-02		1.64						
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Aroclor 1254	2.50E-02		2.81	8.90E-01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Aroclor 1254	2.40E-02		1.96	1.20E+00					
LDWRI-Benthic	C9	8/25/2004	Aroclor 1254	1.40E-02		0.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Aroclor 1260	1.20E+00		2.61	4.60E+01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Aroclor 1260	2.00E-01		3.55	5.60E+00					
KC WQA	WQASOPK	5/15/1997	Aroclor 1260	1.90E-01		1.67						
EPA SI	DR201	8/27/1998	Aroclor 1260	1.67E-01		1.7						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Aroclor 1260	1.50E-01		1.56						
KC WQA	WQASOPK	6/3/1997	Aroclor 1260	1.20E-01		2.11						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Aroclor 1260	1.20E-01		1.92						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Aroclor 1260	1.20E-01		2.89						
Plant 2 RFI-2b	SD-DUW75	4/2/1996	Aroclor 1260	1.10E-01		1.7						
KC WQA	WQASOPK	5/28/1997	Aroclor 1260	1.00E-01		1.77						
KC WQA	WQASOPK	5/20/1997	Aroclor 1260	8.40E-02		1.73						
EPA SI	DR223	8/20/1998	Aroclor 1260	8.40E-02		2.09						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Aroclor 1260	7.80E-02		4.53						
EPA SI	DR233	8/19/1998	Aroclor 1260	7.70E-02	J	2.19						
EPA SI	DR194	8/20/1998	Aroclor 1260	7.50E-02		3.06						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Aroclor 1260	7.40E-02		2.09						
EPA SI	DR225	8/20/1998	Aroclor 1260	7.00E-02		1.73	4.05E+00					
Plant 2 RFI-2b	SD-DUW77	4/3/1996	Aroclor 1260	6.60E-02		1.6						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Aroclor 1260	6.40E-02		2.14						
EPA SI	DR197	8/20/1998	Aroclor 1260	6.20E-02		1.3						
Plant 2 RFI-2b	SD-DUW74	4/2/1996	Aroclor 1260	6.00E-02		1.2						
EPA SI	DR222	8/13/1998	Aroclor 1260	5.80E-02		0.95						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Aroclor 1260	5.80E-02		2.23						
EPA SI	DR226	8/27/1998	Aroclor 1260	5.70E-02		1.77						
EPA SI	DR196	8/20/1998	Aroclor 1260	5.60E-02		1.17						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Aroclor 1260	5.40E-02	1.59						
EPA SI	DR200	8/20/1998	Aroclor 1260	5.30E-02	1.73						
EPA SI	DR193	8/13/1998	Aroclor 1260	5.20E-02	1.21						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Aroclor 1260	5.00E-02	2.26	2.20E+00					
Plant 2 RFI-2b	SD-DUW76	4/2/1996	Aroclor 1260	5.00E-02 J	2						
EPA SI	DR203	8/27/1998	Aroclor 1260	5.00E-02	1.06						
KC WQA	WQA8AVE	3/12/1997	Aroclor 1260	4.80E-02	1.94						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Aroclor 1260	4.60E-02	1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Aroclor 1260	4.50E-02	2.65						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Aroclor 1260	4.30E-02	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Aroclor 1260	4.20E-02	2.52						
Plant 2 RFI-2b	SD-DUW88	4/2/1996	Aroclor 1260	4.10E-02 J	2						
EPA SI	DR199	8/20/1998	Aroclor 1260	4.10E-02	1.45						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Aroclor 1260	4.10E-02	1.35						
EPA SI	DR204	8/27/1998	Aroclor 1260	4.00E-02	1.09						
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Aroclor 1260	3.80E-02	2.35	1.60E+00					
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Aroclor 1260	3.80E-02	0.945						
EPA SI	DR195	8/20/1998	Aroclor 1260	3.60E-02 J	1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Aroclor 1260	3.60E-02	1.37						
EPA SI	DR232	8/13/1998	Aroclor 1260	3.50E-02	1.37						
LDWRI-Benthic	B7a	8/30/2004	Aroclor 1260	3.50E-02	1.64						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Aroclor 1260	2.90E-02	0.79						
Ecology SPI	TRI-095T	8/11/2006	Aroclor 1260	2.90E-02 J	2.39						
EPA SI	DR221	8/13/1998	Aroclor 1260	2.80E-02 J	1.57						
EPA SI	DR190	8/13/1998	Aroclor 1260	2.80E-02 J	1.9						
EPA SI	DR224	8/20/1998	Aroclor 1260	2.80E-02	1.17						
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Aroclor 1260	2.40E-02	1.59	1.50E+00					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Aroclor 1260	2.40E-02	2.81	8.50E-01					
LDWRI-Benthic	C9	8/25/2004	Aroclor 1260	2.10E-02	0.56						
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Aroclor 1260	1.20E-02	1.96	6.10E-01					
KC WQA	WQA8AVE	3/6/1997	Arsenic	1.10E+01	1.93		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Arsenic	1.10E+01	1.94		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Arsenic	1.10E+01	2.03		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Arsenic	1.20E+01	1.58		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Arsenic	1.40E+01	1.87		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Arsenic	1.20E+01	1.67		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Arsenic	1.30E+01	1.77		57	93	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Arsenic	1.20E+01	1.6		57	93	mg/kg dw	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQA8AVE	5/8/1997	Arsenic	1.60E+01		1.79		57	93	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Arsenic	1.20E+01		1.67		57	93	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Arsenic	1.10E+01		1.73		57	93	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Arsenic	1.30E+01		1.77		57	93	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Arsenic	1.30E+01		2.11		57	93	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Arsenic	4.30E+00		0.95		57	93	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Arsenic	7.00E+00		1.21		57	93	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Arsenic	7.00E+00		1.37		57	93	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Arsenic	6.90E+00		1.57		57	93	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Arsenic	5.90E+00		1.9		57	93	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Arsenic	9.90E+00		2.19		57	93	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Arsenic	9.90E+00		1.17		57	93	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Arsenic	6.10E+00		1.17		57	93	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Arsenic	8.90E+00		1.3		57	93	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Arsenic	9.30E+00		1.37		57	93	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Arsenic	8.50E+00		1.45		57	93	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Arsenic	8.20E+00		1.73		57	93	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Arsenic	8.50E+00		1.73		57	93	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Arsenic	1.22E+01		2.09		57	93	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Arsenic	1.43E+01		3.06		57	93	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Arsenic	6.50E+00		1.06		57	93	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Arsenic	7.90E+00		1.09		57	93	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Arsenic	1.07E+01		1.7		57	93	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Arsenic	7.40E+00		1.77		57	93	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Arsenic	3.94E+00		0.56		57	93	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Arsenic	6.56E+00	J	1.64		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Arsenic	6.80E+00		1.24		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Arsenic	4.90E+00		1.09		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Arsenic	8.00E+00		1.35		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Arsenic	6.60E+00		1.37		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Arsenic	1.15E+01		1.35		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Arsenic	6.90E+00		1.92		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Arsenic	7.10E+00		2.52		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Arsenic	5.00E+00		0.945		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Arsenic	8.80E+00		1.26		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Arsenic	1.65E+01		2.65		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Arsenic	7.50E+00		0.79		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Arsenic	1.18E+01		1.59		57	93	mg/kg dw	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Arsenic	9.00E+00		1.36		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Arsenic	9.10E+00		2.23		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Arsenic	9.20E+00		2.14		57	93	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Arsenic	1.28E+01	J	2.39		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Arsenic	1.43E+01		2.09		57	93	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Arsenic	1.69E+01		2.89		57	93	mg/kg dw	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Arsenic	1.91E+01				57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Arsenic	1.30E+01		2.26		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Arsenic	1.00E+01		2.61		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Arsenic	1.00E+01		1.59		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Arsenic	1.00E+01		2.35		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Arsenic	2.00E+01		2.81		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Arsenic	2.00E+01		3.55		57	93	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Arsenic	2.00E+01	J	4.53		57	93	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Barium	3.50E+01		0.95						
EPA SI	DR193	8/13/1998	Barium	3.90E+01		1.21						
EPA SI	DR232	8/13/1998	Barium	5.00E+01		1.37						
EPA SI	DR221	8/13/1998	Barium	6.00E+01		1.57						
EPA SI	DR190	8/13/1998	Barium	5.70E+01		1.9						
EPA SI	DR233	8/19/1998	Barium	6.10E+01		2.19						
EPA SI	DR196	8/20/1998	Barium	3.70E+01		1.17						
EPA SI	DR224	8/20/1998	Barium	3.90E+01		1.17						
EPA SI	DR197	8/20/1998	Barium	3.20E+01		1.3						
EPA SI	DR195	8/20/1998	Barium	1.19E+02		1.37						
EPA SI	DR199	8/20/1998	Barium	4.10E+01		1.45						
EPA SI	DR200	8/20/1998	Barium	4.30E+01		1.73						
EPA SI	DR225	8/20/1998	Barium	5.60E+01		1.73	3.24E+03					
EPA SI	DR223	8/20/1998	Barium	6.70E+01		2.09						
EPA SI	DR194	8/20/1998	Barium	7.40E+01		3.06						
EPA SI	DR203	8/27/1998	Barium	3.30E+01		1.06						
EPA SI	DR204	8/27/1998	Barium	3.90E+01		1.09						
EPA SI	DR201	8/27/1998	Barium	4.00E+01		1.7						
EPA SI	DR226	8/27/1998	Barium	4.30E+01		1.77						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(a)anthracene	3.10E+00		1.56	2.00E+02	110	270	mg/kg OC	1.8	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzo(a)anthracene	4.00E+00		2.65	1.50E+02	110	270	mg/kg OC	1.4	<1
KC WQA	WQA8AVE	3/6/1997	Benzo(a)anthracene	1.20E-01	J	1.93	6.22E+00	110	270	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Benzo(a)anthracene	1.40E-01	J	1.94	7.22E+00	110	270	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Benzo(a)anthracene	1.90E-01	J	1.67	1.14E+01	110	270	mg/kg OC	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQA8AVE	5/1/1997	Benzo(a)anthracene	1.10E-01	J	1.6	6.88E+00	110	270	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Benzo(a)anthracene	1.40E-01	J	1.67	8.38E+00	110	270	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Benzo(a)anthracene	1.00E-01	J	1.77	5.65E+00	110	270	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Benzo(a)anthracene	2.50E-01	J	2.11	1.18E+01	110	270	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Benzo(a)anthracene	8.00E-02		0.95	8.40E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Benzo(a)anthracene	1.40E-01		1.21	1.20E+01	110	270	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Benzo(a)anthracene	2.20E-01		1.37	1.60E+01	110	270	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Benzo(a)anthracene	1.00E+00		1.57	6.40E+01	110	270	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Benzo(a)anthracene	1.10E+00		1.9	5.80E+01	110	270	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Benzo(a)anthracene	1.30E-01		2.19	5.90E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Benzo(a)anthracene	9.00E-02		1.17	7.70E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Benzo(a)anthracene	6.00E-02		1.17	5.10E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Benzo(a)anthracene	5.00E-02		1.3	3.80E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Benzo(a)anthracene	9.00E-02		1.37	6.60E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Benzo(a)anthracene	8.00E-02		1.45	5.50E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Benzo(a)anthracene	8.00E-02		1.73	4.60E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Benzo(a)anthracene	1.40E-01		1.73	8.09E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Benzo(a)anthracene	1.60E-01		2.09	7.70E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Benzo(a)anthracene	2.80E-01		3.06	9.20E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Benzo(a)anthracene	6.00E-02		1.06	5.70E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Benzo(a)anthracene	1.00E-01		1.09	9.20E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Benzo(a)anthracene	5.00E-02		1.7	2.90E+00	110	270	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Benzo(a)anthracene	9.00E-02		1.77	5.10E+00	110	270	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Benzo(a)anthracene	4.20E-02		0.56	7.50E+00	110	270	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Benzo(a)anthracene	3.40E-02		1.64	2.10E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Benzo(a)anthracene	1.00E-02	J	1.24	8.10E-01	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzo(a)anthracene	1.20E-02		1.09	1.10E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Benzo(a)anthracene	4.00E-02		1.35	3.00E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Benzo(a)anthracene	8.90E-03		1.37	6.50E-01	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Benzo(a)anthracene	3.00E-02	J	1.35	2.20E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzo(a)anthracene	6.20E-01		1.92	3.20E+01	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Benzo(a)anthracene	4.80E-02		2.52	1.90E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Benzo(a)anthracene	7.30E-03	J	0.945	7.70E-01	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzo(a)anthracene	1.20E-01		1.26	9.50E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Benzo(a)anthracene	2.20E-02		0.79	2.80E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzo(a)anthracene	1.20E-01		1.59	7.50E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzo(a)anthracene	7.30E-02		1.36	5.40E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzo(a)anthracene	9.10E-01		2.23	4.10E+01	110	270	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Benzo(a)anthracene	5.90E-02		2.14	2.80E+00	110	270	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Benzo(a)anthracene	1.77E-01		2.39	7.41E+00	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzo(a)anthracene	2.80E-01		2.09	1.30E+01	110	270	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzo(a)anthracene	1.60E+00		2.89	5.50E+01	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzo(a)anthracene	4.80E-02		2.26	2.10E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzo(a)anthracene	5.00E-02		2.61	1.90E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzo(a)anthracene	9.00E-02		1.59	5.70E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzo(a)anthracene	3.50E-02		1.96	1.80E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzo(a)anthracene	5.50E-02		2.35	2.30E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzo(a)anthracene	5.70E-02		2.81	2.00E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzo(a)anthracene	6.10E-02		3.55	1.70E+00	110	270	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzo(a)anthracene	2.40E-01		4.53						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(a)pyrene	3.20E+00		1.56	2.10E+02	99	210	mg/kg OC	2.1	1
KC WQA	WQA8AVE	3/6/1997	Benzo(a)pyrene	9.70E-02	J	1.93	5.03E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Benzo(a)pyrene	1.10E-01	J	1.94	5.67E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Benzo(a)pyrene	7.40E-02	J	1.58	4.68E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Benzo(a)pyrene	1.30E-01	J	1.67	7.78E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Benzo(a)pyrene	8.70E-02	J	1.6	5.44E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Benzo(a)pyrene	1.90E-01	J	1.67	1.14E+01	99	210	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Benzo(a)pyrene	8.00E-02	J	1.73	4.62E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Benzo(a)pyrene	1.20E-01	J	1.77	6.78E+00	99	210	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Benzo(a)pyrene	1.90E-01	J	2.11	9.00E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Benzo(a)pyrene	7.00E-02		0.95	7.40E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Benzo(a)pyrene	1.30E-01		1.21	1.10E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Benzo(a)pyrene	1.40E-01		1.37	1.00E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Benzo(a)pyrene	4.60E-01		1.57	2.90E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Benzo(a)pyrene	6.70E-01		1.9	3.50E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Benzo(a)pyrene	1.50E-01		2.19	6.80E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Benzo(a)pyrene	1.20E-01		1.17	1.00E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Benzo(a)pyrene	7.00E-02		1.17	6.00E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Benzo(a)pyrene	6.00E-02		1.3	4.60E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Benzo(a)pyrene	1.10E-01		1.37	8.00E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Benzo(a)pyrene	1.00E-01		1.45	6.90E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Benzo(a)pyrene	1.00E-01		1.73	5.80E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Benzo(a)pyrene	1.70E-01		1.73	9.83E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Benzo(a)pyrene	1.50E-01		2.09	7.20E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Benzo(a)pyrene	2.40E-01		3.06	7.80E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Benzo(a)pyrene	6.00E-02		1.06	5.70E+00	99	210	mg/kg OC	<1	<1

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR204	8/27/1998	Benzo(a)pyrene	1.20E-01		1.09	1.10E+01	99	210	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Benzo(a)pyrene	6.00E-02		1.7	3.50E+00	99	210	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Benzo(a)pyrene	9.00E-02		1.77	5.10E+00	99	210	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Benzo(a)pyrene	4.10E-02		0.56	7.30E+00	99	210	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Benzo(a)pyrene	4.10E-02		1.64	2.50E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Benzo(a)pyrene	9.10E-03	J	1.24	7.30E-01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzo(a)pyrene	1.20E-02		1.09	1.10E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Benzo(a)pyrene	4.40E-02		1.35	3.30E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Benzo(a)pyrene	1.10E-02		1.37	8.00E-01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Benzo(a)pyrene	3.00E-02	J	1.35	2.20E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzo(a)pyrene	6.00E-01		1.92	3.10E+01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Benzo(a)pyrene	4.80E-02		2.52	1.90E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Benzo(a)pyrene	7.30E-03		0.945	7.70E-01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzo(a)pyrene	1.10E-01		1.26	8.70E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzo(a)pyrene	2.00E+00		2.65	7.50E+01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Benzo(a)pyrene	2.00E-02		0.79	2.50E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzo(a)pyrene	1.40E-01		1.59	8.80E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzo(a)pyrene	7.20E-02		1.36	5.30E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzo(a)pyrene	6.70E-01		2.23	3.00E+01	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Benzo(a)pyrene	6.60E-02		2.14	3.10E+00	99	210	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Benzo(a)pyrene	1.55E-01		2.39	6.49E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzo(a)pyrene	1.90E-01		2.09	9.10E+00	99	210	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzo(a)pyrene	1.20E+00		2.89	4.20E+01	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzo(a)pyrene	4.20E-02		2.26	1.90E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzo(a)pyrene	2.80E-02		2.61	1.10E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzo(a)pyrene	7.10E-02		1.59	4.50E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzo(a)pyrene	3.10E-02		1.96	1.60E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzo(a)pyrene	4.80E-02		2.35	2.00E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzo(a)pyrene	4.40E-02		2.81	1.60E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzo(a)pyrene	4.60E-02		3.55	1.30E+00	99	210	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzo(a)pyrene	2.00E-01		4.53						
EPA SI	DR225	8/20/1998	Benzo(b)fluoranthene	2.20E-01		1.73	1.27E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/6/1997	Benzo(b)fluoranthene	1.96E-01		1.93						
KC WQA	WQA8AVE	3/12/1997	Benzo(b)fluoranthene	2.00E-01	J	1.94						
KC WQA	WQA8AVE	4/3/1997	Benzo(b)fluoranthene	1.20E-01		1.58						
KC WQA	WQA8AVE	4/17/1997	Benzo(b)fluoranthene	2.74E-01		1.67						
KC WQA	WQA8AVE	5/1/1997	Benzo(b)fluoranthene	1.50E-01		1.6						
KC WQA	WQASOPK	5/15/1997	Benzo(b)fluoranthene	3.19E-01		1.67						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/20/1997	Benzo(b)fluoranthene	2.47E-01		1.73						
KC WQA	WQASOPK	5/28/1997	Benzo(b)fluoranthene	2.80E-01	J	1.77						
KC WQA	WQASOPK	6/3/1997	Benzo(b)fluoranthene	4.42E-01		2.11						
EPA SI	DR222	8/13/1998	Benzo(b)fluoranthene	8.00E-02		0.95						
EPA SI	DR193	8/13/1998	Benzo(b)fluoranthene	1.40E-01		1.21						
EPA SI	DR232	8/13/1998	Benzo(b)fluoranthene	1.60E-01		1.37						
EPA SI	DR221	8/13/1998	Benzo(b)fluoranthene	5.10E-01		1.57						
EPA SI	DR190	8/13/1998	Benzo(b)fluoranthene	8.70E-01		1.9						
EPA SI	DR233	8/19/1998	Benzo(b)fluoranthene	1.90E-01		2.19						
EPA SI	DR196	8/20/1998	Benzo(b)fluoranthene	1.30E-01		1.17						
EPA SI	DR224	8/20/1998	Benzo(b)fluoranthene	8.00E-02		1.17						
EPA SI	DR197	8/20/1998	Benzo(b)fluoranthene	8.00E-02		1.3						
EPA SI	DR195	8/20/1998	Benzo(b)fluoranthene	1.20E-01		1.37						
EPA SI	DR199	8/20/1998	Benzo(b)fluoranthene	1.10E-01		1.45						
EPA SI	DR200	8/20/1998	Benzo(b)fluoranthene	1.30E-01		1.73						
EPA SI	DR223	8/20/1998	Benzo(b)fluoranthene	2.00E-01		2.09						
EPA SI	DR194	8/20/1998	Benzo(b)fluoranthene	3.30E-01		3.06						
EPA SI	DR203	8/27/1998	Benzo(b)fluoranthene	8.00E-02		1.06						
EPA SI	DR204	8/27/1998	Benzo(b)fluoranthene	1.30E-01		1.09						
EPA SI	DR201	8/27/1998	Benzo(b)fluoranthene	8.00E-02		1.7						
EPA SI	DR226	8/27/1998	Benzo(b)fluoranthene	1.10E-01		1.77						
LDWRI-Benthic	C9	8/25/2004	Benzo(b)fluoranthene	6.70E-02		0.56						
LDWRI-Benthic	B7a	8/30/2004	Benzo(b)fluoranthene	5.20E-02		1.64						
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Benzo(b)fluoranthene	1.00E-01		1.24						
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzo(b)fluoranthene	1.80E-02		1.09						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Benzo(b)fluoranthene	5.70E-02		1.35						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Benzo(b)fluoranthene	1.30E-01		1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Benzo(b)fluoranthene	4.30E-02	J	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzo(b)fluoranthene	8.40E-01		1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Benzo(b)fluoranthene	9.30E-02		2.52						
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Benzo(b)fluoranthene	8.00E-03	J	0.945						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzo(b)fluoranthene	2.60E-01		1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzo(b)fluoranthene	2.50E+00		2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Benzo(b)fluoranthene	2.60E-02		0.79						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzo(b)fluoranthene	1.60E-01		1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzo(b)fluoranthene	1.10E-01		1.36						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzo(b)fluoranthene	1.20E+00		2.23						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Benzo(b)fluoranthene	1.20E-01		2.14						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Ecology SPI	TRI-095T	8/11/2006	Benzo(b)fluoranthene	2.08E-01		2.39						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzo(b)fluoranthene	3.70E-01		2.09						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzo(b)fluoranthene	1.40E+00		2.89						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(b)fluoranthene	2.20E+00	J	1.56						
LDWRI-Benthic	B7a	8/30/2004	Benzo(e)pyrene	4.30E-02		1.64						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(g,h,i)perylene	2.30E+00		1.56	1.50E+02	31	78	mg/kg OC	4.8	1.9
KC WQA	WQA8AVE	3/6/1997	Benzo(g,h,i)perylene	6.50E-02	J	1.93	3.37E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Benzo(g,h,i)perylene	6.80E-02	J	1.94	3.51E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Benzo(g,h,i)perylene	5.50E-02	J	1.58	3.48E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Benzo(g,h,i)perylene	1.20E-01	J	1.67	7.19E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Benzo(g,h,i)perylene	5.50E-02	J	1.6	3.44E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Benzo(g,h,i)perylene	1.00E-01	J	1.67	5.99E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Benzo(g,h,i)perylene	8.80E-02	J	1.73	5.09E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Benzo(g,h,i)perylene	9.60E-02	J	1.77	5.42E+00	31	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Benzo(g,h,i)perylene	1.30E-01	J	2.11	6.16E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Benzo(g,h,i)perylene	4.00E-02		0.95	4.20E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Benzo(g,h,i)perylene	8.00E-02		1.21	6.60E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Benzo(g,h,i)perylene	7.00E-02		1.37	5.10E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Benzo(g,h,i)perylene	1.50E-01		1.57	9.60E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Benzo(g,h,i)perylene	2.20E-01		1.9	1.20E+01	31	78	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Benzo(g,h,i)perylene	1.10E-01		2.19	5.00E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Benzo(g,h,i)perylene	9.00E-02		1.17	7.70E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Benzo(g,h,i)perylene	6.00E-02		1.17	5.10E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Benzo(g,h,i)perylene	6.00E-02		1.3	4.60E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Benzo(g,h,i)perylene	8.00E-02		1.37	5.80E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Benzo(g,h,i)perylene	7.00E-02		1.45	4.80E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Benzo(g,h,i)perylene	7.00E-02		1.73	4.00E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Benzo(g,h,i)perylene	1.20E-01		1.73	6.94E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Benzo(g,h,i)perylene	1.10E-01		2.09	5.30E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Benzo(g,h,i)perylene	1.20E-01		3.06	3.90E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Benzo(g,h,i)perylene	5.00E-02		1.06	4.70E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Benzo(g,h,i)perylene	1.20E-01		1.09	1.10E+01	31	78	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Benzo(g,h,i)perylene	5.00E-02		1.7	2.90E+00	31	78	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Benzo(g,h,i)perylene	6.00E-02		1.77	3.40E+00	31	78	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Benzo(g,h,i)perylene	3.10E-02		0.56	5.50E+00	31	78	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Benzo(g,h,i)perylene	3.40E-02		1.64	2.10E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzo(g,h,i)perylene	1.60E-01		1.92	8.30E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzo(g,h,i)perylene	3.80E-02		1.26	3.00E+00	31	78	mg/kg OC	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzo(g,h,i)perylene	7.90E-01	2.65	3.00E+01	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzo(g,h,i)perylene	4.90E-02	1.59	3.10E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzo(g,h,i)perylene	3.20E-02 J	1.36	2.40E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzo(g,h,i)perylene	1.60E-01	2.23	7.20E+00	31	78	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Benzo(g,h,i)perylene	1.02E-01	2.39	4.27E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzo(g,h,i)perylene	8.10E-02	2.09	3.90E+00	31	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzo(g,h,i)perylene	3.40E-01	2.89	1.20E+01	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzo(g,h,i)perylene	3.30E-02	2.26	1.50E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzo(g,h,i)perylene	2.10E-02	2.61	8.00E-01	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzo(g,h,i)perylene	5.40E-02	1.59	3.40E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzo(g,h,i)perylene	2.80E-02	1.96	1.40E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzo(g,h,i)perylene	4.20E-02	2.35	1.80E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzo(g,h,i)perylene	3.70E-02	2.81	1.30E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzo(g,h,i)perylene	3.70E-02	3.55	1.00E+00	31	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzo(g,h,i)perylene	1.60E-01	4.53						
EPA SI	DR225	8/20/1998	Benzo(k)fluoranthene	1.70E-01	1.73	9.83E+00	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Benzo(k)fluoranthene	8.50E-02 J	1.94						
KC WQA	WQA8AVE	4/17/1997	Benzo(k)fluoranthene	1.20E-01 J	1.67						
KC WQA	WQASOPK	5/15/1997	Benzo(k)fluoranthene	1.30E-01 J	1.67						
KC WQA	WQASOPK	5/20/1997	Benzo(k)fluoranthene	1.10E-01 J	1.73						
KC WQA	WQASOPK	5/28/1997	Benzo(k)fluoranthene	1.00E-01 J	1.77						
KC WQA	WQASOPK	6/3/1997	Benzo(k)fluoranthene	2.00E-01 J	2.11						
EPA SI	DR222	8/13/1998	Benzo(k)fluoranthene	7.00E-02	0.95						
EPA SI	DR193	8/13/1998	Benzo(k)fluoranthene	1.30E-01	1.21						
EPA SI	DR232	8/13/1998	Benzo(k)fluoranthene	1.50E-01	1.37						
EPA SI	DR221	8/13/1998	Benzo(k)fluoranthene	4.90E-01	1.57						
EPA SI	DR190	8/13/1998	Benzo(k)fluoranthene	6.00E-01	1.9						
EPA SI	DR233	8/19/1998	Benzo(k)fluoranthene	1.50E-01	2.19						
EPA SI	DR196	8/20/1998	Benzo(k)fluoranthene	1.10E-01	1.17						
EPA SI	DR224	8/20/1998	Benzo(k)fluoranthene	7.00E-02	1.17						
EPA SI	DR197	8/20/1998	Benzo(k)fluoranthene	7.00E-02	1.3						
EPA SI	DR195	8/20/1998	Benzo(k)fluoranthene	1.00E-01	1.37						
EPA SI	DR199	8/20/1998	Benzo(k)fluoranthene	9.00E-02	1.45						
EPA SI	DR200	8/20/1998	Benzo(k)fluoranthene	1.00E-01	1.73						
EPA SI	DR223	8/20/1998	Benzo(k)fluoranthene	1.50E-01	2.09						
EPA SI	DR194	8/20/1998	Benzo(k)fluoranthene	2.50E-01	3.06						
EPA SI	DR203	8/27/1998	Benzo(k)fluoranthene	8.00E-02	1.06						
EPA SI	DR204	8/27/1998	Benzo(k)fluoranthene	1.20E-01	1.09						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR201	8/27/1998	Benzo(k)fluoranthene	7.00E-02		1.7						
EPA SI	DR226	8/27/1998	Benzo(k)fluoranthene	1.20E-01		1.77						
LDWRI-Benthic	C9	8/25/2004	Benzo(k)fluoranthene	4.50E-02		0.56						
LDWRI-Benthic	B7a	8/30/2004	Benzo(k)fluoranthene	4.70E-02		1.64						
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzo(k)fluoranthene	3.10E-02	J	1.09						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Benzo(k)fluoranthene	5.90E-02		1.35						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Benzo(k)fluoranthene	1.40E-01		1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Benzo(k)fluoranthene	2.30E-02	J	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzo(k)fluoranthene	6.10E-01		1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Benzo(k)fluoranthene	4.90E-02		2.52						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzo(k)fluoranthene	1.40E-01		1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzo(k)fluoranthene	2.70E+00		2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzo(k)fluoranthene	1.70E-01		1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzo(k)fluoranthene	9.50E-02		1.36						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzo(k)fluoranthene	9.00E-01		2.23						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Benzo(k)fluoranthene	1.10E-01		2.14						
Ecology SPI	TRI-095T	8/11/2006	Benzo(k)fluoranthene	1.60E-01		2.39						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzo(k)fluoranthene	2.20E-01		2.09						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzo(k)fluoranthene	1.40E+00		2.89						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzo(k)fluoranthene	2.20E+00	J	1.56						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Benzofluoranthenes (total-calc'd)	4.40E+00	J	1.56	2.80E+02	230	450	mg/kg OC	1.2	<1
KC WQA	WQA8AVE	3/6/1997	Benzofluoranthenes (total-calc'd)	1.96E-01		1.93	1.02E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Benzofluoranthenes (total-calc'd)	2.85E-01	J	1.94	1.47E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Benzofluoranthenes (total-calc'd)	1.20E-01		1.58	7.59E+00	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Benzofluoranthenes (total-calc'd)	3.94E-01	J	1.67	2.36E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Benzofluoranthenes (total-calc'd)	1.50E-01		1.6	9.38E+00	230	450	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Benzofluoranthenes (total-calc'd)	4.49E-01	J	1.67	2.69E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Benzofluoranthenes (total-calc'd)	3.57E-01	J	1.73	2.06E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Benzofluoranthenes (total-calc'd)	3.80E-01	J	1.77	2.15E+01	230	450	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Benzofluoranthenes (total-calc'd)	6.42E-01	J	2.11	3.04E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Benzofluoranthenes (total-calc'd)	1.50E-01		0.95	1.60E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Benzofluoranthenes (total-calc'd)	2.70E-01		1.21	2.20E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Benzofluoranthenes (total-calc'd)	3.10E-01		1.37	2.30E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Benzofluoranthenes (total-calc'd)	1.00E+00		1.57	6.37E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Benzofluoranthenes (total-calc'd)	1.47E+00		1.9	7.74E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Benzofluoranthenes (total-calc'd)	3.40E-01		2.19	1.60E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Benzofluoranthenes (total-calc'd)	2.40E-01		1.17	2.10E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Benzofluoranthenes (total-calc'd)	1.50E-01		1.17	1.28E+01	230	450	mg/kg OC	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR197	8/20/1998	Benzofluoranthenes (total-calc'd)	1.50E-01	1.3	1.15E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Benzofluoranthenes (total-calc'd)	2.20E-01	1.37	1.60E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Benzofluoranthenes (total-calc'd)	2.00E-01	1.45	1.40E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Benzofluoranthenes (total-calc'd)	2.30E-01	1.73	1.30E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Benzofluoranthenes (total-calc'd)	3.90E-01	1.73	2.25E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Benzofluoranthenes (total-calc'd)	3.50E-01	2.09	1.70E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Benzofluoranthenes (total-calc'd)	5.80E-01	3.06	1.90E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Benzofluoranthenes (total-calc'd)	1.60E-01	1.06	1.51E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Benzofluoranthenes (total-calc'd)	2.50E-01	1.09	2.30E+01	230	450	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Benzofluoranthenes (total-calc'd)	1.50E-01	1.7	8.82E+00	230	450	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Benzofluoranthenes (total-calc'd)	2.30E-01	1.77	1.30E+01	230	450	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Benzofluoranthenes (total-calc'd)	1.12E-01	0.56	2.00E+01	230	450	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Benzofluoranthenes (total-calc'd)	9.90E-02	1.64	6.00E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Benzofluoranthenes (total-calc'd)	1.00E-01	1.24	8.10E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzofluoranthenes (total-calc'd)	4.90E-02 J	1.09	4.50E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Benzofluoranthenes (total-calc'd)	1.16E-01	1.35	8.59E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Benzofluoranthenes (total-calc'd)	2.70E-01	1.37	2.00E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Benzofluoranthenes (total-calc'd)	6.60E-02 J	1.35	4.90E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Benzofluoranthenes (total-calc'd)	1.45E+00	1.92	7.55E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Benzofluoranthenes (total-calc'd)	1.42E-01	2.52	5.63E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Benzofluoranthenes (total-calc'd)	8.00E-03 J	0.945	8.50E-01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzofluoranthenes (total-calc'd)	4.00E-01	1.26	3.20E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzofluoranthenes (total-calc'd)	5.20E+00	2.65	2.00E+02	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Benzofluoranthenes (total-calc'd)	2.60E-02	0.79	3.30E+00	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzofluoranthenes (total-calc'd)	3.30E-01	1.59	2.10E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Benzofluoranthenes (total-calc'd)	2.10E-01	1.36	1.50E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Benzofluoranthenes (total-calc'd)	2.10E+00	2.23	9.40E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Benzofluoranthenes (total-calc'd)	2.30E-01	2.14	1.10E+01	230	450	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Benzofluoranthenes (total-calc'd)	3.70E-01	2.39	1.50E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzofluoranthenes (total-calc'd)	5.90E-01	2.09	2.80E+01	230	450	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Benzofluoranthenes (total-calc'd)	2.80E+00	2.89	9.70E+01	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzofluoranthenes (total-calc'd)	8.90E-02	2.26	3.90E+00	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzofluoranthenes (total-calc'd)	6.40E-02	2.61	2.50E+00	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzofluoranthenes (total-calc'd)	1.80E-01	1.59	1.10E+01	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzofluoranthenes (total-calc'd)	8.30E-02	1.96	4.20E+00	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzofluoranthenes (total-calc'd)	1.20E-01	2.35	5.10E+00	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzofluoranthenes (total-calc'd)	1.10E-01	2.81	3.90E+00	230	450	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzofluoranthenes (total-calc'd)	1.20E-01	3.55	3.40E+00	230	450	mg/kg OC	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzofluoranthenes (total-calc'd)	4.80E-01	4.53						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzoic acid	1.60E+00	2.09		650	650	ug/kg dw	2.5	2.5
KC WQA	WQA8AVE	3/12/1997	Benzoic acid	3.00E-01 J	1.94		650	650	ug/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Benzoic acid	2.70E-01	0.56		650	650	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Benzoic acid	1.10E-01	1.09		650	650	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Benzoic acid	2.70E-01	1.26		650	650	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Benzoic acid	2.70E-01	2.65		650	650	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Benzoic acid	6.50E-02	1.59		650	650	ug/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Benzoic acid	1.14E-01 J	2.39		650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzoic acid	2.90E-01	2.26	1.30E+01	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzoic acid	3.80E-01	2.61	1.50E+01	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzoic acid	2.50E-01	1.59	1.60E+01	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzoic acid	1.30E-01 J	1.96	6.60E+00	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzoic acid	3.30E-01	2.35	1.40E+01	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzoic acid	4.80E-01	2.81	1.70E+01	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzoic acid	3.40E-01	3.55	9.60E+00	650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzoic acid	6.40E-01	4.53		650	650	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Benzyl alcohol	6.50E-01	3.55	1.80E+01	57	73	ug/kg dw	11	8.9
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Benzyl alcohol	5.40E-01 J	2.09		57	73	ug/kg dw	9.5	7.4
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Benzyl alcohol	5.40E-01	4.53		57	73	ug/kg dw	9.5	7.4
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Benzyl alcohol	3.50E-01	2.61	1.30E+01	57	73	ug/kg dw	6.1	4.8
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Benzyl alcohol	3.30E-01 J	2.81	1.20E+01	57	73	ug/kg dw	5.8	4.5
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Benzyl alcohol	2.10E-01	2.26	9.30E+00	57	73	ug/kg dw	3.7	2.9
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Benzyl alcohol	1.70E-01	2.35	7.20E+00	57	73	ug/kg dw	3.0	2.3
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Benzyl alcohol	1.20E-01 J	1.59	7.50E+00	57	73	ug/kg dw	2.1	1.6
Ecology SPI	TRI-095T	8/11/2006	Benzyl alcohol	7.10E-02	2.39		57	73	ug/kg dw	1.2	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Benzyl alcohol	4.60E-02 J	1.96	2.30E+00	57	73	ug/kg dw	<1	<1
KC WQA	WQA8AVE	3/6/1997	Beryllium	2.80E-01	1.93						
KC WQA	WQA8AVE	3/12/1997	Beryllium	2.40E-01	1.94						
KC WQA	WQA8AVE	3/27/1997	Beryllium	3.20E-01	2.03						
KC WQA	WQA8AVE	4/3/1997	Beryllium	2.60E-01	1.58						
KC WQA	WQA8AVE	4/8/1997	Beryllium	2.90E-01	1.87						
KC WQA	WQA8AVE	4/17/1997	Beryllium	2.90E-01	1.67						
KC WQA	WQA8AVE	4/24/1997	Beryllium	2.80E-01	1.77						
KC WQA	WQA8AVE	5/1/1997	Beryllium	2.40E-01	1.6						
KC WQA	WQA8AVE	5/8/1997	Beryllium	4.30E-01	1.79						
KC WQA	WQASOPK	5/15/1997	Beryllium	3.80E-01	1.67						
KC WQA	WQASOPK	5/20/1997	Beryllium	3.70E-01	1.73						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/28/1997	Beryllium	4.00E-01		1.77						
KC WQA	WQASOPK	6/3/1997	Beryllium	4.30E-01		2.11						
EPA SI	DR222	8/13/1998	Beryllium	2.50E-01		0.95						
EPA SI	DR193	8/13/1998	Beryllium	2.80E-01		1.21						
EPA SI	DR232	8/13/1998	Beryllium	3.20E-01		1.37						
EPA SI	DR221	8/13/1998	Beryllium	3.40E-01		1.57						
EPA SI	DR190	8/13/1998	Beryllium	4.40E-01		1.9						
EPA SI	DR233	8/19/1998	Beryllium	3.90E-01		2.19						
EPA SI	DR196	8/20/1998	Beryllium	2.30E-01		1.17						
EPA SI	DR224	8/20/1998	Beryllium	2.60E-01		1.17						
EPA SI	DR197	8/20/1998	Beryllium	2.50E-01		1.3						
EPA SI	DR195	8/20/1998	Beryllium	2.60E-01		1.37						
EPA SI	DR199	8/20/1998	Beryllium	3.00E-01		1.45						
EPA SI	DR200	8/20/1998	Beryllium	3.00E-01		1.73						
EPA SI	DR225	8/20/1998	Beryllium	3.60E-01		1.73	2.08E+01					
EPA SI	DR223	8/20/1998	Beryllium	3.80E-01		2.09						
EPA SI	DR194	8/20/1998	Beryllium	4.30E-01		3.06						
EPA SI	DR203	8/27/1998	Beryllium	2.50E-01		1.06						
EPA SI	DR204	8/27/1998	Beryllium	2.70E-01		1.09						
EPA SI	DR201	8/27/1998	Beryllium	2.90E-01		1.7						
EPA SI	DR226	8/27/1998	Beryllium	2.70E-01		1.77						
LDWRI-Benthic	C9	8/25/2004	beta-Chlordane	4.70E-04	JN	0.56						
LDWRI-Benthic	B7a	8/30/2004	beta-Chlordane	1.70E-03	JN	1.64						
LDWRI-Benthic	B7a	8/30/2004	Biphenyl	2.10E-03	J	1.64						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Bis(2-ethylhexyl)phthalate	2.60E+00		2.89	9.00E+01	47	78	mg/kg OC	1.9	1.2
KC WQA	WQA8AVE	3/6/1997	Bis(2-ethylhexyl)phthalate	3.27E-01		1.93	1.69E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Bis(2-ethylhexyl)phthalate	5.10E-01	J	1.94	2.63E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Bis(2-ethylhexyl)phthalate	2.50E-01		1.58	1.58E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Bis(2-ethylhexyl)phthalate	2.03E-01		1.67	1.22E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Bis(2-ethylhexyl)phthalate	2.50E-01		1.6	1.56E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Bis(2-ethylhexyl)phthalate	3.20E-01		1.67	1.92E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Bis(2-ethylhexyl)phthalate	2.99E-01		1.73	1.73E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Bis(2-ethylhexyl)phthalate	2.70E-01	J	1.77	1.53E+01	47	78	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Bis(2-ethylhexyl)phthalate	3.14E-01		2.11	1.49E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Bis(2-ethylhexyl)phthalate	1.30E-01		0.95	1.40E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Bis(2-ethylhexyl)phthalate	1.30E-01		1.21	1.10E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Bis(2-ethylhexyl)phthalate	1.80E-01		1.37	1.30E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Bis(2-ethylhexyl)phthalate	2.60E-01		1.17	2.20E+01	47	78	mg/kg OC	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR225	8/20/1998	Bis(2-ethylhexyl)phthalate	2.70E-01		1.73	1.56E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Bis(2-ethylhexyl)phthalate	3.50E-01		2.09	1.70E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Bis(2-ethylhexyl)phthalate	6.10E-01		3.06	2.00E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Bis(2-ethylhexyl)phthalate	1.30E-01		1.06	1.20E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Bis(2-ethylhexyl)phthalate	1.80E-01		1.09	1.70E+01	47	78	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Bis(2-ethylhexyl)phthalate	1.50E-01		1.7	8.80E+00	47	78	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Bis(2-ethylhexyl)phthalate	1.80E-01		1.77	1.00E+01	47	78	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Bis(2-ethylhexyl)phthalate	2.40E-02	J	0.56	4.30E+00	47	78	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Bis(2-ethylhexyl)phthalate	6.30E-02	J	1.64	3.80E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Bis(2-ethylhexyl)phthalate	5.20E-02	J	1.09	4.80E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Bis(2-ethylhexyl)phthalate	5.70E-02		1.35	4.20E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Bis(2-ethylhexyl)phthalate	1.30E-01		1.37	9.50E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Bis(2-ethylhexyl)phthalate	3.60E-02	J	1.35	2.70E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Bis(2-ethylhexyl)phthalate	5.10E-01		1.92	2.70E+01	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Bis(2-ethylhexyl)phthalate	9.10E-02		2.52	3.60E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Bis(2-ethylhexyl)phthalate	4.30E-01		2.65	1.60E+01	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Bis(2-ethylhexyl)phthalate	4.60E-02		1.59	2.90E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Bis(2-ethylhexyl)phthalate	1.10E-01		1.36	8.10E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Bis(2-ethylhexyl)phthalate	5.30E-01		2.23	2.40E+01	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Bis(2-ethylhexyl)phthalate	1.50E-01		2.14	7.00E+00	47	78	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Bis(2-ethylhexyl)phthalate	4.00E-01		2.09	1.90E+01	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Bis(2-ethylhexyl)phthalate	7.80E-02		1.59	4.90E+00	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Bis(2-ethylhexyl)phthalate	8.50E-02		1.96	4.30E+00	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Bis(2-ethylhexyl)phthalate	1.20E-01		2.35	5.10E+00	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Bis(2-ethylhexyl)phthalate	1.20E-01		2.81	4.30E+00	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Bis(2-ethylhexyl)phthalate	1.20E-01		3.55	3.40E+00	47	78	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Bis(2-ethylhexyl)phthalate	1.60E+00		4.53						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Butyl benzyl phthalate	2.00E-01		2.89	6.90E+00	4.9	64	mg/kg OC	1.4	<1
KC WQA	WQA8AVE	3/12/1997	Butyl benzyl phthalate	4.20E-02	J	1.94	2.16E+00	4.9	64	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Butyl benzyl phthalate	3.20E-02		1.67	1.92E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Butyl benzyl phthalate	2.00E-02		1.21	1.70E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Butyl benzyl phthalate	3.00E-02		2.19	1.40E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Butyl benzyl phthalate	2.00E-02		1.17	1.70E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Butyl benzyl phthalate	2.00E-02		1.73	1.20E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Butyl benzyl phthalate	3.00E-02		1.73	1.73E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Butyl benzyl phthalate	3.00E-02		2.09	1.40E+00	4.9	64	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Butyl benzyl phthalate	3.00E-02		3.06	9.80E-01	4.9	64	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Butyl benzyl phthalate	2.00E-02		1.09	1.80E+00	4.9	64	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-Benthic	B7a	8/30/2004	Butyl benzyl phthalate	1.10E-02	J	1.64	6.70E-01	4.9	64	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Butyl benzyl phthalate	3.00E-02		2.09	1.40E+00	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Butyl benzyl phthalate	1.30E-02	J	2.26	5.80E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Butyl benzyl phthalate	1.90E-02	J	2.61	7.30E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Butyl benzyl phthalate	1.30E-02	J	1.59	8.20E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Butyl benzyl phthalate	2.60E-02	J	1.96	1.30E+00	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Butyl benzyl phthalate	1.60E-02	J	2.35	6.80E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Butyl benzyl phthalate	1.30E-02	J	2.81	4.60E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Butyl benzyl phthalate	1.70E-02	J	3.55	4.80E-01	4.9	64	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Butyl benzyl phthalate	1.10E-01		4.53						
KC WQA	WQA8AVE	4/8/1997	Cadmium	3.10E-01		1.87		5.1	6.7	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Cadmium	3.00E-01		1.67		5.1	6.7	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Cadmium	3.60E-01		1.73		5.1	6.7	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Cadmium	3.80E-01		1.77		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Cadmium	1.60E-01		0.95		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Cadmium	3.30E-01		1.21		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Cadmium	2.20E-01		1.37		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Cadmium	3.10E-01		1.57		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Cadmium	2.90E-01		1.9		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Cadmium	4.00E-01		2.19		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Cadmium	1.20E-01		1.17		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Cadmium	2.10E-01		1.17		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Cadmium	1.20E-01		1.3		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Cadmium	1.60E-01		1.37		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Cadmium	2.10E-01		1.45		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Cadmium	2.50E-01		1.73		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Cadmium	3.50E-01		1.73		5.1	6.7	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Cadmium	3.50E-01		2.09		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Cadmium	4.10E-01		3.06		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Cadmium	2.00E-01		1.06		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Cadmium	2.00E-01		1.09		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Cadmium	2.00E-01		1.7		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Cadmium	3.00E-01		1.77		5.1	6.7	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Cadmium	6.00E-02		0.56		5.1	6.7	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Cadmium	1.76E-01		1.64		5.1	6.7	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Cadmium	3.00E-01		1.92		5.1	6.7	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Cadmium	4.00E-01		2.65		5.1	6.7	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Cadmium	4.00E-01		2.23		5.1	6.7	mg/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Ecology SPI	TRI-095T	8/11/2006	Cadmium	3.60E-01		2.39		5.1	6.7	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Cadmium	6.00E-01		2.89		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Cadmium	4.00E-01		2.26		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Cadmium	5.00E-01		2.61		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Cadmium	4.00E-01		1.59		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Cadmium	5.00E-01		2.35		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Cadmium	5.00E-01		2.81		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Cadmium	5.00E-01		3.55		5.1	6.7	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Cadmium	1.10E+00		4.53		5.1	6.7	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Carbazole	2.00E-02		1.57						
EPA SI	DR190	8/13/1998	Carbazole	3.00E-02		1.9						
EPA SI	DR225	8/20/1998	Carbazole	2.00E-02		1.73	1.16E+00					
EPA SI	DR223	8/20/1998	Carbazole	2.00E-02		2.09						
EPA SI	DR194	8/20/1998	Carbazole	4.00E-02		3.06						
LDWRI-Benthic	C9	8/25/2004	Carbazole	4.10E-03	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Carbazole	6.20E-03	J	1.64						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Carbazole	1.50E-01		1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Carbazole	2.30E-02		1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Carbazole	4.20E+00		2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Carbazole	2.80E-02		1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Carbazole	1.00E-01		2.23						
Ecology SPI	TRI-095T	8/11/2006	Carbazole	2.60E-02	J	2.39						
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Carbazole	1.10E-02	J	1.59	6.90E-01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Carbazole	1.10E-02	J	2.35	4.70E-01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Carbazole	1.10E-02	J	2.81	3.90E-01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Carbazole	1.00E-02	J	3.55	2.80E-01					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Carbazole	5.00E-02		4.53						
KC WQA	WQA8AVE	3/6/1997	Chromium	2.70E+01		1.93		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Chromium	2.64E+01		1.94		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Chromium	2.55E+01		2.03		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Chromium	2.53E+01		1.58		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Chromium	2.68E+01		1.87		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Chromium	2.66E+01		1.67		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Chromium	2.68E+01		1.77		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Chromium	2.31E+01		1.6		260	270	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Chromium	2.39E+01		1.79		260	270	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Chromium	2.38E+01		1.67		260	270	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Chromium	2.19E+01		1.73		260	270	mg/kg dw	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/28/1997	Chromium	2.30E+01	1.77		260	270	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Chromium	2.33E+01	2.11		260	270	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Chromium	1.50E+01	0.95		260	270	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Chromium	1.70E+01	1.21		260	270	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Chromium	1.80E+01	1.37		260	270	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Chromium	2.20E+01	1.57		260	270	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Chromium	2.50E+01	1.9		260	270	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Chromium	2.40E+01	2.19		260	270	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Chromium	1.50E+01	1.17		260	270	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Chromium	1.50E+01	1.17		260	270	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Chromium	1.70E+01	1.3		260	270	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Chromium	1.90E+01	1.37		260	270	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Chromium	2.00E+01	1.45		260	270	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Chromium	2.00E+01	1.73		260	270	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Chromium	2.40E+01	1.73		260	270	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Chromium	2.60E+01	2.09		260	270	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Chromium	2.90E+01	3.06		260	270	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Chromium	1.70E+01	1.06		260	270	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Chromium	2.30E+01	1.09		260	270	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Chromium	2.00E+01	1.7		260	270	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Chromium	2.10E+01	1.77		260	270	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Chromium	1.22E+01	0.56		260	270	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Chromium	2.29E+01	1.64		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Chromium	2.00E+01	1.24		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Chromium	1.20E+01	1.09		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Chromium	2.58E+01	1.35		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Chromium	1.79E+01	1.37		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Chromium	1.78E+01	1.35		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Chromium	2.76E+01	1.92		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Chromium	2.25E+01	2.52		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Chromium	1.53E+01	0.945		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Chromium	2.12E+01	1.26		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Chromium	3.03E+01	2.65		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Chromium	1.35E+01	0.79		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Chromium	6.10E+01 J	1.59		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Chromium	1.92E+01	1.36		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Chromium	3.30E+01	2.23		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Chromium	2.40E+01	2.14		260	270	mg/kg dw	<1	<1

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Ecology SPI	TRI-095T	8/11/2006	Chromium	3.06E+01	2.39		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Chromium	2.60E+01	2.09		260	270	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Chromium	4.00E+01	2.89		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Chromium	2.48E+01	2.26		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Chromium	3.00E+01	2.61		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Chromium	2.36E+01	1.59		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Chromium	1.75E+01	1.96		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Chromium	2.80E+01	2.35		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Chromium	2.70E+01	2.81		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Chromium	2.80E+01	3.55		260	270	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Chromium	4.90E+01	4.53		260	270	mg/kg dw	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Chrysene	3.80E+00	1.56	2.40E+02	110	460	mg/kg OC	2.2	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Chrysene	5.70E+00	2.65	2.20E+02	110	460	mg/kg OC	2	<1
KC WQA	WQA8AVE	3/6/1997	Chrysene	1.67E-01	1.93	8.65E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Chrysene	1.80E-01 J	1.94	9.28E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Chrysene	1.05E-01	1.58	6.65E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Chrysene	2.43E-01	1.67	1.46E+01	110	460	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Chrysene	1.32E-01	1.6	8.25E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Chrysene	1.85E-01	1.67	1.11E+01	110	460	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Chrysene	1.59E-01	1.73	9.19E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Chrysene	1.70E-01 J	1.77	9.60E+00	110	460	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Chrysene	4.96E-01	2.11	2.35E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Chrysene	1.00E-01	0.95	1.10E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Chrysene	1.90E-01	1.21	1.60E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Chrysene	2.40E-01	1.37	1.80E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Chrysene	8.40E-01	1.57	5.40E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Chrysene	1.30E+00	1.9	6.80E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Chrysene	2.00E-01	2.19	9.10E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Chrysene	1.50E-01	1.17	1.30E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Chrysene	9.00E-02	1.17	7.70E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Chrysene	9.00E-02	1.3	6.90E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Chrysene	1.40E-01	1.37	1.00E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Chrysene	1.30E-01	1.45	9.00E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Chrysene	1.20E-01	1.73	6.90E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Chrysene	2.20E-01	1.73	1.27E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Chrysene	2.30E-01	2.09	1.10E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Chrysene	3.40E-01	3.06	1.10E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Chrysene	1.10E-01	1.06	1.00E+01	110	460	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR204	8/27/1998	Chrysene	1.60E-01	1.09	1.50E+01	110	460	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Chrysene	1.00E-01	1.7	5.90E+00	110	460	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Chrysene	1.40E-01	1.77	7.90E+00	110	460	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Chrysene	7.40E-02	0.56	1.30E+01	110	460	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Chrysene	6.50E-02	1.64	4.00E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Chrysene	1.60E-01	1.24	1.30E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Chrysene	5.60E-02 J	1.09	5.10E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Chrysene	6.40E-02	1.35	4.70E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Chrysene	1.20E-01	1.37	8.80E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Chrysene	5.90E-02	1.35	4.40E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Chrysene	8.80E-01	1.92	4.60E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Chrysene	8.70E-02	2.52	3.50E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Chrysene	2.60E-01	1.26	2.10E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Chrysene	2.50E-02	0.79	3.20E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Chrysene	2.20E-01	1.59	1.40E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Chrysene	1.20E-01	1.36	8.80E+00	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Chrysene	1.20E+00	2.23	5.40E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Chrysene	1.10E-01	2.14	5.10E+00	110	460	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Chrysene	2.69E-01	2.39	1.13E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Chrysene	4.00E-01	2.09	1.90E+01	110	460	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Chrysene	2.40E+00	2.89	8.30E+01	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Chrysene	7.20E-02	2.26	3.20E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Chrysene	5.90E-02	2.61	2.30E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Chrysene	1.30E-01	1.59	8.20E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Chrysene	5.40E-02	1.96	2.80E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Chrysene	7.90E-02	2.35	3.40E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Chrysene	9.50E-02	2.81	3.40E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Chrysene	8.10E-02	3.55	2.30E+00	110	460	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Chrysene	3.90E-01	4.53						
KC WQA	WQA8AVE	3/6/1997	Copper	3.43E+01	1.93		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Copper	3.50E+01	1.94		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Copper	3.59E+01	2.03		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Copper	3.18E+01	1.58		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Copper	3.59E+01	1.87		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Copper	3.51E+01	1.67		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Copper	3.53E+01	1.77		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Copper	3.07E+01	1.6		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Copper	3.35E+01	1.79		390	390	mg/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/15/1997	Copper	4.32E+01	1.67		390	390	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Copper	4.07E+01	1.73		390	390	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Copper	4.33E+01	1.77		390	390	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Copper	4.72E+01	2.11		390	390	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Copper	2.40E+01	0.95		390	390	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Copper	4.00E+01	1.21		390	390	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Copper	3.20E+01	1.37		390	390	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Copper	3.60E+01	1.57		390	390	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Copper	5.30E+01	1.9		390	390	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Copper	4.60E+01	2.19		390	390	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Copper	2.80E+01	1.17		390	390	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Copper	2.90E+01	1.17		390	390	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Copper	3.00E+01	1.3		390	390	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Copper	3.60E+01	1.37		390	390	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Copper	3.30E+01	1.45		390	390	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Copper	4.30E+01	1.73		390	390	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Copper	4.40E+01	1.73		390	390	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Copper	4.60E+01	2.09		390	390	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Copper	5.70E+01	3.06		390	390	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Copper	3.70E+01	1.06		390	390	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Copper	3.00E+01	1.09		390	390	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Copper	4.30E+01	1.7		390	390	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Copper	3.40E+01	1.77		390	390	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Copper	1.80E+01	0.56		390	390	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Copper	3.09E+01	1.64		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Copper	3.09E+01	1.24		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Copper	1.72E+01	1.09		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Copper	2.94E+01	1.35		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Copper	3.98E+01	1.37		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Copper	3.40E+01	1.35		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Copper	1.80E+02	1.92		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Copper	3.56E+01	2.52		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Copper	2.58E+01	0.945		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Copper	3.53E+01	1.26		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Copper	6.54E+01	2.65		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Copper	1.71E+01	0.79		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Copper	7.18E+01	1.59		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Copper	3.44E+01	1.36		390	390	mg/kg dw	<1	<1

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Copper	6.17E+01		2.23		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Copper	4.51E+01		2.14		390	390	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Copper	5.45E+01		2.39		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Copper	5.80E+01		2.09		390	390	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Copper	1.00E+02		2.89		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Copper	4.01E+01		2.26		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Copper	4.65E+01		2.61		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Copper	3.85E+01		1.59		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Copper	2.70E+01		1.96		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Copper	5.88E+01		2.35		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Copper	6.30E+01		2.81		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Copper	5.34E+01		3.55		390	390	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Copper	1.09E+02	J	4.53		390	390	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/6/1997	Coprostanol	5.42E-01		1.93						
KC WQA	WQA8AVE	3/12/1997	Coprostanol	4.40E-01	J	1.94						
Ecology SPI	TRI-095T	8/11/2006	Coprostanol	1.21E-01	J	2.39						
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Decachlorobiphenyl	6.80E-03		2.26	3.00E-01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Decachlorobiphenyl	1.10E-02		2.61	4.20E-01					
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Decachlorobiphenyl	4.90E-03		1.59	3.10E-01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Decachlorobiphenyl	5.00E-03		1.96	2.60E-01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Decachlorobiphenyl	5.70E-03		2.35	2.40E-01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Decachlorobiphenyl	5.20E-03		2.81	1.90E-01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Decachlorobiphenyl	4.40E-03		3.55	1.20E-01					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Decachlorobiphenyl	6.20E-03		4.53						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Dibenzo(a,h)anthracene	5.80E-01		1.56	3.70E+01	12	33	mg/kg OC	3.1	1.1
EPA SI	DR193	8/13/1998	Dibenzo(a,h)anthracene	2.00E-02		1.21	1.70E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Dibenzo(a,h)anthracene	5.00E-02		1.57	3.20E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Dibenzo(a,h)anthracene	8.00E-02		1.9	4.20E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Dibenzo(a,h)anthracene	3.00E-02		2.19	1.40E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Dibenzo(a,h)anthracene	2.00E-02		1.17	1.70E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Dibenzo(a,h)anthracene	2.00E-02		1.37	1.50E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Dibenzo(a,h)anthracene	3.00E-02		1.73	1.73E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Dibenzo(a,h)anthracene	3.00E-02		2.09	1.40E+00	12	33	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Dibenzo(a,h)anthracene	3.00E-02		3.06	9.80E-01	12	33	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Dibenzo(a,h)anthracene	5.00E-02		1.09	4.60E+00	12	33	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Dibenzo(a,h)anthracene	7.70E-03		0.56	1.40E+00	12	33	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Dibenzo(a,h)anthracene	6.20E-03		1.64	3.80E-01	12	33	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Dibenzo(a,h)anthracene	1.00E-01	J	2.65	3.80E+00	12	33	mg/kg OC	<1	<1

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Dibenzo(a,h)anthracene	3.40E-02	J	2.23	1.50E+00	12	33	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Dibenzo(a,h)anthracene	2.80E-02		2.09	1.30E+00	12	33	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Dibenzo(a,h)anthracene	1.10E-01	J	2.89	3.80E+00	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Dibenzo(a,h)anthracene	7.00E-03		2.26	3.10E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Dibenzo(a,h)anthracene	1.50E-02		1.59	9.40E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Dibenzo(a,h)anthracene	6.60E-03		1.96	3.40E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Dibenzo(a,h)anthracene	1.20E-02	J	2.35	5.10E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Dibenzo(a,h)anthracene	1.10E-02		2.81	3.90E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Dibenzo(a,h)anthracene	1.10E-02	J	3.55	3.10E-01	12	33	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Dibenzo(a,h)anthracene	5.80E-02		4.53						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Dibenzofuran	4.00E+00		2.65	1.50E+02	15	58	mg/kg OC	10	2.6
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Dibenzofuran	4.60E-01		1.56	2.90E+01	15	58	mg/kg OC	1.9	<1
KC WQA	WQA8AVE	3/12/1997	Dibenzofuran	7.60E-02	J	1.94	3.92E+00	15	58	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Dibenzofuran	7.00E-02		1.37	5.10E+00	15	58	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Dibenzofuran	8.00E-02		1.57	5.10E+00	15	58	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Dibenzofuran	3.00E-02		1.9	1.60E+00	15	58	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Dibenzofuran	4.00E-02		3.06	1.30E+00	15	58	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Dibenzofuran	2.80E-03	J	0.56	5.00E-01	15	58	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Dibenzofuran	3.40E-03	J	1.64	2.10E-01	15	58	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Dibenzofuran	5.60E-02	J	2.23	2.50E+00	15	58	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Dibenzofuran	5.60E-02		2.39	2.30E+00	15	58	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Dibenzofuran	9.60E-02		2.09	4.60E+00	15	58	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Dibenzofuran	1.50E-01		2.89	5.20E+00	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Dibenzofuran	2.40E-02		2.61	9.20E-01	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Dibenzofuran	1.30E-02	J	1.59	8.20E-01	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Dibenzofuran	1.50E-02	J	2.35	6.40E-01	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Dibenzofuran	1.40E-02	J	2.81	5.00E-01	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Dibenzofuran	2.20E-02		3.55	6.20E-01	15	58	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Dibenzofuran	4.50E-02		4.53						
LDWRI-Benthic	B7a	8/30/2004	Dibenzothiophene	3.00E-03	J	1.64						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Dibutyl phthalate	3.30E-02		4.53						
EPA SI	DR232	8/13/1998	Dibutyltin as ion	6.00E-03		1.37						
EPA SI	DR221	8/13/1998	Dibutyltin as ion	1.00E-02		1.57						
EPA SI	DR194	8/20/1998	Dibutyltin as ion	1.30E-02	J	3.06						
EPA SI	DR203	8/27/1998	Dibutyltin as ion	3.90E-02	J	1.06						
LDWRI-Benthic	C9	8/25/2004	Dibutyltin as ion	1.30E-03	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Dibutyltin as ion	5.10E-03		1.64						
Ecology SPI	TRI-095T	8/11/2006	Dibutyltin as ion	7.30E-03		2.39						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Diethyl phthalate	6.60E-03		1.09	6.10E-01	61	110	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Diethyl phthalate	1.20E-02		1.35	8.90E-01	61	110	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Diethyl phthalate	5.70E-03	J	0.79	7.20E-01	61	110	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Diethyl phthalate	7.90E-03		2.23	3.50E-01	61	110	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Diethyl phthalate	6.50E-03		2.14	3.00E-01	61	110	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Diethyl phthalate	2.20E-02		4.53						
EPA SI	DR200	8/20/1998	Dimethyl phthalate	2.00E-02		1.73	1.20E+00	53	53	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Dimethyl phthalate	2.00E-02		1.73	1.16E+00	53	53	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Dimethyl phthalate	2.00E-02		2.09	9.60E-01	53	53	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Dimethyl phthalate	4.00E-02		3.06	1.30E+00	53	53	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Dimethyl phthalate	3.00E-02		1.06	2.80E+00	53	53	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Dimethyl phthalate	7.10E-03	J	1.64	4.30E-01	53	53	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Dimethyl phthalate	3.60E-02		1.59	2.30E+00	53	53	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Dimethyl phthalate	1.60E-02		2.09	7.70E-01	53	53	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Dimethyl phthalate	3.30E-02		2.89	1.10E+00	53	53	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Dimethyl phthalate	8.00E-03		2.61	3.10E-01	53	53	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Dimethyl phthalate	2.30E-02		4.53						
KC WQA	WQA8AVE	3/12/1997	Di-n-butyl phthalate	5.40E-02	J	1.94	2.78E+00	220	1700	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Di-n-butyl phthalate	2.00E-02		1.57	1.30E+00	220	1700	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Di-n-butyl phthalate	3.00E-02		2.09	1.40E+00	220	1700	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Di-n-butyl phthalate	2.00E-02		3.06	6.50E-01	220	1700	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Di-n-butyl phthalate	4.00E-02		1.09	3.70E+00	220	1700	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Di-n-butyl phthalate	9.10E-03	J	0.56	1.60E+00	220	1700	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Di-n-butyl phthalate	2.90E-02		2.52	1.20E+00	220	1700	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Di-n-butyl phthalate	4.90E-02	J	2.09	2.30E+00	220	1700	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Di-n-butyl phthalate	5.70E-02	J	2.89	2.00E+00	220	1700	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Di-n-octyl phthalate	3.60E-02	J	1.09	3.30E+00	58	4500	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Di-n-octyl phthalate	9.20E-02	J	2.89	3.20E+00	58	4500	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Di-n-Octyl phthalate	3.10E-02		4.53						
EPA SI	DR221	8/13/1998	Dioxin/furan TEQ - mammal (half DL)	3.90E-06	J							
EPA SI	DR224	8/20/1998	Dioxin/furan TEQ - mammal (half DL)	2.00E-06								
EPA SI	DR203	8/27/1998	Dioxin/furan TEQ - mammal (half DL)	2.20E-06	J							
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Dioxin/furan TEQ - mammal (half DL)	3.57E-05	J	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Dioxin/Furan TEQ, nd SDL*0.5	3.19E-06	J	2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	DX TOTAL (TEQ ND=0)	3.00E-06		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	DX TOTAL (TEQ ND=1/2 DL)	3.03E-06		2.61						
LDWRI-Benthic	B7a	8/30/2004	Endosulfan sulfate	2.50E-02	JN	1.64						
LDWRI-Benthic	B7a	8/30/2004	Endrin ketone	1.50E-03	JN	1.64						

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Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Fluoranthene	1.70E+01	2.65	6.40E+02	160	1200	mg/kg OC	4	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Fluoranthene	8.10E+00	1.56	5.20E+02	160	1200	mg/kg OC	3.3	<1
EPA SI	DR221	8/13/1998	Fluoranthene	4.20E+00	1.57	2.70E+02	160	1200	mg/kg OC	1.7	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Fluoranthene	7.50E+00	2.89	2.60E+02	160	1200	mg/kg OC	1.6	<1
KC WQA	WQA8AVE	3/6/1997	Fluoranthene	3.40E-01 J	1.93	1.76E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Fluoranthene	4.40E-01 J	1.94	2.27E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Fluoranthene	2.70E-01 J	1.58	1.71E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Fluoranthene	5.60E-01 J	1.67	3.35E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Fluoranthene	3.60E-01 J	1.6	2.25E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Fluoranthene	2.40E-01 J	1.67	1.44E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Fluoranthene	2.20E-01 J	1.73	1.27E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Fluoranthene	2.20E-01 J	1.77	1.24E+01	160	1200	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Fluoranthene	4.30E-01 J	2.11	2.04E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Fluoranthene	2.20E-01	0.95	2.30E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Fluoranthene	2.60E-01	1.21	2.10E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Fluoranthene	6.50E-01	1.37	4.70E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Fluoranthene	2.10E+00	1.9	1.10E+02	160	1200	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Fluoranthene	3.70E-01	2.19	1.70E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Fluoranthene	2.20E-01	1.17	1.90E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Fluoranthene	1.50E-01	1.17	1.30E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Fluoranthene	1.30E-01	1.3	1.00E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Fluoranthene	2.10E-01	1.37	1.50E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Fluoranthene	2.30E-01	1.45	1.60E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Fluoranthene	2.40E-01	1.73	1.40E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Fluoranthene	3.50E-01	1.73	2.02E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Fluoranthene	4.20E-01	2.09	2.00E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Fluoranthene	8.40E-01	3.06	2.70E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Fluoranthene	1.50E-01	1.06	1.40E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Fluoranthene	2.30E-01	1.09	2.10E+01	160	1200	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Fluoranthene	1.40E-01	1.7	8.20E+00	160	1200	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Fluoranthene	2.30E-01	1.77	1.30E+01	160	1200	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Fluoranthene	1.00E-01	0.56	1.80E+01	160	1200	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Fluoranthene	1.10E-01	1.64	6.70E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Fluoranthene	2.80E-01	1.24	2.30E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Fluoranthene	9.90E-02	1.09	9.10E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Fluoranthene	9.20E-02	1.35	6.80E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Fluoranthene	1.90E-01	1.37	1.40E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Fluoranthene	1.10E-01	1.35	8.10E+00	160	1200	mg/kg OC	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Fluoranthene	1.70E+00	1.92	8.90E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Fluoranthene	1.60E-01	2.52	6.30E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Fluoranthene	2.00E-02	0.945	2.10E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Fluoranthene	3.60E-01	1.26	2.90E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Fluoranthene	3.60E-02	0.79	4.60E+00	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Fluoranthene	3.00E-01	1.59	1.90E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Fluoranthene	1.90E-01	1.36	1.40E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Fluoranthene	2.70E+00	2.23	1.20E+02	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Fluoranthene	2.00E-01	2.14	9.30E+00	160	1200	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Fluoranthene	5.43E-01 J	2.39	2.27E+01	160	1200	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Fluoranthene	1.10E+00	2.09	5.30E+01	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Fluoranthene	1.10E-01	2.26	4.90E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Fluoranthene	1.40E-01	2.61	5.40E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Fluoranthene	2.10E-01	1.59	1.30E+01	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Fluoranthene	8.50E-02	1.96	4.30E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Fluoranthene	1.40E-01	2.35	6.00E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Fluoranthene	1.40E-01	2.81	5.00E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Fluoranthene	1.80E-01	3.55	5.10E+00	160	1200	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Fluoranthene	7.40E-01	4.53						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Fluorene	6.80E+00	2.65	2.60E+02	23	79	mg/kg OC	11	3.3
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Fluorene	8.20E-01	1.56	5.30E+01	23	79	mg/kg OC	2.3	<1
KC WQA	WQA8AVE	3/6/1997	Fluorene	4.80E-02 J	1.93	2.49E+00	23	79	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Fluorene	1.10E-01 J	1.94	5.67E+00	23	79	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Fluorene	6.80E-02 J	1.67	4.07E+00	23	79	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Fluorene	3.70E-02 J	1.6	2.31E+00	23	79	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Fluorene	1.10E-01	1.37	8.00E+00	23	79	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Fluorene	9.00E-02	1.57	5.70E+00	23	79	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Fluorene	8.00E-02	1.9	4.20E+00	23	79	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Fluorene	2.00E-02	2.09	9.60E-01	23	79	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Fluorene	6.00E-02	3.06	2.00E+00	23	79	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Fluorene	3.90E-03 J	0.56	7.00E-01	23	79	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Fluorene	4.70E-03 J	1.64	2.90E-01	23	79	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Fluorene	7.20E-02 J	1.92	3.80E+00	23	79	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Fluorene	1.00E-01	2.23	4.50E+00	23	79	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Fluorene	1.10E-01	2.09	5.30E+00	23	79	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Fluorene	3.20E-01	2.89	1.10E+01	23	79	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Fluorene	2.60E-02	2.61	1.00E+00	23	79	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Fluorene	1.40E-02 J	1.59	8.80E-01	23	79	mg/kg OC	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Fluorene	1.50E-02	J	2.35	6.40E-01	23	79	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Fluorene	1.50E-02	J	2.81	5.30E-01	23	79	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Fluorene	2.60E-02		3.55	7.30E-01	23	79	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Fluorene	4.60E-02		4.53						
LDWRI-Benthic	B7a	8/30/2004	Hexachlorobenzene	6.30E-02	JN	1.64	3.80E+00	0.38	2.3	mg/kg OC	10	1.7
EPA SI	DR194	8/20/1998	Hexachlorobenzene	2.00E-02		3.06	6.50E-01	0.38	2.3	mg/kg OC	1.7	<1
KC WQA	WQA8AVE	5/1/1997	Hexachlorobenzene	3.50E-03	J	1.6	2.19E-01	0.38	2.3	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Hexachlorobenzene	8.00E-04	JN	0.56	1.40E-01	0.38	2.3	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Hexachlorobenzene	9.60E-04	J	2.14	4.50E-02	0.38	2.3	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Hexachlorobenzene	2.40E-02	J	4.53						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Indeno(1,2,3-cd)pyrene	1.60E+00		1.56	1.00E+02	34	88	mg/kg OC	2.9	1.1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Indeno(1,2,3-cd)pyrene	9.70E-01		2.65	3.70E+01	34	88	mg/kg OC	1.1	<1
KC WQA	WQA8AVE	3/6/1997	Indeno(1,2,3-cd)pyrene	6.30E-02	J	1.93	3.26E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Indeno(1,2,3-cd)pyrene	7.80E-02	J	1.94	4.02E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Indeno(1,2,3-cd)pyrene	5.70E-02	J	1.58	3.61E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Indeno(1,2,3-cd)pyrene	1.00E-01	J	1.67	5.99E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Indeno(1,2,3-cd)pyrene	6.10E-02	J	1.6	3.81E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Indeno(1,2,3-cd)pyrene	1.30E-01	J	1.67	7.78E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Indeno(1,2,3-cd)pyrene	1.10E-01	J	1.73	6.36E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Indeno(1,2,3-cd)pyrene	1.10E-01	J	1.77	6.21E+00	34	88	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Indeno(1,2,3-cd)pyrene	1.40E-01	J	2.11	6.64E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Indeno(1,2,3-cd)pyrene	5.00E-02		0.95	5.30E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Indeno(1,2,3-cd)pyrene	9.00E-02		1.21	7.40E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Indeno(1,2,3-cd)pyrene	8.00E-02		1.37	5.80E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Indeno(1,2,3-cd)pyrene	1.90E-01		1.57	1.20E+01	34	88	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Indeno(1,2,3-cd)pyrene	2.90E-01		1.9	1.50E+01	34	88	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Indeno(1,2,3-cd)pyrene	1.30E-01		2.19	5.90E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Indeno(1,2,3-cd)pyrene	1.00E-01		1.17	8.50E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Indeno(1,2,3-cd)pyrene	6.00E-02		1.17	5.10E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Indeno(1,2,3-cd)pyrene	7.00E-02		1.3	5.40E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Indeno(1,2,3-cd)pyrene	1.00E-01		1.37	7.30E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Indeno(1,2,3-cd)pyrene	9.00E-02		1.45	6.20E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Indeno(1,2,3-cd)pyrene	9.00E-02		1.73	5.20E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Indeno(1,2,3-cd)pyrene	1.30E-01		1.73	7.51E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Indeno(1,2,3-cd)pyrene	1.30E-01		2.09	6.20E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Indeno(1,2,3-cd)pyrene	1.50E-01		3.06	4.90E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Indeno(1,2,3-cd)pyrene	5.00E-02		1.06	4.70E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Indeno(1,2,3-cd)pyrene	1.20E-01		1.09	1.10E+01	34	88	mg/kg OC	<1	<1

Table A-1
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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR201	8/27/1998	Indeno(1,2,3-cd)pyrene	5.00E-02		1.7	2.90E+00	34	88	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Indeno(1,2,3-cd)pyrene	6.00E-02		1.77	3.40E+00	34	88	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Indeno(1,2,3-cd)pyrene	3.10E-02		0.56	5.50E+00	34	88	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Indeno(1,2,3-cd)pyrene	3.40E-02		1.64	2.10E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Indeno(1,2,3-cd)pyrene	6.50E-03	J	1.24	5.20E-01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Indeno(1,2,3-cd)pyrene	1.20E-02		1.09	1.10E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Indeno(1,2,3-cd)pyrene	1.00E-02		1.35	7.40E-01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Indeno(1,2,3-cd)pyrene	8.30E-03		1.37	6.10E-01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Indeno(1,2,3-cd)pyrene	2.40E-01		1.92	1.30E+01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Indeno(1,2,3-cd)pyrene	2.10E-02		2.52	8.30E-01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Indeno(1,2,3-cd)pyrene	6.60E-03	J	0.945	7.00E-01	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Indeno(1,2,3-cd)pyrene	4.80E-02		1.26	3.80E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Indeno(1,2,3-cd)pyrene	1.80E-02		0.79	2.30E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Indeno(1,2,3-cd)pyrene	6.60E-02		1.59	4.20E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Indeno(1,2,3-cd)pyrene	2.30E-02		1.36	1.70E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Indeno(1,2,3-cd)pyrene	2.00E-01		2.23	9.00E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Indeno(1,2,3-cd)pyrene	6.50E-03		2.14	3.00E-01	34	88	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Indeno(1,2,3-cd)pyrene	7.10E-02		2.39	3.00E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Indeno(1,2,3-cd)pyrene	8.50E-02		2.09	4.10E+00	34	88	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Indeno(1,2,3-cd)pyrene	3.40E-01		2.89	1.20E+01	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Indeno(1,2,3-cd)pyrene	2.40E-02		2.26	1.10E+00	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Indeno(1,2,3-cd)pyrene	1.70E-02	J	2.61	6.50E-01	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Indeno(1,2,3-cd)pyrene	4.60E-02		1.59	2.90E+00	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Indeno(1,2,3-cd)pyrene	2.20E-02		1.96	1.10E+00	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Indeno(1,2,3-cd)pyrene	3.60E-02		2.35	1.50E+00	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Indeno(1,2,3-cd)pyrene	3.20E-02		2.81	1.10E+00	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Indeno(1,2,3-cd)pyrene	3.00E-02		3.55	8.50E-01	34	88	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Indeno(1,2,3-cd)pyrene	1.30E-01		4.53						
KC WQA	WQA8AVE	3/6/1997	Iron	2.90E+04	J	1.93						
KC WQA	WQA8AVE	3/12/1997	Iron	2.70E+04	J	1.94						
KC WQA	WQA8AVE	3/27/1997	Iron	2.70E+04	J	2.03						
KC WQA	WQA8AVE	4/3/1997	Iron	2.40E+04	J	1.58						
KC WQA	WQA8AVE	4/8/1997	Iron	2.80E+04	J	1.87						
KC WQA	WQA8AVE	4/17/1997	Iron	2.70E+04	J	1.67						
KC WQA	WQA8AVE	4/24/1997	Iron	2.70E+04	J	1.77						
KC WQA	WQA8AVE	5/1/1997	Iron	2.40E+04	J	1.6						
KC WQA	WQA8AVE	5/8/1997	Iron	2.60E+04	J	1.79						
KC WQA	WQASOPK	5/15/1997	Iron	2.20E+04	J	1.67						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	5/20/1997	Iron	2.00E+04 J	1.73						
KC WQA	WQASOPK	5/28/1997	Iron	2.30E+04 J	1.77						
KC WQA	WQASOPK	6/3/1997	Iron	2.40E+04 J	2.11						
EPA SI	DR222	8/13/1998	Iron	1.51E+04 J	0.95						
EPA SI	DR193	8/13/1998	Iron	1.76E+04 J	1.21						
EPA SI	DR232	8/13/1998	Iron	2.00E+04 J	1.37						
EPA SI	DR221	8/13/1998	Iron	2.16E+04 J	1.57						
EPA SI	DR190	8/13/1998	Iron	2.12E+04 J	1.9						
EPA SI	DR233	8/19/1998	Iron	2.59E+04 J	2.19						
EPA SI	DR196	8/20/1998	Iron	1.99E+04 J	1.17						
EPA SI	DR224	8/20/1998	Iron	1.55E+04 J	1.17						
EPA SI	DR197	8/20/1998	Iron	1.89E+04 J	1.3						
EPA SI	DR195	8/20/1998	Iron	2.00E+04 J	1.37						
EPA SI	DR199	8/20/1998	Iron	2.13E+04 J	1.45						
EPA SI	DR200	8/20/1998	Iron	2.11E+04 J	1.73						
EPA SI	DR225	8/20/1998	Iron	2.32E+04 J	1.73						
EPA SI	DR223	8/20/1998	Iron	2.76E+04 J	2.09						
EPA SI	DR194	8/20/1998	Iron	3.13E+04 J	3.06						
EPA SI	DR203	8/27/1998	Iron	1.82E+04	1.06						
EPA SI	DR204	8/27/1998	Iron	2.59E+04 J	1.09						
EPA SI	DR201	8/27/1998	Iron	2.86E+04	1.7						
EPA SI	DR226	8/27/1998	Iron	2.15E+04	1.77						
KC WQA	WQA8AVE	3/6/1997	Lead	1.30E+01	1.93		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Lead	1.67E+01	1.94		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Lead	1.40E+01	2.03		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Lead	1.20E+01	1.58		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Lead	1.30E+01	1.87		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Lead	1.40E+01	1.67		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Lead	1.40E+01	1.77		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Lead	1.30E+01	1.6		450	530	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Lead	1.64E+01	1.79		450	530	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Lead	3.05E+01	1.67		450	530	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Lead	2.88E+01	1.73		450	530	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Lead	2.64E+01	1.77		450	530	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Lead	2.78E+01	2.11		450	530	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Lead	1.18E+01	0.95		450	530	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Lead	1.94E+01	1.21		450	530	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Lead	1.42E+01	1.37		450	530	mg/kg dw	<1	<1

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EPA SI	DR221	8/13/1998	Lead	2.06E+01		1.57		450	530	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Lead	2.58E+01		1.9		450	530	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Lead	1.84E+01		2.19		450	530	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Lead	2.33E+01		1.17		450	530	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Lead	1.36E+01		1.17		450	530	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Lead	1.83E+01		1.3		450	530	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Lead	3.17E+01		1.37		450	530	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Lead	2.44E+01		1.45		450	530	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Lead	2.77E+01		1.73		450	530	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Lead	2.56E+01		1.73		450	530	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Lead	2.20E+01		2.09		450	530	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Lead	3.14E+01		3.06		450	530	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Lead	2.20E+01		1.06		450	530	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Lead	2.26E+01		1.09		450	530	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Lead	2.67E+01		1.7		450	530	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Lead	2.54E+01		1.77		450	530	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Lead	5.12E+01	J	0.56		450	530	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Lead	2.14E+01	J	1.64		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Lead	2.70E+01		1.24		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Lead	3.10E+01		1.09		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Lead	2.60E+01		1.35		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Lead	2.80E+01		1.37		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Lead	2.20E+01		1.35		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Lead	3.80E+01		1.92		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Lead	2.20E+01		2.52		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Lead	2.50E+01		0.945		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Lead	3.00E+01		1.26		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Lead	3.80E+01		2.65		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Lead	6.10E+01		0.79		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Lead	7.00E+01	J	1.59		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Lead	1.70E+01		1.36		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Lead	4.20E+01		2.23		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Lead	2.60E+01		2.14		450	530	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Lead	2.64E+01		2.39		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Lead	3.30E+01		2.09		450	530	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Lead	7.00E+01		2.89		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Lead	1.80E+01		2.26		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Lead	1.50E+01		2.61		450	530	mg/kg dw	<1	<1

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LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Lead	2.60E+01	1.59		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Lead	2.80E+01	1.96		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Lead	2.40E+01	2.35		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Lead	2.40E+01	2.81		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Lead	2.00E+01	3.55		450	530	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Lead	7.20E+01 J	4.53		450	530	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Manganese	1.44E+02	0.95						
EPA SI	DR193	8/13/1998	Manganese	1.74E+02	1.21						
EPA SI	DR232	8/13/1998	Manganese	2.19E+02	1.37						
EPA SI	DR221	8/13/1998	Manganese	2.25E+02	1.57						
EPA SI	DR190	8/13/1998	Manganese	2.19E+02	1.9						
EPA SI	DR233	8/19/1998	Manganese	2.78E+02	2.19						
EPA SI	DR196	8/20/1998	Manganese	2.54E+02	1.17						
EPA SI	DR224	8/20/1998	Manganese	1.81E+02	1.17						
EPA SI	DR197	8/20/1998	Manganese	2.99E+02	1.3						
EPA SI	DR195	8/20/1998	Manganese	2.47E+02	1.37						
EPA SI	DR199	8/20/1998	Manganese	2.25E+02	1.45						
EPA SI	DR200	8/20/1998	Manganese	2.64E+02	1.73						
EPA SI	DR225	8/20/1998	Manganese	2.28E+02	1.73						
EPA SI	DR223	8/20/1998	Manganese	2.89E+02	2.09						
EPA SI	DR194	8/20/1998	Manganese	3.40E+02	3.06						
EPA SI	DR203	8/27/1998	Manganese	2.53E+02	1.06						
EPA SI	DR204	8/27/1998	Manganese	2.68E+02	1.09						
EPA SI	DR201	8/27/1998	Manganese	3.03E+02	1.7						
EPA SI	DR226	8/27/1998	Manganese	2.05E+02	1.77						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Mercury	6.50E+00	4.53		0.41	0.59	mg/kg dw	16	11
KC WQA	WQA8AVE	3/6/1997	Mercury	1.70E-01	1.93		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Mercury	1.30E-01	1.94		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Mercury	1.10E-01	2.03		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Mercury	8.00E-02	1.58		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Mercury	1.50E-01	1.87		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Mercury	8.00E-02	1.67		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Mercury	8.00E-02	1.77		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Mercury	8.00E-02	1.6		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Mercury	8.00E-02	1.79		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Mercury	1.10E-01	1.67		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Mercury	1.00E-01	1.73		0.41	0.59	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Mercury	3.60E-01	1.77		0.41	0.59	mg/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQASOPK	6/3/1997	Mercury	1.70E-01	2.11		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Mercury	5.00E-02	0.95		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Mercury	7.00E-02	1.21		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Mercury	7.00E-02	1.37		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Mercury	1.10E-01	1.57		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Mercury	1.90E-01	1.9		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Mercury	2.60E-01	2.19		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Mercury	8.00E-02	1.17		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Mercury	1.70E-01	1.17		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Mercury	8.00E-02	1.3		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Mercury	9.00E-02	1.37		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Mercury	1.20E-01	1.45		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Mercury	1.30E-01	1.73		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Mercury	1.50E-01	1.73		0.41	0.59	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Mercury	1.20E-01	2.09		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Mercury	1.70E-01	3.06		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Mercury	6.00E-02	1.06		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Mercury	2.30E-01	1.09		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Mercury	8.00E-02	1.7		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Mercury	3.20E-01	1.77		0.41	0.59	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Mercury	7.60E-02	0.56		0.41	0.59	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Mercury	6.00E-02	1.64		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Mercury	9.00E-02	1.24		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Mercury	1.00E-01	1.37		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Mercury	7.00E-02	1.92		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Mercury	1.10E-01	2.52		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Mercury	2.60E-01	2.65		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Mercury	8.00E-02	1.36		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Mercury	1.70E-01	2.23		0.41	0.59	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Mercury	2.51E-01 J	2.39		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Mercury	1.60E-01	2.09		0.41	0.59	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Mercury	2.80E-01	2.89		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Mercury	9.00E-02	2.26		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Mercury	8.00E-02	2.61		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Mercury	1.00E-01	1.59		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Mercury	5.00E-02	1.96		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Mercury	9.00E-02	2.35		0.41	0.59	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Mercury	1.30E-01	2.81		0.41	0.59	mg/kg dw	<1	<1

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Mercury	1.20E-01		3.55		0.41	0.59	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Methoxychlor	2.00E-03		1.17						
EPA SI	DR224	8/20/1998	Methyl ethyl ketone	5.30E-03		1.17						
KC WQA	WQA8AVE	3/6/1997	Methylmercury	8.80E-04		1.93						
KC WQA	WQA8AVE	3/12/1997	Methylmercury	8.70E-04		1.94						
KC WQA	WQA8AVE	3/27/1997	Methylmercury	7.30E-04		2.03						
KC WQA	WQA8AVE	4/3/1997	Methylmercury	7.50E-04		1.58						
KC WQA	WQA8AVE	4/8/1997	Methylmercury	9.10E-04		1.87						
KC WQA	WQA8AVE	4/17/1997	Methylmercury	9.10E-04		1.67						
KC WQA	WQA8AVE	4/24/1997	Methylmercury	3.50E-04		1.77						
KC WQA	WQA8AVE	5/1/1997	Methylmercury	8.20E-04		1.6						
KC WQA	WQA8AVE	5/8/1997	Methylmercury	7.30E-04		1.79						
KC WQA	WQASOPK	5/15/1997	Methylmercury	5.10E-04		1.67						
KC WQA	WQASOPK	5/20/1997	Methylmercury	5.20E-04		1.73						
KC WQA	WQASOPK	5/28/1997	Methylmercury	5.50E-04		1.77						
KC WQA	WQASOPK	6/3/1997	Methylmercury	6.60E-04		2.11						
LDWRI-Benthic	C9	8/25/2004	Molybdenum	4.86E-01	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Molybdenum	7.49E-01		1.64						
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Molybdenum	1.50E+00		1.24						
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Molybdenum	9.00E-01		1.09						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Molybdenum	1.10E+00		1.35						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Molybdenum	1.10E+00		1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Molybdenum	1.30E+00		1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Molybdenum	1.40E+00		1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Molybdenum	1.60E+00		2.52						
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Molybdenum	1.30E+00		0.945						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Molybdenum	1.40E+00		1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Molybdenum	1.90E+00		2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Molybdenum	1.00E+00		0.79						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Molybdenum	4.00E+00		1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Molybdenum	1.20E+00		1.36						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Molybdenum	3.00E+00		2.23						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Molybdenum	2.00E+00		2.14						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Molybdenum	7.00E-01		2.09						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Molybdenum	2.10E+00		2.89						
EPA SI	DR232	8/13/1998	Monobutyltin as ion	5.00E-03	J	1.37						
EPA SI	DR221	8/13/1998	Monobutyltin as ion	9.00E-03	J	1.57						
EPA SI	DR199	8/20/1998	Monobutyltin as ion	1.00E-02	J	1.45						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR194	8/20/1998	Monobutyltin as ion	1.00E-02	J	3.06						
EPA SI	DR203	8/27/1998	Monobutyltin as ion	1.40E-02	J	1.06						
LDWRI-Benthic	C9	8/25/2004	Monobutyltin as ion	6.00E-04	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Monobutyltin as ion	2.50E-03	J	1.64						
Ecology SPI	TRI-095T	8/11/2006	Monobutyltin as ion	7.50E-03	J	2.39						
EPA SI	DR221	8/13/1998	Naphthalene	2.00E-02		1.57	1.30E+00	99	170	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Naphthalene	4.10E-03	J	0.56	7.30E-01	99	170	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Naphthalene	5.50E-03		1.64	3.40E-01	99	170	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Naphthalene	4.40E-01		2.65	1.70E+01	99	170	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Naphthalene	4.10E-02	J	2.23	1.80E+00	99	170	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Naphthalene	5.20E-02	J	2.09	2.50E+00	99	170	mg/kg OC	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Naphthalene	1.00E+00		1.56	6.40E+01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Naphthalene	1.70E-02	J	2.26	7.50E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Naphthalene	1.10E-02	J	2.61	4.20E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Naphthalene	2.20E-02		1.59	1.40E+00	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Naphthalene	1.80E-02	J	1.96	9.20E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Naphthalene	1.50E-02	J	2.35	6.40E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Naphthalene	1.30E-02	J	2.81	4.60E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Naphthalene	1.20E-02	J	3.55	3.40E-01	99	170	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Naphthalene	4.80E-02		4.53						
KC WQA	WQA8AVE	3/6/1997	Nickel	2.34E+01		1.93		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Nickel	2.23E+01		1.94		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Nickel	2.31E+01		2.03		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Nickel	2.01E+01		1.58		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Nickel	2.33E+01		1.87		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Nickel	2.32E+01		1.67		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/24/1997	Nickel	2.33E+01		1.77		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Nickel	2.11E+01		1.6		140	370	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Nickel	2.18E+01		1.79		140	370	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Nickel	1.81E+01		1.67		140	370	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Nickel	1.77E+01		1.73		140	370	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Nickel	1.94E+01		1.77		140	370	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Nickel	2.00E+01		2.11		140	370	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Nickel	1.26E+01		0.95		140	370	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Nickel	1.35E+01		1.21		140	370	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Nickel	1.41E+01		1.37		140	370	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Nickel	1.78E+01		1.57		140	370	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Nickel	1.94E+01		1.9		140	370	mg/kg dw	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR233	8/19/1998	Nickel	1.89E+01	2.19		140	370	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Nickel	1.21E+01	1.17		140	370	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Nickel	1.27E+01	1.17		140	370	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Nickel	1.42E+01	1.3		140	370	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Nickel	1.33E+01	1.37		140	370	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Nickel	1.53E+01	1.45		140	370	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Nickel	1.66E+01	1.73		140	370	mg/kg dw	<1	<1
EPA SI	DR223	8/20/1998	Nickel	2.02E+01	2.09		140	370	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Nickel	1.98E+01	3.06		140	370	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Nickel	1.39E+01	1.06		140	370	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Nickel	1.42E+01	1.09		140	370	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Nickel	1.69E+01	1.7		140	370	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Nickel	1.63E+01	1.77		140	370	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Nickel	1.13E+01	0.56		140	370	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Nickel	1.17E+01	1.64		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Nickel	1.30E+01	1.24		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Nickel	9.00E+00	1.09		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Nickel	1.40E+01	1.35		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Nickel	1.20E+01	1.37		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Nickel	1.30E+01	1.35		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Nickel	2.20E+01	1.92		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Nickel	1.60E+01	2.52		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Nickel	9.00E+00	0.945		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Nickel	1.50E+01	1.26		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Nickel	1.80E+01	2.65		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Nickel	1.00E+01	0.79		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Nickel	2.40E+01	1.59		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Nickel	1.30E+01	1.36		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Nickel	2.20E+01	2.23		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Nickel	1.80E+01	2.14		140	370	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Nickel	2.68E+01	2.39		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Nickel	2.20E+01	2.09		140	370	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Nickel	3.50E+01	2.89		140	370	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Nickel	1.81E+01	1.73						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	n-Nitrosodiphenylamine	6.60E-03	2.23	3.00E-01	11	11	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	OCDD	1.30E-03	1.57						
EPA SI	DR224	8/20/1998	OCDD	6.00E-04	1.17						
EPA SI	DR203	8/27/1998	OCDD	4.20E-04	1.06						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Dioxin Sampling	LDW-SS530	12/15/2009	OCDD	9.59E-03		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDD	6.26E-04		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDD (TEQ ND=0)	1.88E-07		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDD (TEQ ND=1/2 DL)	1.88E-07		2.61						
EPA SI	DR221	8/13/1998	OCDF	5.50E-05		1.57						
EPA SI	DR224	8/20/1998	OCDF	3.90E-05		1.17						
EPA SI	DR203	8/27/1998	OCDF	2.20E-05		1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	OCDF	3.03E-04		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDF	4.54E-05		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDF (TEQ ND=0)	1.36E-08		2.61						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	OCDF (TEQ ND=1/2 DL)	1.36E-08		2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	PCBs (total calc'd)	8.60E-01		1.56	5.50E+01	12	65	mg/kg OC	4.6	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	PCBs (total calc'd)	1.20E+00		2.61	4.60E+01	12	65	mg/kg OC	3.8	<1
EPA SI	DR201	8/27/1998	PCBs (total calc'd)	6.55E-01		1.7	3.85E+01	12	65	mg/kg OC	3.2	<1
NOAA SiteChar	CH0019	10/20/1997	PCBs (total calc'd)	4.30E-01		1.5	2.90E+01	12	65	mg/kg OC	2.4	<1
KC WQA	WQASOPK	5/15/1997	PCBs (total calc'd)	3.81E-01		1.67	2.28E+01	12	65	mg/kg OC	1.9	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	PCBs (total calc'd)	2.10E-01		0.945	2.20E+01	12	65	mg/kg OC	1.8	<1
NOAA SiteChar	WIT270	11/4/1997	PCBs (total calc'd)	1.00E-01		0.52	2.00E+01	12	65	mg/kg OC	1.7	<1
Plant 2 RFI-2b	SD-DUW75	4/2/1996	PCBs (total calc'd)	2.70E-01		1.7	1.60E+01	12	65	mg/kg OC	1.3	<1
KC WQA	WQASOPK	5/28/1997	PCBs (total calc'd)	2.49E-01		1.77	1.41E+01	12	65	mg/kg OC	1.2	<1
EPA SI	DR222	8/13/1998	PCBs (total calc'd)	1.32E-01		0.95	1.40E+01	12	65	mg/kg OC	1.2	<1
KC WQA	WQASOPK	5/20/1997	PCBs (total calc'd)	2.25E-01		1.73	1.30E+01	12	65	mg/kg OC	1.1	<1
NOAA SiteChar	WIT276	10/3/1997	PCBs (total calc'd)	1.20E-01		0.91	1.30E+01	12	65	mg/kg OC	1.1	<1
NOAA SiteChar	WST334	10/24/1997	PCBs (total calc'd)	1.20E-01		0.95	1.30E+01	12	65	mg/kg OC	1.1	<1
Plant 2 RFI-2b	SD-DUW74	4/2/1996	PCBs (total calc'd)	1.30E-01		1.2	1.10E+01	12	65	mg/kg OC	<1	<1
Plant 2 RFI-2b	SD-DUW76	4/2/1996	PCBs (total calc'd)	1.40E-01	J	2	7.00E+00	12	65	mg/kg OC	<1	<1
Plant 2 RFI-2b	SD-DUW88	4/2/1996	PCBs (total calc'd)	1.32E-01	J	2	6.60E+00	12	65	mg/kg OC	<1	<1
Plant 2 RFI-2b	SD-DUW77	4/3/1996	PCBs (total calc'd)	1.62E-01		1.6	1.00E+01	12	65	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/6/1997	PCBs (total calc'd)	4.00E-02		1.93	2.07E+00	12	65	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	PCBs (total calc'd)	9.60E-02		1.94	4.95E+00	12	65	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	PCBs (total calc'd)	4.60E-02		1.58	2.91E+00	12	65	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	PCBs (total calc'd)	4.60E-02		1.67	2.75E+00	12	65	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	PCBs (total calc'd)	2.40E-01		2.11	1.14E+01	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT271	10/3/1997	PCBs (total calc'd)	2.40E-02	J	0.22		130	1000	ug/kg dw	<1	<1
NOAA SiteChar	WST329	10/3/1997	PCBs (total calc'd)	8.40E-02	J	1.36	6.20E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST332	10/3/1997	PCBs (total calc'd)	1.10E-01		1.46	7.50E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST328	10/3/1997	PCBs (total calc'd)	1.10E-01		1.52	7.20E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST326	10/3/1997	PCBs (total calc'd)	9.80E-02	J	1.59	6.20E+00	12	65	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
NOAA SiteChar	WST325	10/3/1997	PCBs (total calc'd)	1.10E-01		1.85	5.90E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST330	10/3/1997	PCBs (total calc'd)	1.60E-01		1.93	8.30E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST331	10/3/1997	PCBs (total calc'd)	1.60E-01		2.11	7.60E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	CH0013	10/15/1997	PCBs (total calc'd)	1.20E-01		1.56	7.70E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	CH0022	10/15/1997	PCBs (total calc'd)	7.70E-02	J	1.79	4.30E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT279	10/17/1997	PCBs (total calc'd)	5.80E-02	J	1.27	4.60E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST337	10/22/1997	PCBs (total calc'd)	6.30E-02	J	1.69	3.70E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST338	10/22/1997	PCBs (total calc'd)	3.50E-02	J	1.9	1.80E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST335	10/24/1997	PCBs (total calc'd)	8.30E-02	J	1.94	4.30E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT274	11/4/1997	PCBs (total calc'd)	6.40E-02	J	0.7	9.10E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT269	11/4/1997	PCBs (total calc'd)	3.70E-02	J	0.8	4.60E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT272	11/4/1997	PCBs (total calc'd)	5.70E-02	J	1.25	4.60E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT275	11/12/1997	PCBs (total calc'd)	2.00E-01		1.4	1.00E+01	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST327	11/12/1997	PCBs (total calc'd)	1.20E-01		1.64	7.32E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WIT273	11/13/1997	PCBs (total calc'd)	7.00E-02	J	1.15	6.00E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST333	11/13/1997	PCBs (total calc'd)	6.00E-02	J	1.59	4.00E+00	12	65	mg/kg OC	<1	<1
NOAA SiteChar	WST340	11/13/1997	PCBs (total calc'd)	8.30E-02	J	2.1	4.00E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	PCBs (total calc'd)	1.18E-01		1.21	9.75E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	PCBs (total calc'd)	8.10E-02		1.37	5.90E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	PCBs (total calc'd)	6.40E-02	J	1.57	4.10E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	PCBs (total calc'd)	5.60E-02	J	1.9	2.90E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	PCBs (total calc'd)	1.49E-01	J	2.19	6.80E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	PCBs (total calc'd)	1.15E-01		1.17	9.83E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	PCBs (total calc'd)	5.70E-02		1.17	4.90E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	PCBs (total calc'd)	9.80E-02		1.3	7.50E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	PCBs (total calc'd)	6.40E-02	J	1.37	4.70E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	PCBs (total calc'd)	6.90E-02		1.45	4.80E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	PCBs (total calc'd)	8.30E-02		1.73	4.80E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	PCBs (total calc'd)	1.53E-01		2.09	7.32E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	PCBs (total calc'd)	1.55E-01		3.06	5.07E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	PCBs (total calc'd)	1.01E-01		1.06	9.53E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	PCBs (total calc'd)	4.00E-02		1.09	3.70E+00	12	65	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	PCBs (total calc'd)	1.13E-01		1.77	6.38E+00	12	65	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	PCBs (total calc'd)	3.50E-02		0.56	6.30E+00	12	65	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	PCBs (total calc'd)	6.10E-02		1.64	3.70E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	PCBs (total calc'd)	8.10E-02		1.35	6.00E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	PCBs (total calc'd)	7.40E-02		1.37	5.40E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	PCBs (total calc'd)	7.50E-02		1.35	5.60E+00	12	65	mg/kg OC	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	PCBs (total calc'd)	1.70E-01	1.92	8.90E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	PCBs (total calc'd)	8.00E-02	2.52	3.20E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	PCBs (total calc'd)	4.60E-02	1.26	3.70E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	PCBs (total calc'd)	1.98E-01	2.65	7.47E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	PCBs (total calc'd)	7.20E-02	0.79	9.10E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	PCBs (total calc'd)	5.40E-02	1.59	3.40E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	PCBs (total calc'd)	7.20E-02 J	1.36	5.30E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	PCBs (total calc'd)	1.30E-01	2.23	5.83E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	PCBs (total calc'd)	1.04E-01	2.14	4.86E+00	12	65	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	PCBs (total calc'd)	9.70E-02 J	2.39	4.10E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	PCBs (total calc'd)	1.90E-01	2.09	9.10E+00	12	65	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	PCBs (total calc'd)	3.00E-01	2.89	1.00E+01	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	PCBs (total calc'd)	1.40E-01	2.26	6.20E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	PCBs (total calc'd)	9.20E-02	1.59	5.80E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	PCBs (total calc'd)	4.80E-02	1.96	2.40E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	PCBs (total calc'd)	1.00E-01	2.35	4.30E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	PCBs (total calc'd)	6.40E-02	2.81	2.30E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	PCBs (total calc'd)	2.00E-01	3.55	5.60E+00	12	65	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	PCBs (total calc'd)	2.00E-01	4.53						
NOAA SiteChar	WIT276	10/3/1997	PCTs (total)	1.00E-02	0.91						
NOAA SiteChar	WST329	10/3/1997	PCTs (total)	1.50E-02	1.36						
NOAA SiteChar	WST332	10/3/1997	PCTs (total)	1.10E-02	1.46						
NOAA SiteChar	WST328	10/3/1997	PCTs (total)	5.20E-02	1.52						
NOAA SiteChar	WST326	10/3/1997	PCTs (total)	1.20E-02	1.59						
NOAA SiteChar	WST325	10/3/1997	PCTs (total)	1.30E-02	1.85						
NOAA SiteChar	WST330	10/3/1997	PCTs (total)	1.70E-02	1.93						
NOAA SiteChar	WST331	10/3/1997	PCTs (total)	2.10E-02	2.11						
NOAA SiteChar	CH0013	10/15/1997	PCTs (total)	1.50E-02	1.56						
NOAA SiteChar	CH0022	10/15/1997	PCTs (total)	1.50E-02	1.79						
NOAA SiteChar	WIT279	10/17/1997	PCTs (total)	2.80E-02	1.27						
NOAA SiteChar	CH0019	10/20/1997	PCTs (total)	1.80E-02	1.5						
NOAA SiteChar	WST337	10/22/1997	PCTs (total)	6.30E-03 J	1.69						
NOAA SiteChar	WST338	10/22/1997	PCTs (total)	6.10E-03 J	1.9						
NOAA SiteChar	WST334	10/24/1997	PCTs (total)	1.50E-02	0.95						
NOAA SiteChar	WST335	10/24/1997	PCTs (total)	1.70E-02	1.94						
NOAA SiteChar	WIT270	11/4/1997	PCTs (total)	1.80E-02	0.52						
NOAA SiteChar	WIT274	11/4/1997	PCTs (total)	7.60E-03 J	0.7						
NOAA SiteChar	WIT269	11/4/1997	PCTs (total)	7.10E-03 J	0.8						

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
NOAA SiteChar	WIT272	11/4/1997	PCTs (total)	8.80E-03	1.25						
NOAA SiteChar	WIT275	11/12/1997	PCTs (total)	2.10E-02	1.4						
NOAA SiteChar	WST327	11/12/1997	PCTs (total)	1.80E-02	1.64	1.10E+00					
NOAA SiteChar	WIT273	11/13/1997	PCTs (total)	3.00E-02	1.15						
NOAA SiteChar	WST333	11/13/1997	PCTs (total)	7.20E-03 J	1.59						
NOAA SiteChar	WST340	11/13/1997	PCTs (total)	3.70E-02	2.1						
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Pentachlorophenol	1.70E-02 J	4.53		360	690	ug/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Perylene	2.10E-02 J	1.64						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Phenanthrene	7.10E+00	1.56	4.60E+02	100	480	mg/kg OC	4.6	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Phenanthrene	2.20E+01	2.65	8.30E+02	100	480	mg/kg OC	8.3	1.7
KC WQA	WQA8AVE	3/6/1997	Phenanthrene	2.30E-01 J	1.93	1.19E+01	100	480	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Phenanthrene	3.80E-01 J	1.94	1.96E+01	100	480	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Phenanthrene	1.50E-01 J	1.58	9.49E+00	100	480	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Phenanthrene	4.00E-01 J	1.67	2.40E+01	100	480	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Phenanthrene	2.00E-01 J	1.6	1.25E+01	100	480	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Phenanthrene	9.30E-02 J	1.67	5.57E+00	100	480	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Phenanthrene	1.10E-01 J	1.73	6.36E+00	100	480	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Phenanthrene	1.30E-01 J	1.77	7.34E+00	100	480	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Phenanthrene	2.00E-01 J	2.11	9.48E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Phenanthrene	9.00E-02	0.95	9.50E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Phenanthrene	1.30E-01	1.21	1.10E+01	100	480	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Phenanthrene	6.40E-01	1.37	4.70E+01	100	480	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Phenanthrene	7.90E-01	1.57	5.00E+01	100	480	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Phenanthrene	5.70E-01	1.9	3.00E+01	100	480	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Phenanthrene	1.20E-01	2.19	5.50E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Phenanthrene	1.10E-01	1.17	9.40E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Phenanthrene	5.00E-02	1.17	4.30E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Phenanthrene	5.00E-02	1.3	3.80E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Phenanthrene	9.00E-02	1.37	6.60E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Phenanthrene	9.00E-02	1.45	6.20E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Phenanthrene	9.00E-02	1.73	5.20E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Phenanthrene	1.30E-01	1.73	7.51E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Phenanthrene	1.40E-01	2.09	6.70E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Phenanthrene	2.80E-01	3.06	9.20E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Phenanthrene	6.00E-02	1.06	5.70E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Phenanthrene	8.00E-02	1.09	7.30E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Phenanthrene	6.00E-02	1.7	3.50E+00	100	480	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Phenanthrene	9.00E-02	1.77	5.10E+00	100	480	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-Benthic	C9	8/25/2004	Phenanthrene	4.80E-02	0.56	8.60E+00	100	480	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Phenanthrene	4.10E-02 J	1.64	2.50E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Phenanthrene	1.40E-01	1.24	1.10E+01	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Phenanthrene	4.10E-02 J	1.09	3.80E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Phenanthrene	4.20E-02	1.35	3.10E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Phenanthrene	6.40E-02 J	1.37	4.70E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Phenanthrene	4.40E-02 J	1.35	3.30E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Phenanthrene	7.00E-01	1.92	3.60E+01	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Phenanthrene	3.90E-02	2.52	1.50E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Phenanthrene	7.40E-02	1.26	5.90E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Phenanthrene	1.20E-01	1.59	7.50E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Phenanthrene	6.40E-02	1.36	4.70E+00	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Phenanthrene	6.50E-01	2.23	2.90E+01	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Phenanthrene	5.80E-02 J	2.14	2.70E+00	100	480	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Phenanthrene	2.76E-01	2.39	1.15E+01	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Phenanthrene	4.80E-01	2.09	2.30E+01	100	480	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Phenanthrene	2.80E+00	2.89	9.70E+01	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Phenanthrene	5.40E-02	2.26	2.40E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Phenanthrene	9.60E-02	2.61	3.70E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Phenanthrene	7.40E-02	1.59	4.70E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Phenanthrene	3.00E-02	1.96	1.50E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Phenanthrene	7.80E-02	2.35	3.30E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Phenanthrene	7.00E-02	2.81	2.50E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Phenanthrene	1.10E-01	3.55	3.10E+00	100	480	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Phenanthrene	3.50E-01	4.53						
EPA SI	DR203	8/27/1998	Phenol	7.10E-01	1.06		420	1200	ug/kg dw	1.7	<1
EPA SI	DR222	8/13/1998	Phenol	2.00E-02	0.95		420	1200	ug/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Phenol	2.00E-02	1.21		420	1200	ug/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Phenol	9.00E-02	1.57		420	1200	ug/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Phenol	3.00E-02	2.19		420	1200	ug/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Phenol	2.00E-02	1.17		420	1200	ug/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Phenol	2.00E-02	1.3		420	1200	ug/kg dw	<1	<1
EPA SI	DR223	8/20/1998	Phenol	2.90E-01	2.09		420	1200	ug/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Phenol	3.00E-02	3.06		420	1200	ug/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Phenol	6.00E-02	1.7		420	1200	ug/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Phenol	8.70E-02	0.56		420	1200	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Phenol	2.10E-02	1.26		420	1200	ug/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Phenol	1.37E-01	2.39		420	1200	ug/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Phenol	3.40E-02		2.26	1.50E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Phenol	3.80E-02		2.61	1.50E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Phenol	3.30E-02		1.59	2.10E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Phenol	1.90E-02	J	1.96	9.70E-01	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Phenol	3.60E-02		2.35	1.50E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Phenol	8.70E-02		2.81	3.10E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Phenol	4.60E-02		3.55	1.30E+00	420	1200	ug/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Phenol	1.20E-01		4.53		420	1200	ug/kg dw	<1	<1
KC WQA	WQA8AVE	3/6/1997	Pyrene	2.90E-01	J	1.93	1.50E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Pyrene	3.60E-01	J	1.94	1.86E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Pyrene	2.20E-01	J	1.58	1.39E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Pyrene	4.00E-01	J	1.67	2.40E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Pyrene	2.80E-01	J	1.6	1.75E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Pyrene	3.40E-01	J	1.67	2.04E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Pyrene	3.00E-01	J	1.73	1.73E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Pyrene	3.20E-01	J	1.77	1.81E+01	1000	1400	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Pyrene	4.40E-01	J	2.11	2.09E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Pyrene	2.40E-01		0.95	2.50E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Pyrene	2.80E-01		1.21	2.30E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Pyrene	5.50E-01		1.37	4.00E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Pyrene	2.70E+00		1.57	1.70E+02	1000	1400	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Pyrene	2.10E+00		1.9	1.10E+02	1000	1400	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Pyrene	2.90E-01		2.19	1.30E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Pyrene	2.20E-01		1.17	1.90E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Pyrene	1.30E-01		1.17	1.10E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Pyrene	1.20E-01		1.3	9.20E+00	1000	1400	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Pyrene	1.70E-01		1.37	1.20E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Pyrene	2.00E-01		1.45	1.40E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Pyrene	1.90E-01		1.73	1.10E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Pyrene	3.50E-01		1.73	2.02E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Pyrene	3.30E-01		2.09	1.60E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Pyrene	5.40E-01		3.06	1.80E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Pyrene	1.40E-01		1.06	1.30E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Pyrene	1.90E-01		1.09	1.70E+01	1000	1400	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Pyrene	1.30E-01		1.7	7.60E+00	1000	1400	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Pyrene	2.50E-01		1.77	1.40E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Pyrene	8.50E-02		0.56	1.50E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Pyrene	9.10E-02		1.64	5.50E+00	1000	1400	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Pyrene	2.00E-01	1.24	1.60E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Pyrene	6.50E-02	1.09	6.00E+00	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Pyrene	7.30E-02	1.35	5.40E+00	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Pyrene	1.80E-01	1.37	1.30E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Pyrene	6.90E-02	1.35	5.10E+00	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Pyrene	1.10E+00	1.92	5.70E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Pyrene	1.10E-01	2.52	4.40E+00	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Pyrene	2.10E-01	1.26	1.70E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Pyrene	1.20E+01	2.65	4.50E+02	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Pyrene	2.60E-02	0.79	3.30E+00	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Pyrene	2.00E-01	1.59	1.30E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Pyrene	1.50E-01	1.36	1.10E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Pyrene	2.50E+00	2.23	1.10E+02	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Pyrene	1.60E-01	2.14	7.50E+00	1000	1400	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Pyrene	6.28E-01	2.39	2.63E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Pyrene	6.40E-01	2.09	3.10E+01	1000	1400	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Pyrene	4.00E+00	2.89	1.40E+02	1000	1400	mg/kg OC	<1	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Pyrene	7.40E+00	1.56	4.70E+02	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Pyrene	1.00E-01	2.26	4.40E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Pyrene	1.10E-01	2.61	4.20E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Pyrene	1.80E-01	1.59	1.10E+01	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Pyrene	8.60E-02	1.96	4.40E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Pyrene	1.30E-01	2.35	5.50E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Pyrene	1.10E-01	2.81	3.90E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Pyrene	1.40E-01	3.55	3.90E+00	1000	1400	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Pyrene	8.20E-01	4.53						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
Ecology SPI	TRI-095T	8/11/2006	Retene	5.70E-02	2.39						
EPA SI	DR222	8/13/1998	Selenium	4.00E+00	0.95						
EPA SI	DR193	8/13/1998	Selenium	4.00E+00	1.21						
EPA SI	DR232	8/13/1998	Selenium	5.00E+00	1.37						
EPA SI	DR221	8/13/1998	Selenium	5.00E+00	1.57						
EPA SI	DR190	8/13/1998	Selenium	7.00E+00	1.9						
EPA SI	DR233	8/19/1998	Selenium	5.00E+00 J	2.19						
EPA SI	DR196	8/20/1998	Selenium	4.00E+00	1.17						
EPA SI	DR224	8/20/1998	Selenium	4.00E+00	1.17						
EPA SI	DR197	8/20/1998	Selenium	4.00E+00	1.3						
EPA SI	DR195	8/20/1998	Selenium	4.00E+00	1.37						
EPA SI	DR199	8/20/1998	Selenium	5.00E+00	1.45						
EPA SI	DR200	8/20/1998	Selenium	5.00E+00	1.73						
EPA SI	DR225	8/20/1998	Selenium	5.00E+00	1.73						
EPA SI	DR223	8/20/1998	Selenium	5.00E+00	2.09						
EPA SI	DR194	8/20/1998	Selenium	6.00E+00	3.06						
EPA SI	DR203	8/27/1998	Selenium	1.00E+01	1.06						
EPA SI	DR204	8/27/1998	Selenium	1.10E+01 J	1.09						
EPA SI	DR201	8/27/1998	Selenium	1.20E+01	1.7						
EPA SI	DR226	8/27/1998	Selenium	1.10E+01	1.77						
LDWRI-Benthic	C9	8/25/2004	Selenium	3.00E-01 J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Selenium	6.00E-01	1.64						
EPA SI	DR222	8/13/1998	Silver	1.40E-01	0.95		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Silver	2.20E-01	1.21		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Silver	2.00E-01	1.37		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Silver	1.60E-01	1.57		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Silver	2.10E-01	1.9		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Silver	2.60E-01	2.19		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Silver	1.50E-01	1.17		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Silver	2.00E-01	1.17		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Silver	1.40E-01	1.3		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Silver	1.70E-01	1.37		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Silver	1.80E-01	1.45		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Silver	1.70E-01	1.73		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Silver	2.90E-01	1.73		6.1	6.1	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Silver	2.50E-01	2.09		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Silver	3.00E-01	3.06		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Silver	1.10E-01	1.06		6.1	6.1	mg/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR204	8/27/1998	Silver	1.20E-01		1.09		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Silver	1.30E-01		1.7		6.1	6.1	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Silver	2.00E-01		1.77		6.1	6.1	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Silver	8.40E-02		0.56		6.1	6.1	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Silver	1.39E-01		1.64		6.1	6.1	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Silver	1.70E-01		2.39		6.1	6.1	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Tetrachlorometaxylene	6.40E-03		2.26	2.80E-01					
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Tetrachlorometaxylene	8.50E-03		2.61	3.30E-01					
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Tetrachlorometaxylene	4.40E-03		1.59	2.80E-01					
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Tetrachlorometaxylene	4.80E-03		1.96	2.40E-01					
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Tetrachlorometaxylene	5.80E-03		2.35	2.50E-01					
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Tetrachlorometaxylene	4.80E-03		2.81	1.70E-01					
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Tetrachlorometaxylene	3.40E-03		3.55	9.60E-02					
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Tetrachlorometaxylene	5.70E-03		4.53						
EPA SI	DR222	8/13/1998	Thallium	5.00E-02		0.95						
EPA SI	DR193	8/13/1998	Thallium	7.00E-02		1.21						
EPA SI	DR232	8/13/1998	Thallium	6.00E-02		1.37						
EPA SI	DR221	8/13/1998	Thallium	9.00E-02		1.57						
EPA SI	DR190	8/13/1998	Thallium	9.00E-02		1.9						
EPA SI	DR233	8/19/1998	Thallium	7.00E-02	J	2.19						
EPA SI	DR196	8/20/1998	Thallium	6.00E-02		1.17						
EPA SI	DR224	8/20/1998	Thallium	8.00E-02		1.17						
EPA SI	DR197	8/20/1998	Thallium	5.00E-02		1.3						
EPA SI	DR195	8/20/1998	Thallium	7.00E-02		1.37						
EPA SI	DR199	8/20/1998	Thallium	7.00E-02		1.45						
EPA SI	DR200	8/20/1998	Thallium	6.00E-02		1.73						
EPA SI	DR225	8/20/1998	Thallium	9.00E-02		1.73	5.20E+00					
EPA SI	DR223	8/20/1998	Thallium	1.10E-01		2.09						
EPA SI	DR194	8/20/1998	Thallium	1.20E-01		3.06						
EPA SI	DR203	8/27/1998	Thallium	5.00E-02		1.06						
EPA SI	DR204	8/27/1998	Thallium	3.00E-02		1.09						
EPA SI	DR201	8/27/1998	Thallium	7.00E-02		1.7						
EPA SI	DR226	8/27/1998	Thallium	9.00E-02		1.77						
LDWRI-Benthic	C9	8/25/2004	Thallium	3.70E-02		0.56						
LDWRI-Benthic	B7a	8/30/2004	Thallium	5.70E-02		1.64						
EPA SI	DR222	8/13/1998	Tin	1.00E+00	J	0.95						
EPA SI	DR193	8/13/1998	Tin	3.00E+00	J	1.21						
EPA SI	DR232	8/13/1998	Tin	2.00E+00	J	1.37						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR190	8/13/1998	Tin	3.00E+00	1.9						
EPA SI	DR233	8/19/1998	Tin	3.00E+00	2.19						
EPA SI	DR196	8/20/1998	Tin	3.00E+00	1.17						
EPA SI	DR197	8/20/1998	Tin	4.00E+00	1.3						
EPA SI	DR195	8/20/1998	Tin	3.00E+00	1.37						
EPA SI	DR199	8/20/1998	Tin	4.00E+00	1.45						
EPA SI	DR200	8/20/1998	Tin	4.00E+00	1.73						
EPA SI	DR225	8/20/1998	Tin	4.00E+00	1.73	2.31E+02					
EPA SI	DR223	8/20/1998	Tin	3.00E+00	2.09						
EPA SI	DR194	8/20/1998	Tin	4.00E+00	3.06						
EPA SI	DR204	8/27/1998	Tin	5.00E+00	1.09						
LDWRI-Benthic	C9	8/25/2004	Total chlordane	5.70E-04 JN	0.56		10		ug/kg dw	<1	
LDWRI-Benthic	B7a	8/30/2004	Total chlordane	1.70E-03 JN	1.64		10		ug/kg dw	<1	
LDWRI-Benthic	B7a	8/30/2004	Total DDTs	3.50E-02 JN	1.64		6.9	69	ug/kg dw	5.1	<1
EPA SI	DR224	8/20/1998	Total DDTs	1.00E-03	1.17		6.9	69	ug/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Total DDTs	5.10E-03 JN	0.56		6.9	69	ug/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Total HPAH (calc'd)	4.80E+01 J	2.65	1.80E+03	960	5300	mg/kg OC	1.9	<1
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HPAH (calc'd)	3.45E+01 J	1.56	2.21E+03	960	5300	mg/kg OC	2.3	<1
KC WQA	WQA8AVE	3/6/1997	Total HPAH (calc'd)	1.34E+00 J	1.93	6.93E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Total HPAH (calc'd)	1.66E+00 J	1.94	8.56E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Total HPAH (calc'd)	9.01E-01 J	1.58	5.70E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Total HPAH (calc'd)	2.14E+00 J	1.67	1.28E+02	960	5300	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Total HPAH (calc'd)	1.24E+00 J	1.6	7.72E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Total HPAH (calc'd)	1.77E+00 J	1.67	1.06E+02	960	5300	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Total HPAH (calc'd)	1.31E+00 J	1.73	7.60E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Total HPAH (calc'd)	1.52E+00 J	1.77	8.56E+01	960	5300	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Total HPAH (calc'd)	2.72E+00 J	2.11	1.29E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Total HPAH (calc'd)	9.50E-01	0.95	1.00E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Total HPAH (calc'd)	1.46E+00	1.21	1.21E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Total HPAH (calc'd)	2.26E+00	1.37	1.65E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Total HPAH (calc'd)	1.06E+01	1.57	6.75E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Total HPAH (calc'd)	9.30E+00	1.9	4.90E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Total HPAH (calc'd)	1.75E+00	2.19	7.99E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Total HPAH (calc'd)	1.25E+00	1.17	1.07E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Total HPAH (calc'd)	7.70E-01	1.17	6.60E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Total HPAH (calc'd)	7.30E-01	1.3	5.60E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Total HPAH (calc'd)	1.14E+00	1.37	8.32E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR199	8/20/1998	Total HPAH (calc'd)	1.10E+00	1.45	7.59E+01	960	5300	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR200	8/20/1998	Total HPAH (calc'd)	1.12E+00	1.73	6.47E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Total HPAH (calc'd)	1.51E+00	1.73	8.73E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Total HPAH (calc'd)	1.91E+00	2.09	9.14E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Total HPAH (calc'd)	3.12E+00	3.06	1.02E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Total HPAH (calc'd)	7.80E-01	1.06	7.40E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Total HPAH (calc'd)	1.34E+00	1.09	1.23E+02	960	5300	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Total HPAH (calc'd)	7.30E-01	1.7	4.30E+01	960	5300	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Total HPAH (calc'd)	1.15E+00	1.77	6.50E+01	960	5300	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Total HPAH (calc'd)	5.20E-01	0.56	9.30E+01	960	5300	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Total HPAH (calc'd)	5.10E-01	1.64	3.10E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Total HPAH (calc'd)	7.70E-01 J	1.24	6.20E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Total HPAH (calc'd)	3.05E-01 J	1.09	2.80E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Total HPAH (calc'd)	4.39E-01	1.35	3.25E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Total HPAH (calc'd)	7.90E-01	1.37	5.80E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Total HPAH (calc'd)	3.60E-01 J	1.35	2.70E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Total HPAH (calc'd)	6.80E+00	1.92	3.50E+02	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Total HPAH (calc'd)	6.20E-01	2.52	2.50E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Total HPAH (calc'd)	4.90E-02 J	0.945	5.20E+00	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Total HPAH (calc'd)	1.55E+00	1.26	1.23E+02	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Total HPAH (calc'd)	1.73E-01	0.79	2.19E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Total HPAH (calc'd)	1.43E+00	1.59	8.99E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Total HPAH (calc'd)	8.70E-01 J	1.36	6.40E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Total HPAH (calc'd)	1.05E+01 J	2.23	4.71E+02	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Total HPAH (calc'd)	8.30E-01	2.14	3.90E+01	960	5300	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Total HPAH (calc'd)	2.31E+00 J	2.39	9.67E+01	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Total HPAH (calc'd)	3.40E+00	2.09	1.60E+02	960	5300	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Total HPAH (calc'd)	2.03E+01 J	2.89	7.02E+02	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Total HPAH (calc'd)	5.30E-01	2.26	2.30E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total HPAH (calc'd)	4.90E-01 J	2.61	1.90E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Total HPAH (calc'd)	9.80E-01	1.59	6.20E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Total HPAH (calc'd)	4.30E-01	1.96	2.20E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Total HPAH (calc'd)	6.60E-01 J	2.35	2.80E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Total HPAH (calc'd)	6.40E-01	2.81	2.30E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Total HPAH (calc'd)	7.10E-01 J	3.55	2.00E+01	960	5300	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Total HPAH (calc'd)	3.20E+00	4.53						
EPA SI	DR221	8/13/1998	Total HpCDD	4.40E-04	1.57						
EPA SI	DR224	8/20/1998	Total HpCDD	1.70E-04	1.17						
EPA SI	DR203	8/27/1998	Total HpCDD	1.20E-04	1.06						

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HpCDD	4.51E-03	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total HpCDD	1.90E-04	2.61						
EPA SI	DR221	8/13/1998	Total HpCDF	6.80E-05	1.57						
EPA SI	DR224	8/20/1998	Total HpCDF	5.20E-05	1.17						
EPA SI	DR203	8/27/1998	Total HpCDF	2.80E-05	1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HpCDF	3.14E-04	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total HpCDF	5.24E-05	2.61						
EPA SI	DR221	8/13/1998	Total HxCDD	4.20E-05	1.57						
EPA SI	DR224	8/20/1998	Total HxCDD	1.50E-05	1.17						
EPA SI	DR203	8/27/1998	Total HxCDD	1.40E-05	1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HxCDD	4.63E-04	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total HxCDD	3.04E-05	2.61						
EPA SI	DR221	8/13/1998	Total HxCDF	2.10E-05	1.57						
EPA SI	DR224	8/20/1998	Total HxCDF	1.40E-05	1.17						
EPA SI	DR203	8/27/1998	Total HxCDF	1.10E-05	1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total HxCDF	1.84E-04	1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total HxCDF	2.46E-05	2.61						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total LPAH (calc'd)	1.18E+01	1.56	7.56E+02	370	780	mg/kg OC	2	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Total LPAH (calc'd)	4.40E+01	2.65	1.70E+03	370	780	mg/kg OC	4.6	2.2
KC WQA	WQA8AVE	3/6/1997	Total LPAH (calc'd)	3.64E-01 J	1.93	1.89E+01	370	780	mg/kg OC	<1	<1
KC WQA	WQA8AVE	3/12/1997	Total LPAH (calc'd)	6.43E-01 J	1.94	3.31E+01	370	780	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/3/1997	Total LPAH (calc'd)	1.80E-01 J	1.58	1.14E+01	370	780	mg/kg OC	<1	<1
KC WQA	WQA8AVE	4/17/1997	Total LPAH (calc'd)	5.86E-01 J	1.67	3.51E+01	370	780	mg/kg OC	<1	<1
KC WQA	WQA8AVE	5/1/1997	Total LPAH (calc'd)	2.68E-01 J	1.6	1.68E+01	370	780	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/15/1997	Total LPAH (calc'd)	9.30E-02 J	1.67	5.57E+00	370	780	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/20/1997	Total LPAH (calc'd)	1.10E-01 J	1.73	6.36E+00	370	780	mg/kg OC	<1	<1
KC WQA	WQASOPK	5/28/1997	Total LPAH (calc'd)	1.30E-01 J	1.77	7.34E+00	370	780	mg/kg OC	<1	<1
KC WQA	WQASOPK	6/3/1997	Total LPAH (calc'd)	2.62E-01 J	2.11	1.24E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR222	8/13/1998	Total LPAH (calc'd)	9.00E-02	0.95	9.50E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR193	8/13/1998	Total LPAH (calc'd)	1.80E-01	1.21	1.50E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR232	8/13/1998	Total LPAH (calc'd)	9.20E-01	1.37	6.70E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR221	8/13/1998	Total LPAH (calc'd)	1.17E+00	1.57	7.45E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR190	8/13/1998	Total LPAH (calc'd)	9.10E-01	1.9	4.80E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR233	8/19/1998	Total LPAH (calc'd)	1.50E-01	2.19	6.80E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR196	8/20/1998	Total LPAH (calc'd)	1.30E-01	1.17	1.10E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR224	8/20/1998	Total LPAH (calc'd)	5.00E-02	1.17	4.30E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR197	8/20/1998	Total LPAH (calc'd)	5.00E-02	1.3	3.80E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR195	8/20/1998	Total LPAH (calc'd)	9.00E-02	1.37	6.60E+00	370	780	mg/kg OC	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR199	8/20/1998	Total LPAH (calc'd)	1.10E-01		1.45	7.59E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR200	8/20/1998	Total LPAH (calc'd)	9.00E-02		1.73	5.20E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR225	8/20/1998	Total LPAH (calc'd)	1.60E-01		1.73	9.25E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR223	8/20/1998	Total LPAH (calc'd)	2.00E-01		2.09	9.60E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR194	8/20/1998	Total LPAH (calc'd)	4.60E-01		3.06	1.50E+01	370	780	mg/kg OC	<1	<1
EPA SI	DR203	8/27/1998	Total LPAH (calc'd)	6.00E-02		1.06	5.70E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR204	8/27/1998	Total LPAH (calc'd)	8.00E-02		1.09	7.30E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR201	8/27/1998	Total LPAH (calc'd)	9.00E-02		1.7	5.30E+00	370	780	mg/kg OC	<1	<1
EPA SI	DR226	8/27/1998	Total LPAH (calc'd)	9.00E-02		1.77	5.10E+00	370	780	mg/kg OC	<1	<1
LDWRI-Benthic	C9	8/25/2004	Total LPAH (calc'd)	7.50E-02	J	0.56	1.30E+01	370	780	mg/kg OC	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Total LPAH (calc'd)	7.60E-02	J	1.64	4.60E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Total LPAH (calc'd)	1.40E-01		1.24	1.10E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Total LPAH (calc'd)	4.10E-02	J	1.09	3.80E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Total LPAH (calc'd)	4.20E-02		1.35	3.10E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Total LPAH (calc'd)	6.40E-02	J	1.37	4.70E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Total LPAH (calc'd)	4.40E-02	J	1.35	3.30E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Total LPAH (calc'd)	1.01E+00	J	1.92	5.26E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Total LPAH (calc'd)	3.90E-02		2.52	1.50E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Total LPAH (calc'd)	9.80E-02		1.26	7.80E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Total LPAH (calc'd)	1.90E-01		1.59	1.20E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Total LPAH (calc'd)	6.40E-02		1.36	4.70E+00	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Total LPAH (calc'd)	1.26E+00	J	2.23	5.65E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Total LPAH (calc'd)	5.80E-02	J	2.14	2.70E+00	370	780	mg/kg OC	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Total LPAH (calc'd)	4.25E-01	J	2.39	1.78E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Total LPAH (calc'd)	8.70E-01	J	2.09	4.20E+01	370	780	mg/kg OC	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Total LPAH (calc'd)	4.60E+00	J	2.89	1.60E+02	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Total LPAH (calc'd)	8.70E-02	J	2.26	3.80E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total LPAH (calc'd)	1.80E-01	J	2.61	6.90E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Total LPAH (calc'd)	1.50E-01	J	1.59	9.40E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Total LPAH (calc'd)	4.80E-02	J	1.96	2.40E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Total LPAH (calc'd)	1.40E-01	J	2.35	6.00E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Total LPAH (calc'd)	1.30E-01	J	2.81	4.60E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Total LPAH (calc'd)	2.00E-01	J	3.55	5.60E+00	370	780	mg/kg OC	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Total LPAH (calc'd)	6.30E-01	J	4.53						
KC WQA	WQA8AVE	3/6/1997	Total PAH (calc'd)	1.70E+00	J	1.93						
KC WQA	WQA8AVE	3/12/1997	Total PAH (calc'd)	2.30E+00	J	1.94						
KC WQA	WQA8AVE	4/3/1997	Total PAH (calc'd)	1.08E+00	J	1.58						
KC WQA	WQA8AVE	4/17/1997	Total PAH (calc'd)	2.72E+00	J	1.67						

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQA8AVE	5/1/1997	Total PAH (calc'd)	1.50E+00	J	1.6						
KC WQA	WQASOPK	5/15/1997	Total PAH (calc'd)	1.87E+00	J	1.67						
KC WQA	WQASOPK	5/20/1997	Total PAH (calc'd)	1.42E+00	J	1.73						
KC WQA	WQASOPK	5/28/1997	Total PAH (calc'd)	1.65E+00	J	1.77						
KC WQA	WQASOPK	6/3/1997	Total PAH (calc'd)	2.98E+00	J	2.11						
EPA SI	DR222	8/13/1998	Total PAH (calc'd)	1.04E+00		0.95						
EPA SI	DR193	8/13/1998	Total PAH (calc'd)	1.64E+00		1.21						
EPA SI	DR232	8/13/1998	Total PAH (calc'd)	3.18E+00		1.37						
EPA SI	DR221	8/13/1998	Total PAH (calc'd)	1.18E+01		1.57						
EPA SI	DR190	8/13/1998	Total PAH (calc'd)	1.02E+01		1.9						
EPA SI	DR233	8/19/1998	Total PAH (calc'd)	1.90E+00		2.19						
EPA SI	DR196	8/20/1998	Total PAH (calc'd)	1.38E+00		1.17						
EPA SI	DR224	8/20/1998	Total PAH (calc'd)	8.20E-01		1.17						
EPA SI	DR197	8/20/1998	Total PAH (calc'd)	7.80E-01		1.3						
EPA SI	DR195	8/20/1998	Total PAH (calc'd)	1.23E+00		1.37						
EPA SI	DR199	8/20/1998	Total PAH (calc'd)	1.21E+00		1.45						
EPA SI	DR200	8/20/1998	Total PAH (calc'd)	1.21E+00		1.73						
EPA SI	DR223	8/20/1998	Total PAH (calc'd)	2.11E+00		2.09						
EPA SI	DR194	8/20/1998	Total PAH (calc'd)	3.58E+00		3.06						
EPA SI	DR203	8/27/1998	Total PAH (calc'd)	8.40E-01		1.06						
EPA SI	DR204	8/27/1998	Total PAH (calc'd)	1.42E+00		1.09						
EPA SI	DR201	8/27/1998	Total PAH (calc'd)	8.20E-01		1.7						
EPA SI	DR226	8/27/1998	Total PAH (calc'd)	1.24E+00		1.77						
LDWRI-Benthic	C9	8/25/2004	Total PAH (calc'd)	6.00E-01	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Total PAH (calc'd)	5.90E-01	J	1.64						
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Total PAH (calc'd)	9.10E-01	J	1.24						
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Total PAH (calc'd)	3.46E-01	J	1.09						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Total PAH (calc'd)	4.81E-01		1.35						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Total PAH (calc'd)	8.50E-01	J	1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Total PAH (calc'd)	4.10E-01	J	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Total PAH (calc'd)	7.80E+00	J	1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Total PAH (calc'd)	6.60E-01		2.52						
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Total PAH (calc'd)	4.90E-02	J	0.945						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Total PAH (calc'd)	1.64E+00		1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Total PAH (calc'd)	9.20E+01	J	2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Total PAH (calc'd)	1.73E-01		0.79						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Total PAH (calc'd)	1.61E+00		1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Total PAH (calc'd)	9.30E-01	J	1.36						

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Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)		TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Total PAH (calc'd)	1.17E+01	J	2.23						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Total PAH (calc'd)	8.90E-01	J	2.14						
Ecology SPI	TRI-095T	8/11/2006	Total PAH (calc'd)	2.74E+00	J	2.39						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Total PAH (calc'd)	4.30E+00	J	2.09						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Total PAH (calc'd)	2.49E+01	J	2.89						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total PAH (calc'd)	4.63E+01	J	1.56						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total PeCDD	4.29E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total PeCDD	5.99E-06		2.61						
EPA SI	DR221	8/13/1998	Total PeCDF	1.40E-05		1.57						
EPA SI	DR224	8/20/1998	Total PeCDF	4.90E-06		1.17						
EPA SI	DR203	8/27/1998	Total PeCDF	5.30E-06		1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total PeCDF	1.25E-04		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total PeCDF	9.98E-06		2.61						
EPA SI	DR221	8/13/1998	Total TCDD	2.20E-06		1.57						
EPA SI	DR224	8/20/1998	Total TCDD	1.80E-06		1.17						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total TCDD	1.81E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total TCDD	3.36E-06		2.61						
EPA SI	DR221	8/13/1998	Total TCDF	1.50E-05		1.57						
EPA SI	DR224	8/20/1998	Total TCDF	6.60E-06		1.17						
EPA SI	DR203	8/27/1998	Total TCDF	7.60E-06		1.06						
LDW Dioxin Sampling	LDW-SS530	12/15/2009	Total TCDF	8.45E-05		1.56						
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Total TCDF	9.32E-06		2.61						
LDWRI-Benthic	B7a	8/30/2004	Toxaphene	3.40E-01	JN	1.64						
EPA SI	DR232	8/13/1998	Tributyltin as ion	2.10E-02		1.37						
EPA SI	DR221	8/13/1998	Tributyltin as ion	3.10E-02		1.57						
EPA SI	DR224	8/20/1998	Tributyltin as ion	1.80E-02		1.17						
EPA SI	DR199	8/20/1998	Tributyltin as ion	2.90E-02		1.45						
EPA SI	DR194	8/20/1998	Tributyltin as ion	4.20E-02		3.06						
EPA SI	DR203	8/27/1998	Tributyltin as ion	8.60E-02	J	1.06						
LDWRI-Benthic	C9	8/25/2004	Tributyltin as ion	1.30E-03	J	0.56						
LDWRI-Benthic	B7a	8/30/2004	Tributyltin as ion	5.60E-03		1.64						
Ecology SPI	TRI-095T	8/11/2006	Tributyltin as ion	8.10E-03	J	2.39						
EPA SI	DR222	8/13/1998	Vanadium	3.20E+01		0.95						
EPA SI	DR193	8/13/1998	Vanadium	3.70E+01		1.21						
EPA SI	DR232	8/13/1998	Vanadium	4.20E+01		1.37						
EPA SI	DR221	8/13/1998	Vanadium	4.40E+01		1.57						
EPA SI	DR190	8/13/1998	Vanadium	5.10E+01		1.9						
EPA SI	DR233	8/19/1998	Vanadium	5.50E+01		2.19						

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
EPA SI	DR196	8/20/1998	Vanadium	3.80E+01	1.17						
EPA SI	DR224	8/20/1998	Vanadium	4.00E+01	1.17						
EPA SI	DR197	8/20/1998	Vanadium	4.40E+01	1.3						
EPA SI	DR195	8/20/1998	Vanadium	4.80E+01	1.37						
EPA SI	DR199	8/20/1998	Vanadium	4.90E+01	1.45						
EPA SI	DR200	8/20/1998	Vanadium	5.10E+01	1.73						
EPA SI	DR225	8/20/1998	Vanadium	5.60E+01	1.73	3.24E+03					
EPA SI	DR223	8/20/1998	Vanadium	5.90E+01	2.09						
EPA SI	DR194	8/20/1998	Vanadium	6.30E+01	3.06						
EPA SI	DR203	8/27/1998	Vanadium	4.80E+01	1.06						
EPA SI	DR204	8/27/1998	Vanadium	6.10E+01	1.09						
EPA SI	DR201	8/27/1998	Vanadium	5.20E+01	1.7						
EPA SI	DR226	8/27/1998	Vanadium	5.50E+01	1.77						
LDWRI-Benthic	C9	8/25/2004	Vanadium	4.18E+01	0.56						
LDWRI-Benthic	B7a	8/30/2004	Vanadium	5.04E+01	1.64						
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Vanadium	5.25E+01	1.24						
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Vanadium	4.12E+01	1.09						
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Vanadium	4.69E+01	1.35						
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Vanadium	5.24E+01	1.37						
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Vanadium	5.39E+01	1.35						
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Vanadium	5.30E+01	1.92						
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Vanadium	6.12E+01	2.52						
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Vanadium	5.02E+01	0.945						
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Vanadium	5.75E+01	1.26						
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Vanadium	5.42E+01	2.65						
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Vanadium	4.26E+01	0.79						
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Vanadium	5.60E+01	1.59						
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Vanadium	5.31E+01	1.36						
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Vanadium	6.87E+01	2.23						
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Vanadium	6.21E+01	2.14						
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Vanadium	5.80E+01	2.09						
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Vanadium	6.76E+01	2.89						
KC WQA	WQA8AVE	3/6/1997	Zinc	6.88E+01	1.93		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/12/1997	Zinc	7.69E+01	1.94		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	3/27/1997	Zinc	6.89E+01	2.03		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/3/1997	Zinc	6.23E+01	1.58		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/8/1997	Zinc	6.86E+01	1.87		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	4/17/1997	Zinc	7.07E+01	1.67		410	960	mg/kg dw	<1	<1

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Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
KC WQA	WQA8AVE	4/24/1997	Zinc	7.32E+01	1.77		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/1/1997	Zinc	6.25E+01	1.6		410	960	mg/kg dw	<1	<1
KC WQA	WQA8AVE	5/8/1997	Zinc	6.82E+01	1.79		410	960	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/15/1997	Zinc	8.98E+01	1.67		410	960	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/20/1997	Zinc	8.15E+01	1.73		410	960	mg/kg dw	<1	<1
KC WQA	WQASOPK	5/28/1997	Zinc	9.06E+01	1.77		410	960	mg/kg dw	<1	<1
KC WQA	WQASOPK	6/3/1997	Zinc	9.34E+01	2.11		410	960	mg/kg dw	<1	<1
EPA SI	DR222	8/13/1998	Zinc	5.30E+01	0.95		410	960	mg/kg dw	<1	<1
EPA SI	DR193	8/13/1998	Zinc	8.80E+01	1.21		410	960	mg/kg dw	<1	<1
EPA SI	DR232	8/13/1998	Zinc	7.00E+01	1.37		410	960	mg/kg dw	<1	<1
EPA SI	DR221	8/13/1998	Zinc	7.60E+01	1.57		410	960	mg/kg dw	<1	<1
EPA SI	DR190	8/13/1998	Zinc	9.80E+01	1.9		410	960	mg/kg dw	<1	<1
EPA SI	DR233	8/19/1998	Zinc	9.00E+01	2.19		410	960	mg/kg dw	<1	<1
EPA SI	DR196	8/20/1998	Zinc	5.80E+01	1.17		410	960	mg/kg dw	<1	<1
EPA SI	DR224	8/20/1998	Zinc	5.70E+01	1.17		410	960	mg/kg dw	<1	<1
EPA SI	DR197	8/20/1998	Zinc	7.10E+01	1.3		410	960	mg/kg dw	<1	<1
EPA SI	DR195	8/20/1998	Zinc	8.20E+01	1.37		410	960	mg/kg dw	<1	<1
EPA SI	DR199	8/20/1998	Zinc	7.70E+01	1.45		410	960	mg/kg dw	<1	<1
EPA SI	DR200	8/20/1998	Zinc	7.90E+01	1.73		410	960	mg/kg dw	<1	<1
EPA SI	DR225	8/20/1998	Zinc	9.30E+01	1.73		410	960	mg/kg DW	<1	<1
EPA SI	DR223	8/20/1998	Zinc	9.50E+01	2.09		410	960	mg/kg dw	<1	<1
EPA SI	DR194	8/20/1998	Zinc	1.17E+02	3.06		410	960	mg/kg dw	<1	<1
EPA SI	DR203	8/27/1998	Zinc	6.30E+01	1.06		410	960	mg/kg dw	<1	<1
EPA SI	DR204	8/27/1998	Zinc	6.20E+01	1.09		410	960	mg/kg dw	<1	<1
EPA SI	DR201	8/27/1998	Zinc	7.20E+01	1.7		410	960	mg/kg dw	<1	<1
EPA SI	DR226	8/27/1998	Zinc	7.80E+01	1.77		410	960	mg/kg dw	<1	<1
LDWRI-Benthic	C9	8/25/2004	Zinc	5.58E+01 J	0.56		410	960	mg/kg dw	<1	<1
LDWRI-Benthic	B7a	8/30/2004	Zinc	8.16E+01	1.64		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS99	1/19/2005	Zinc	6.60E+01	1.24		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS101	1/20/2005	Zinc	5.35E+01	1.09		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS97	1/21/2005	Zinc	5.89E+01	1.35		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS102	1/24/2005	Zinc	1.15E+02	1.37		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound1	LDW-SS104	1/25/2005	Zinc	7.70E+01	1.35		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS91	3/7/2005	Zinc	2.25E+02	1.92		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS103	3/7/2005	Zinc	7.60E+01	2.52		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS106	3/8/2005	Zinc	6.61E+01	0.945		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS105	3/8/2005	Zinc	8.68E+01	1.26		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS95	3/9/2005	Zinc	1.83E+02	2.65		410	960	mg/kg dw	<1	<1

Table A-1
Chemicals Detected in Surface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg OC)	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDWRI-SurfaceSedimentRound2	LDW-SS100	3/11/2005	Zinc	5.21E+01	0.79		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS90	3/14/2005	Zinc	2.46E+02 J	1.59		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS98	3/15/2005	Zinc	6.50E+01	1.36		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SS93	3/15/2005	Zinc	1.22E+02	2.23		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound2	LDW-SSB7a	3/18/2005	Zinc	8.80E+01	2.14		410	960	mg/kg dw	<1	<1
Ecology SPI	TRI-095T	8/11/2006	Zinc	1.20E+02 J	2.39		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS336	10/3/2006	Zinc	1.21E+02	2.09		410	960	mg/kg dw	<1	<1
LDWRI-SurfaceSedimentRound3	LDW-SS335	10/4/2006	Zinc	2.50E+02	2.89		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-D	3/4/2011	Zinc	7.90E+01	2.26		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-A	3/4/2011	Zinc	9.90E+01	2.61		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-A	3/7/2011	Zinc	8.10E+01	1.59		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2113-U	3/7/2011	Zinc	5.90E+01	1.96		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-A	3/7/2011	Zinc	1.06E+02	2.35		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2108-U	3/7/2011	Zinc	1.21E+02	2.81		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2106-U	3/7/2011	Zinc	1.07E+02	3.55		410	960	mg/kg dw	<1	<1
LDW Outfall Sampling	LDW-SS2112-A	4/8/2011	Zinc	3.48E+02 J	4.53		410	960	mg/kg dw	<1	<1

mg/kg - milligram per kilogram
ug/kg - microgram per kilogram
DW - dry weight
TOC - total organic carbon
OC - organic carbon normalized
SMS - SMS Sediment Quality Standards
CSL - SMS Cleanup Screening Level
PAH - polycyclic aromatic hydrocarbon

Total HPAH - Total high molecular weight PAH
Total LPAH - Total low molecular weight PAH
PCB - Polychlorinated biphenyl
SMS - Sediment Management Standard (Washington Administrative Code 173-204)
J - Estimated value between the method detection limit and the laboratory reporting limit
JN - Estimated value between the method detection limit and laboratory reporting limit; tentative identification, the analyte exhibits low spectral match.

Table presents detected chemicals only.
Exceedance factors are the ration of the detected concentrations to the CSL or SQS: exceedance factors are shown only if they are greater than 1.
Chemicals with exceedance factors are shaded in yellow.
Sampling events are listed in Table 1

Table A-2
Chemicals Detected in Subsurface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg) OC	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	1,2,4-Trichlorobenzene	7.10E-03 J	1.42	5.00E-01	0.81	1.8	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	1,2-Dichlorobenzene	2.90E-03 J	1.75	1.70E-01	2.3	2.3	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	1,4-Dichlorobenzene	5.30E-03 J	1.42	3.70E-01	3.1	9	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	1,4-Dichlorobenzene	5.30E-03 J	1.75	3.00E-01	3.1	9	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	1,4-Dichlorobenzene	3.00E-03 J	1.61	1.90E-01	3.1	9	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	1,4-Dichlorobenzene	3.00E-03 J	1.81	1.70E-01	3.1	9	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Acenaphthene	9.60E-02	1.81	5.30E+00	16	57	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Acenaphthene	6.30E-02 J	1.42	4.40E+00	16	57	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Acenaphthene	6.00E-02	1.94	3.10E+00	16	57	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Acenaphthylene	6.40E-02 J	1.42	4.50E+00	66	66	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Acenaphthylene	5.80E-02 J	1.94	3.00E+00	66	66	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Acenaphthylene	3.50E-02 J	1.81	1.90E+00	66	66	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Anthracene	3.50E-01	1.42	2.50E+01	220	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Anthracene	3.60E-01	1.81	2.00E+01	220	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Anthracene	3.20E-01	1.94	1.60E+01	220	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	4 - 6.8	Aroclor-1242	2.10E-02	1.88						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Aroclor-1248	6.70E-02	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Aroclor-1248	6.80E-02	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Aroclor-1248	4.60E-01	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Aroclor-1248	1.00E-01 J	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Aroclor-1248	3.80E-02	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Aroclor-1248	1.30E-02	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Aroclor-1254	1.00E-01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	4 - 6.8	Aroclor-1254	8.40E-02	1.88						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Aroclor-1254	6.50E-02	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Aroclor-1254	1.10E+00	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Aroclor-1254	2.70E-01 J	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Aroclor-1254	7.20E-02	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Aroclor-1254	3.00E-02 J	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Aroclor-1260	1.00E-01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	4 - 6.8	Aroclor-1260	9.00E-02	1.88						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Aroclor-1260	8.10E-02	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Aroclor-1260	4.10E-01	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Aroclor-1260	1.20E-01 J	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Aroclor-1260	7.50E-02	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Aroclor-1260	2.90E-02 J	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Arsenic	1.80E+01	1.94		57	93	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Arsenic	1.60E+01	1.81		57	93	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Arsenic	1.20E+01	1.75		57	93	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Arsenic	8.00E+00	1.61		57	93	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Arsenic	1.30E+01	1.42		57	93	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzo(a)anthracene	1.20E+00	1.42	8.50E+01	110	270	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzo(a)anthracene	1.20E+00	1.94	6.20E+01	110	270	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzo(a)anthracene	9.40E-01	1.81	5.20E+01	110	270	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzo(a)anthracene	3.60E-02 J	1.75	2.10E+00	110	270	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzo(a)pyrene	7.80E-01	1.42	5.50E+01	99	210	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzo(a)pyrene	7.30E-01	1.94	3.80E+01	99	210	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzo(a)pyrene	5.70E-01	1.81	3.10E+01	99	210	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzo(a)pyrene	4.40E-02 J	1.75	2.50E+00	99	210	mg/kg OC	<1	<1

Table A-2
Chemicals Detected in Subsurface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg) OC	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzo(b)fluoranthene	9.70E-01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzo(b)fluoranthene	7.50E-01	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzo(b)fluoranthene	6.70E-02	1.75						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzo(b)fluoranthene	1.10E+00	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Benzo(b)fluoranthene	7.90E-02	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzo(g,h,i)perylene	2.10E-01	1.94	1.10E+01	31	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzo(g,h,i)perylene	1.20E-01	1.42	8.50E+00	31	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzo(g,h,i)perylene	9.80E-02	1.81	5.40E+00	31	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzo(k)fluoranthene	8.80E-01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzo(k)fluoranthene	6.40E-01	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzo(k)fluoranthene	4.70E-02 J	1.75						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzo(k)fluoranthene	9.70E-01	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Benzo(k)fluoranthene	5.30E-02 J	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzofluoranthenes (total-calc'd)	2.10E+00	1.42	1.50E+02	230	450	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzofluoranthenes (total-calc'd)	1.85E+00	1.94	9.50E+01	230	450	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzofluoranthenes (total-calc'd)	1.39E+00	1.81	7.70E+01	230	450	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Benzofluoranthenes (total-calc'd)	1.32E-01 J	1.08	1.20E+01	230	450	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzofluoranthenes (total-calc'd)	1.14E-01 J	1.75	6.50E+00	230	450	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzoic acid	2.10E-01 J	1.94		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzoic acid	2.20E-01 J	1.81		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Benzoic acid	1.30E-01 J	1.75		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Benzoic acid	1.10E-01 J	1.61		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzoic acid	4.50E-01 J	1.42		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Benzoic acid	1.10E-01 J	1.08		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3 - 4	Benzoic acid	3.50E-02 J	0.199		650	650	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Benzyl alcohol	6.40E-02 J	1.42		57	73	ug/kg dw	1.1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Benzyl alcohol	2.10E-02 J	1.94		57	73	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Benzyl alcohol	1.80E-02 J	1.81		57	73	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Bis(2-ethylhexyl)phthalate	3.50E-01	1.61	2.20E+01	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Bis(2-ethylhexyl)phthalate	2.20E-01	1.42	1.50E+01	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Bis(2-ethylhexyl)phthalate	2.50E-01	1.81	1.40E+01	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Bis(2-ethylhexyl)phthalate	2.00E-01	1.94	1.00E+01	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Bis(2-ethylhexyl)phthalate	1.80E-01	1.75	1.00E+01	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Bis(2-ethylhexyl)phthalate	4.30E-02 J	1.08	4.00E+00	47	78	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3 - 4	Bis(2-ethylhexyl)phthalate	1.70E-02 J	0.199		1300	1900	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Butyl benzyl phthalate	3.40E-02	1.81	1.90E+00	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Butyl benzyl phthalate	2.80E-02	1.75	1.60E+00	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Butyl benzyl phthalate	2.10E-02	1.42	1.50E+00	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Butyl benzyl phthalate	2.30E-02	1.94	1.20E+00	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Butyl benzyl phthalate	7.00E-03	1.08	6.50E-01	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Butyl benzyl phthalate	8.30E-03	1.61	5.20E-01	4.9	64	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Cadmium	8.00E-01	1.75		5.1	6.7	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Cadmium	3.00E-01	1.61		5.1	6.7	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Carcinogenic PAHs - Mammal - Half DL	1.20E+00							
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Carcinogenic PAHs - Mammal - Half DL	1.10E+00 J							
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Carcinogenic PAHs - Mammal - Half DL	8.40E-01 J							
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Carcinogenic PAHs - Mammal - Half DL	7.40E-02 J							
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Carcinogenic PAHs - Mammal - Half DL	6.10E-02 J							

Table A-2
Chemicals Detected in Subsurface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)	Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg) OC	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Chromium	4.15E+01	1.94		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Chromium	3.33E+01	1.81		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Chromium	3.45E+01	1.75		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Chromium	2.17E+01	1.61		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Chromium	2.73E+01	1.42		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Chromium	1.36E+01	1.08		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3 - 4	Chromium	1.00E+01	0.199		260	270	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Chrysene	1.50E+00	1.42	1.10E+02	110	460	mg/kg OC	1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Chrysene	1.50E+00	1.94	7.70E+01	110	460	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Chrysene	1.10E+00	1.81	6.10E+01	110	460	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Chrysene	5.00E-02 J	1.08	4.60E+00	110	460	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Chrysene	4.30E-02 J	1.75	2.50E+00	110	460	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Cobalt	1.01E+01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Cobalt	7.90E+00	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Cobalt	8.20E+00	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Cobalt	6.70E+00	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Cobalt	8.10E+00	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Cobalt	4.30E+00	1.08						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3 - 4	Cobalt	3.50E+00	0.199						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Copper	8.19E+01	1.94		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Copper	5.49E+01	1.81		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Copper	4.52E+01	1.75		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Copper	2.81E+01	1.61		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Copper	4.66E+01	1.42		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Copper	1.91E+01	1.08		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3 - 4	Copper	1.24E+01	0.199		390	390	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Dibenzo(a,h)anthracene	7.10E-02	1.94	3.70E+00	12	33	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Dibenzo(a,h)anthracene	3.20E-02 J	1.81	1.80E+00	12	33	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Dibenzofuran	9.20E-02	1.81	5.10E+00	15	58	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Di-n-butyl phthalate	1.40E-01	1.75	8.00E+00	220	1700	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Di-n-butyl phthalate	5.20E-02 J	1.61	3.20E+00	220	1700	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Fluoranthene	2.90E+00	1.42	2.00E+02	160	1200	mg/kg OC	1.3	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Fluoranthene	3.90E+00	1.81	2.20E+02	160	1200	mg/kg OC	1.4	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Fluoranthene	3.00E+00	1.94	1.50E+02	160	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Fluoranthene	8.80E-02	1.75	5.00E+00	160	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0 - 1	Fluoranthene	5.30E-02 J	1.08	4.90E+00	160	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Fluoranthene	6.30E-02 J	1.61	3.90E+00	160	1200	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Fluorene	1.50E-01	1.81	8.30E+00	23	79	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Fluorene	6.70E-02 J	1.42	4.70E+00	23	79	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Fluorene	6.40E-02	1.94	3.30E+00	23	79	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Hexachlorobenzene	1.00E-02	1.42	7.00E-01	0.38	2.3	mg/kg OC	1.8	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Indeno(1,2,3-cd)pyrene	3.00E-01 J	1.94	1.50E+01	34	88	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Indeno(1,2,3-cd)pyrene	1.90E-01	1.42	1.30E+01	34	88	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Indeno(1,2,3-cd)pyrene	1.40E-01	1.81	7.70E+00	34	88	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2 - 4	Lead	3.10E+01	1.94		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0 - 1	Lead	2.90E+01	1.81		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1 - 2	Lead	4.60E+01	1.75		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2 - 3	Lead	2.20E+01	1.61		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1 - 2	Lead	2.40E+01	1.42		450	530	mg/kg dw	<1	<1

Table A-2
Chemicals Detected in Subsurface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg) OC	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Lead	1.40E+01	1.08		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3	-	4	Lead	7.00E+00	0.199		450	530	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Mercury	1.50E-01	1.94		0.41	0.59	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Mercury	1.30E-01	1.81		0.41	0.59	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Mercury	1.70E-01	1.75		0.41	0.59	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Mercury	1.80E-01	1.61		0.41	0.59	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Mercury	1.20E-01	1.42		0.41	0.59	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Molybdenum	1.30E+00	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Molybdenum	1.10E+00	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Molybdenum	2.90E+00	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Molybdenum	1.80E+00	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Molybdenum	1.20E+00	1.42						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Naphthalene	3.70E-01	1.42	2.60E+01	99	170	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Naphthalene	3.80E-01	1.94	2.00E+01	99	170	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Naphthalene	6.00E-02	1.81	3.30E+00	99	170	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Nickel	3.10E+01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Nickel	2.10E+01	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Nickel	1.90E+01	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Nickel	1.50E+01	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Nickel	2.20E+01	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Nickel	9.00E+00	1.08						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3	-	4	Nickel	7.00E+00	0.199						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	PCBs (total calc'd)	2.00E+00	1.75	1.10E+02	12	65	mg/kg OC	9.2	1.7
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	PCBs (total calc'd)	4.90E-01 J	1.61	3.00E+01	12	65	mg/kg OC	2.5	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	PCBs (total calc'd)	2.70E-01	1.94	1.40E+01	12	65	mg/kg OC	1.2	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	PCBs (total calc'd)	1.85E-01	1.42	1.30E+01	12	65	mg/kg OC	1.1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	PCBs (total calc'd)	2.14E-01	1.81	1.20E+01	12	65	mg/kg OC	1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	4	-	6.8	PCBs (total calc'd)	1.95E-01	1.88	1.00E+01	12	65	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	PCBs (total calc'd)	7.20E-02 J	1.08	6.70E+00	12	65	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Phenanthrene	1.40E+00	1.81	7.70E+01	100	480	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Phenanthrene	3.80E-01	1.42	2.70E+01	100	480	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Phenanthrene	3.60E-01	1.94	1.90E+01	100	480	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Phenanthrene	4.90E-02 J	1.75	2.80E+00	100	480	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Phenol	6.10E-02	1.94		420	1200	ug/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Pyrene	4.90E+00	1.42	3.50E+02	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Pyrene	4.40E+00	1.94	2.30E+02	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Pyrene	2.30E+00	1.81	1.30E+02	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Pyrene	9.40E-02 J	1.61	5.80E+00	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Pyrene	1.00E-01	1.75	5.70E+00	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Pyrene	6.10E-02	1.08	5.60E+00	1000	1400	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Silver	5.00E-01	1.75		6.1	6.1	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Total HPAH (calc'd)	1.37E+01	1.42	9.60E+02	960	5300	mg/kg OC	1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Total HPAH (calc'd)	1.33E+01 J	1.94	6.90E+02	960	5300	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Total HPAH (calc'd)	1.05E+01 J	1.81	5.80E+02	960	5300	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Total HPAH (calc'd)	2.96E-01 J	1.08	2.70E+01	960	5300	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Total HPAH (calc'd)	4.30E-01 J	1.75	2.50E+01	960	5300	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Total HPAH (calc'd)	1.57E-01 J	1.61	9.80E+00	960	5300	mg/kg OC	<1	<1

Table A-2
Chemicals Detected in Subsurface Sediment Samples
Associated with the Riverside Drive Source Control Area

Event Name	Location Name	Date Collected	Sample Depth (feet)			Chemical	Conc'n (mg/kg DW)	TOC %	Conc'n (mg/kg) OC	SQS	CSL	Units	SQS Exceedance Factor	CSL Exceedance Factor
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Total LPAH (calc'd)	2.10E+00 J	1.81	1.20E+02	370	780	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Total LPAH (calc'd)	1.29E+00 J	1.42	9.10E+01	370	780	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Total LPAH (calc'd)	1.24E+00 J	1.94	6.40E+01	370	780	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Total LPAH (calc'd)	4.90E-02 J	1.75	2.80E+00	370	780	mg/kg OC	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Total PAH (calc'd)	1.45E+01 J	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Total PAH (calc'd)	1.26E+01 J	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Total PAH (calc'd)	4.70E-01 J	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Total PAH (calc'd)	1.57E-01 J	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Total PAH (calc'd)	1.50E+01 J	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Total PAH (calc'd)	2.96E-01 J	1.08						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Vanadium	6.78E+01	1.94						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Vanadium	6.11E+01	1.81						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Vanadium	6.25E+01	1.75						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Vanadium	4.92E+01	1.61						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Vanadium	6.11E+01	1.42						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Vanadium	4.18E+01	1.08						
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3	-	4	Vanadium	3.91E+01	0.199						
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	2	-	4	Zinc	1.32E+02	1.94		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	0	-	1	Zinc	1.18E+02	1.81		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	1	-	2	Zinc	1.17E+02	1.75		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	2	-	3	Zinc	5.46E+01	1.61		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC46	2/24/2006	1	-	2	Zinc	1.08E+02	1.42		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	0	-	1	Zinc	4.23E+01	1.08		410	960	mg/kg dw	<1	<1
LDW Subsurface Sediment 2006	LDW-SC47	2/23/2006	3	-	4	Zinc	2.30E+01	0.199		410	960	mg/kg dw	<1	<1

mg/kg - Milligram per kilogram
ug/kg - Microgram per kilogram
DW - Dry weight
OC - Organic carbon normalized
SQS - SMS Sediment Quality Standard
CSL - SMS Cleanup Screening Level

PAH - Polycyclic aromatic hydrocarbon
Total HPAH - Total high molecular weight PAH
Total LPAH - Total low molecular weight PAH
PCB - Polychlorinated biphenyl
SMS - Sediment Management Standard (Washington Administrative Code 173-204)
J - Estimated value between the method detection limit and the laboratory reporting limit

Table presents detected chemicals only.

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

Chemicals with exceedance factors are shaded.

Sampling events are listed in Table 1.

Table A-3
Chemicals Detected in Seep Samples
Riverside Drive

Source	Sample Location	Date Sampled	Chemical	Conc'n (ug/L)	Marine Chronic WQS	Marine Acute WQS	Chronic WQS Exceedance Factor	GW-to-Sediment Screening Level[a]	GW-to-Sediment Screening Level Exceedance Factor
Filtered Samples									
LDWRI-Seep	SP-48	6/30/2004	Arsenic	0.422	36	69	<1	370	<1
LDWRI-Seep	SP-48	6/30/2004	Cadmium	0.101	9.3	42	<1	3.4	<1
LDWRI-Seep	SP-48	6/30/2004	Copper	10.1 J	3.1	4.8	3.3	123	<1
LDWRI-Seep	SP-48	6/30/2004	Lead	0.154 J	8.1	210	<1	13	<1
LDWRI-Seep	SP-48	6/30/2004	Mercury	0.00132	0.025	1.8	<1	0.0074	<1
LDWRI-Seep	SP-48	6/30/2004	Nickel	1.56	8.2	74	<1		
LDWRI-Seep	SP-48	6/30/2004	Silver	0.053	1.9	1.9	<1	1.5	<1
LDWRI-Seep	SP-48	6/30/2004	Zinc	15.8	81	90	<1	76	<1
Unfiltered Samples									
LDWRI-Seep	SP-48	6/30/2004	Arsenic	0.618	36	69	<1	370	<1
LDWRI-Seep	SP-48	6/30/2004	Cadmium	0.138	9.3	42	<1	3.4	<1
LDWRI-Seep	SP-48	6/30/2004	Cadmium	0.116	9.3	42	<1	3.4	<1
LDWRI-Seep	SP-48	6/30/2004	Copper	10.9 J	3.1	4.8	3.5	123	<1
LDWRI-Seep	SP-48	6/30/2004	Copper	11.28	3.1	4.8	3.6	123	<1
LDWRI-Seep	SP-48	6/30/2004	Lead	1.11	8.1	210	<1	13	<1
LDWRI-Seep	SP-48	6/30/2004	Lead	1.013	8.1	210	<1	13	<1
LDWRI-Seep	SP-48	6/30/2004	Mercury	0.00109	0.025	1.8	<1	0.0074	<1
LDWRI-Seep	SP-48	6/30/2004	Nickel	2.83	8.2	74	<1		
LDWRI-Seep	SP-48	6/30/2004	Nickel	3.63	8.2	74	<1		
LDWRI-Seep	SP-48	6/30/2004	Silver	0.051	1.9	1.9	<1	1.5	<1
LDWRI-Seep	SP-48	6/30/2004	Silver	0.056	1.9	1.9	<1	1.5	<1
LDWRI-Seep	SP-48	6/30/2004	Zinc	17.7	81	90	<1	76	<1
LDWRI-Seep	SP-48	6/30/2004	Zinc	17.72	81	90	<1	76	<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

J - Estimated value between the method detection limit and the laboratory reporting limit

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.

Appendix B
Aerial Photographs

Appendix B

Lower Duwamish Waterway
RM 2.2-3.4 West (Riverside Drive)
Historical Aerial Photograph Review

In an effort to more thoroughly understand and evaluate historical facility operations and development within the RM 2.2-3.4 West (Riverside Drive) source control area, SAIC reviewed historical aerial photographs from 1936 to 2006. These photographs represent conditions from roughly each decade. Additional photographs from supplementary years are available; however, if during a cursory assessment there were no apparent changes, photographs less than a decade apart were not included in this summary. Aerial photographs for years 1936, 1946, 1960, 1969, 1980, 1995, 2001, 2004 and 2006 are described below.

For the purpose of discussion, the source control area has been divided into a northern section and southern section. Current-day street names are used as reference points. In general, the year of facility specific building construction is presented in the text for each upland facility and is not discussed during this photograph review. For historical aerial photographs, the “a” figure (e.g. Figure B–1a) represents a current-day overview of the source control area. Inset boxes have been placed on the “a” figure to represent the area represented by the subsequent historical photographs (e.g. B-1b and B-1c) for a particular year. The “b” and “c” figures present historical photographs. For oblique aerial photographs, an overview of the source control area is not presented.

1936

The land area in the northern section of the Riverside Drive source control area appears to be residential housing and farmland (Figure B-1b). Development along the shoreline appears to be limited. The 8th Avenue S wooden trolley bridge extends across the Lower Duwamish Waterway (LDW) at the corner of 8th Avenue S and S Portland Street. The southern portion of the source control area is occupied by residential adjacent to and near the LDW and farmland further west (Figure B–1c). Present day arterial roads and residential streets are fairly well developed. The South Park Bridge is visible immediately south of the source control area.

1946

Development in the northern section of the source control area remains relatively unchanged from the 1936 photograph (Figure B–2b). Some increased development has occurred along the waterway on the east side of S Riverside Drive. It appears the 8th Avenue S wooden trolley bridge has been removed. Residential development has increased in the southern section of the source control area (Figure B–2c). Shoreline activity appears to remain restricted to residential use.

1960

In the mid 1950s, the area was rezoned for industrial use (History Link 2011 [8410]). Industrial activity has increased between S Webster Street and S Elmgrove Street, as observed in Figure B–3b and Figure B–3c. The area south of S Elmgrove Street remains primarily residential except for the construction of the former Spencer Industries facility on the south of S Orr Street. Shoreline activity appears to remain restricted to residential use.

1969

A significant amount of industrial development has occurred in the northern and central section of the source control area. An overwater structure has been built adjacent to the former Hurlen Construction facility. State Route 509 and West Marginal Way S are fully constructed and span the western portion of the source control area (Figure B–4b and B–4c). The land area directly east of West Marginal Way S appears to be under construction. The southern portion of the source control area remains largely unchanged with the exception of a large warehouse constructed at the former Long Painting Company – 10th Avenue Facility, located at the southeast corner of 8th Avenue S and S Monroe Street.

1980

The former Hurlen Construction facility continued overwater activity. Overwater activity is observed at Silver Bay Logging adjacent to the LDW between S Portland Street and S Kenyon Street. The land area between West Marginal Way S and the LDW in the northern section of the source control area has become almost entirely industrial (Figure B–5b).

Activity in the southern portion of the source control area remained consistent with 1969. The 1980 aerial photograph was not reproduced for this report.

1995

The former Hurlen Construction facility has increased development of the shoreline property. Historical records indicate Hurlen Construction built a wharf extension, storage grid, and marine lift over the LDW. The facility appears to be operating at both the north (620 S Riverside Drive) and south (700 S Riverside Drive) properties (Figure B–6b). Silver Bay Logging continues to conduct overwater operations.

Upland facilities and the southern section of the source control area remain largely unchanged from previous years. The 1995 aerial photograph was not reproduced for this report.

2001

Overwater activity is conducted north of the source control area (Figure B–7a). The former Hurlen Construction facility has four barges moored along the waterway and operates at both properties (Figure B–7b). Silver Bay Logging occupies the facility adjacent to the waterway bordered by S Kenyon Street and 8th Avenue S (Figure B–7c). Independent Metals Plant 2 has not started operations at the facility. Unity Electric (a portion of the former Long Painting facility) occupies land near the waterway (Figure B–7d).

2004

A wharf has been constructed at Pacific Pile and Marine. Records indicate that Pacific Pile and Marine did not begin operation until 2008. The business operation at this facility is unknown. The former Hurlen Construction facility has increased overwater activities. Approximately five barges are moored at wharfs along the waterway (Figure B–8b). Silver Bay Logging has one barge moored along the shoreline (Figure B–8c). Upland facilities remain largely unchanged from previous years.

2006

Overwater operations continued at the future property of Pacific Pile and Marine and both properties of former Hurlen Construction (Figure B–9a and Figure B–9b). Independent Metals Plant 2 began operations at the south yard of Silver Bay Logging between 2001 and 2006. In Figure B–9c, a barge is moored along the wharf at Silver Bay Logging. Independent Metals Plant 2 has four barges moored along the waterway. A city park and residential houses are present along the remainder of the shoreline south of Unity Electric (Figures B-9d and B-9e). Upland facilities remain largely unchanged from previous years.

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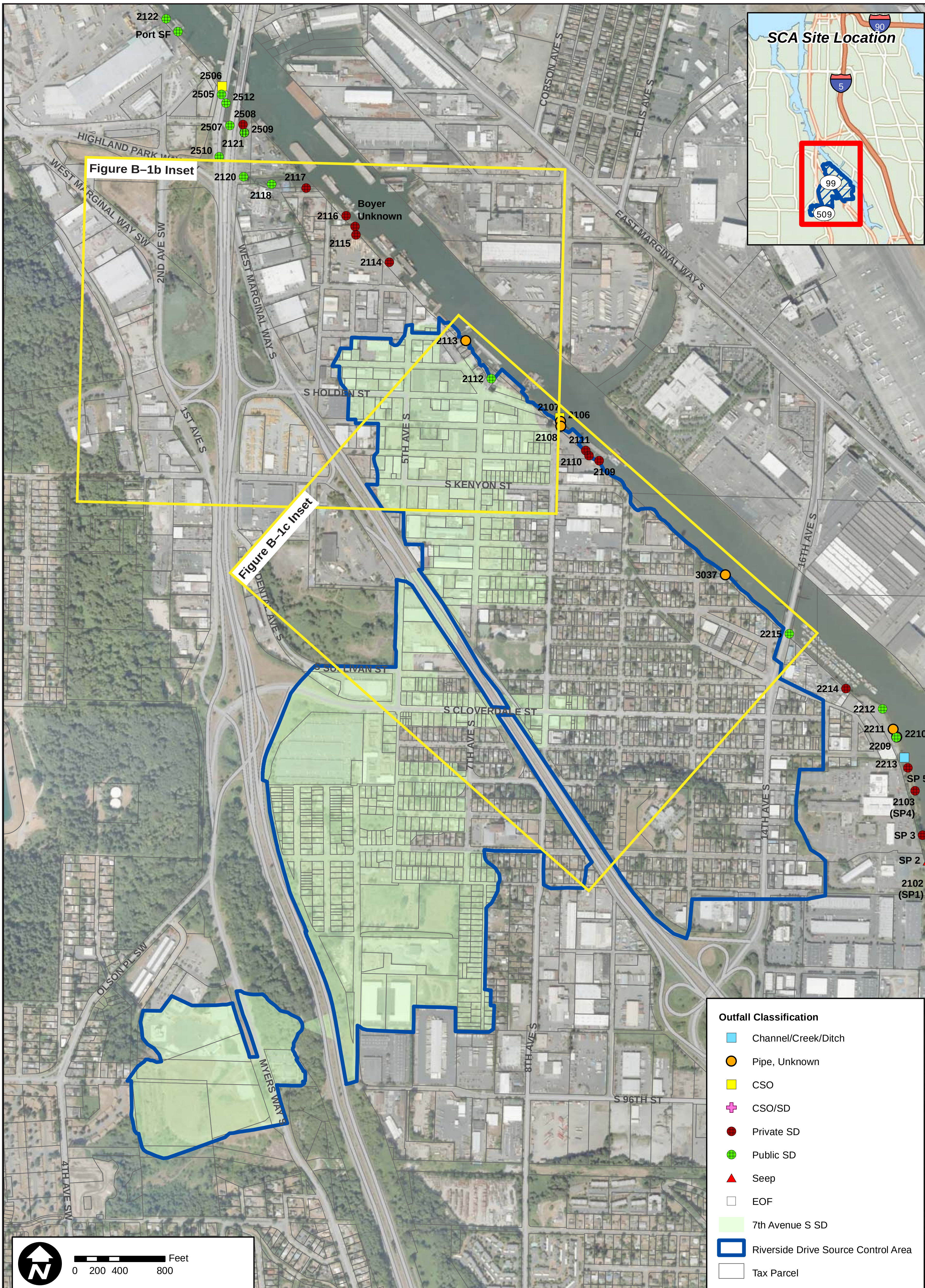

Figure B–1a. 1936 Aerial Photo Index

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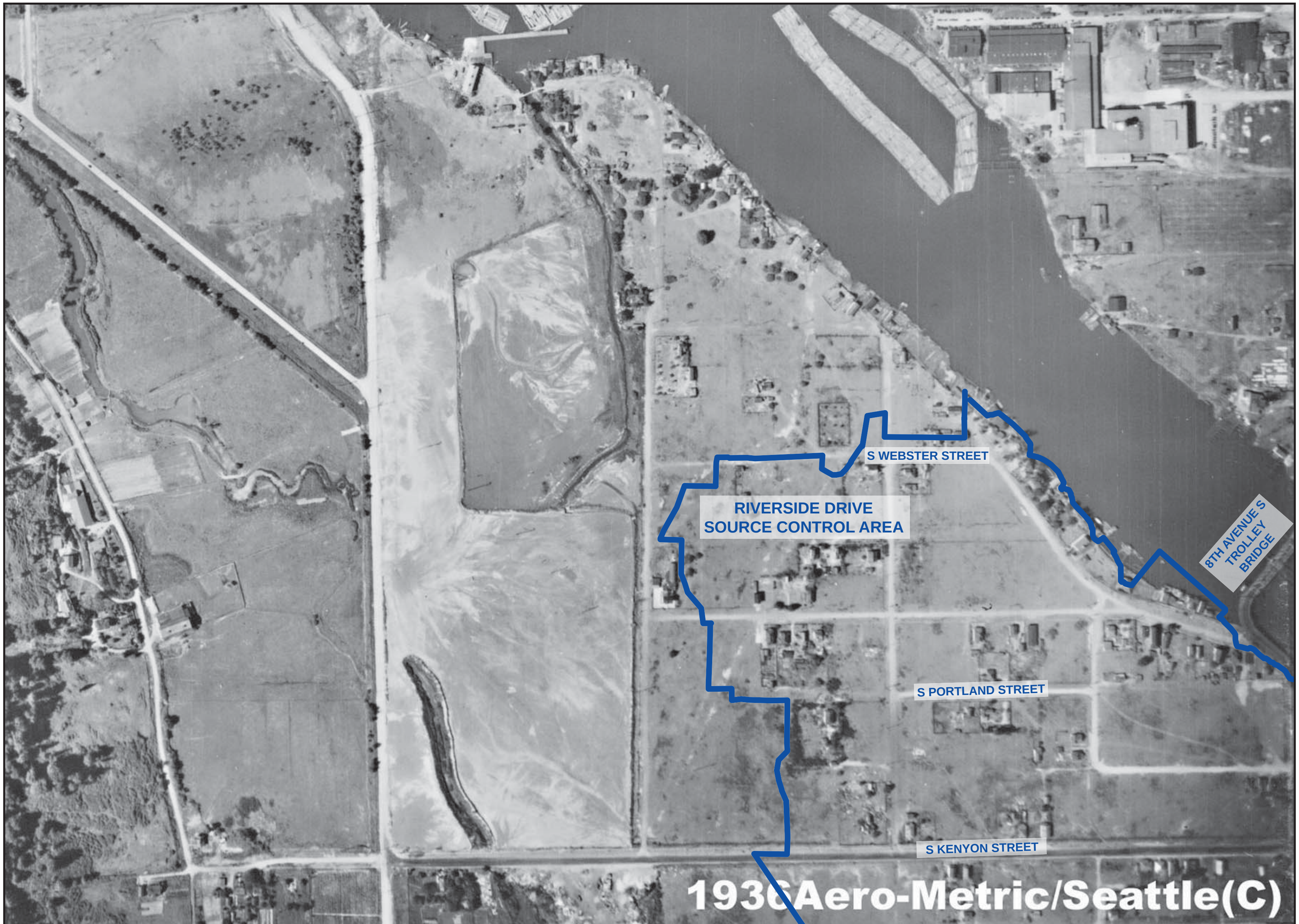

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Figure B–1b. RM 2.2 to 3.4 (Riverside Drive): 1936 Aerial Photo, Northern Portion

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Figure B–1c. RM 2.2 to 3.4 (Riverside Drive): 1936 Aerial Photo, Southern Portion

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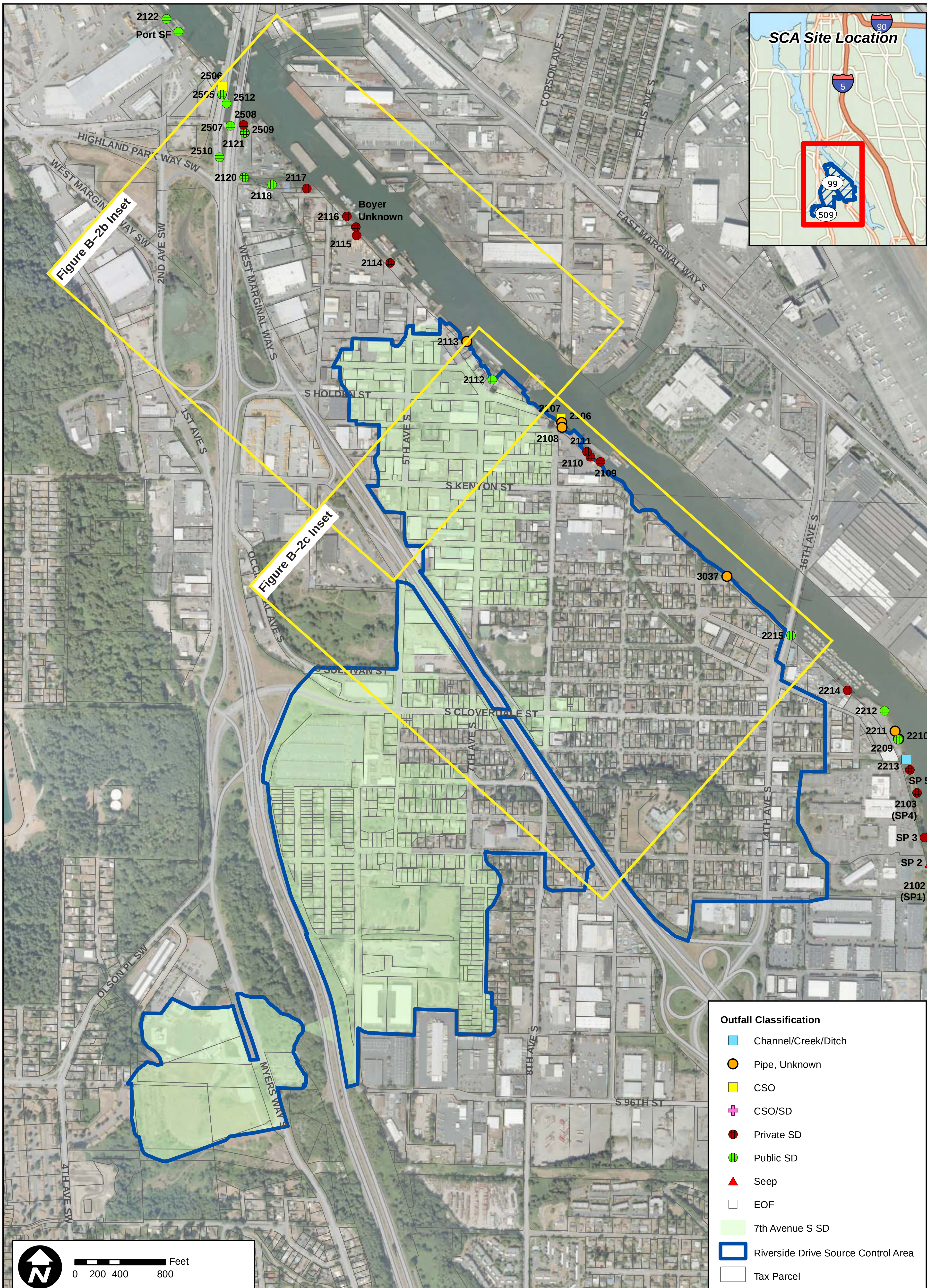

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Figure B–2a. 1946 Aerial Photo Index

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Figure B–2b. RM 2.2 to 3.4 (Riverside Drive): 1946 Aerial Photo, Northern Portion

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Figure B–2c. RM 2.2 to 3.4 (Riverside Drive): 1946 Aerial Photo, Southern Portion

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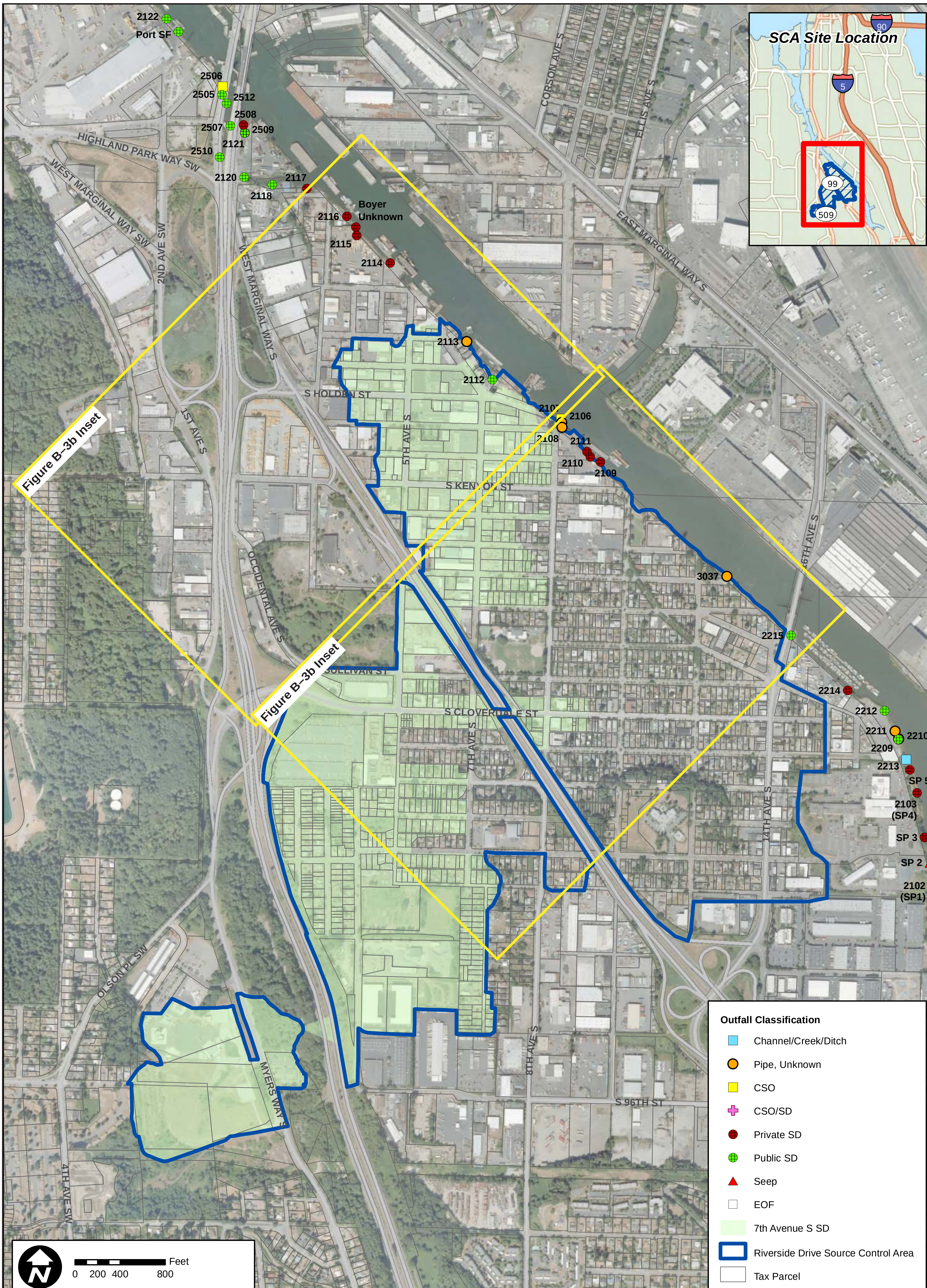

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Figure B–3a. 1960 Aerial Photo Index

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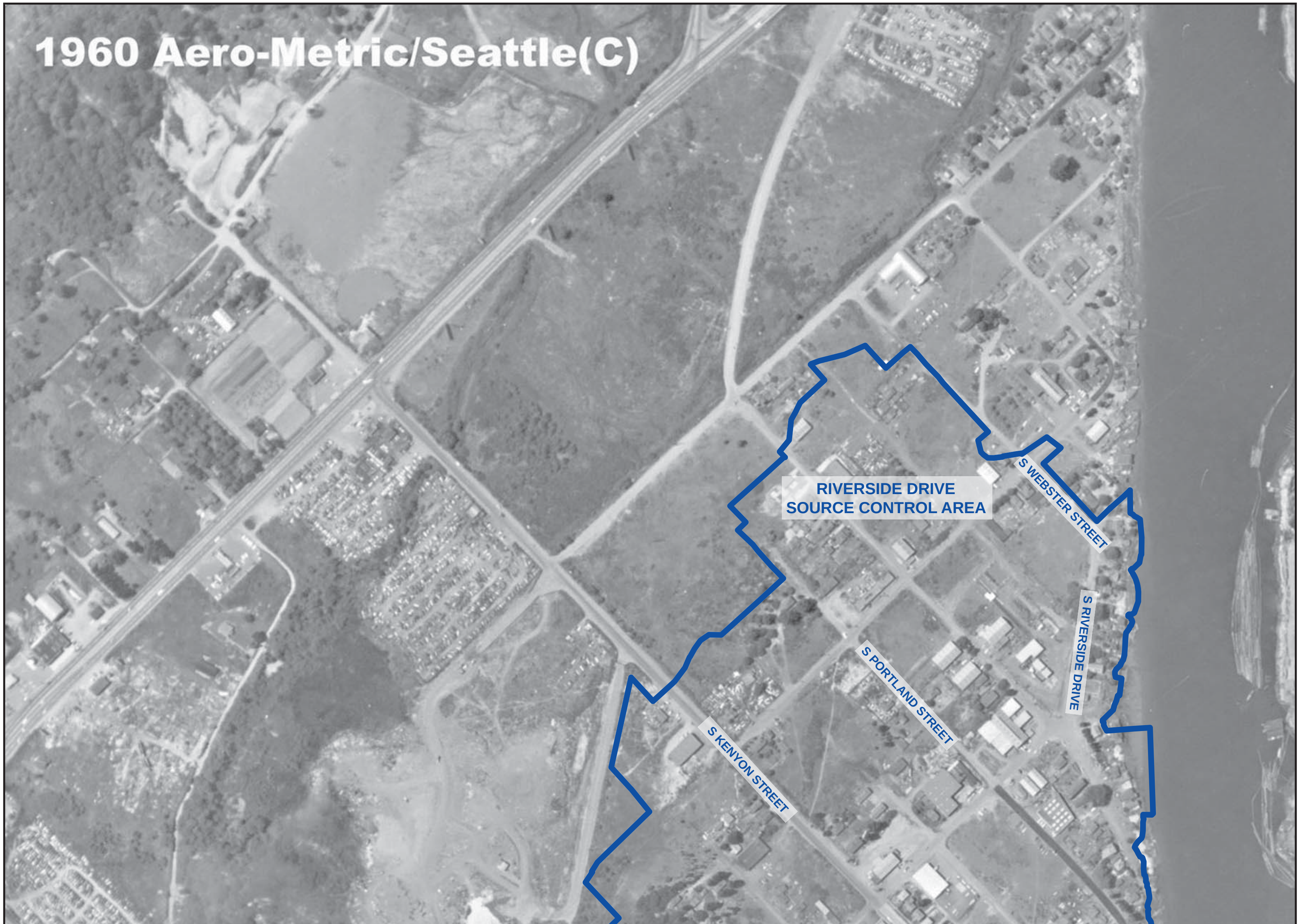

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Figure B–3b. RM 2.2 to 3.4 (Riverside Drive): 1960 Aerial Photo, Northern Portion

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Figure B–3c. RM 2.2 to 3.4 (Riverside Drive): 1960 Aerial Photo, Southern Portion

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Figure B–4a. 1969 Aerial Photo Index

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Figure B–4b. RM 2.2 to 3.4 (Riverside Drive): 1969 Aerial Photo, Northern Portion

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Figure B–4c. RM 2.2 to 3.4 (Riverside Drive): 1969 Aerial Photo, Southern Portion

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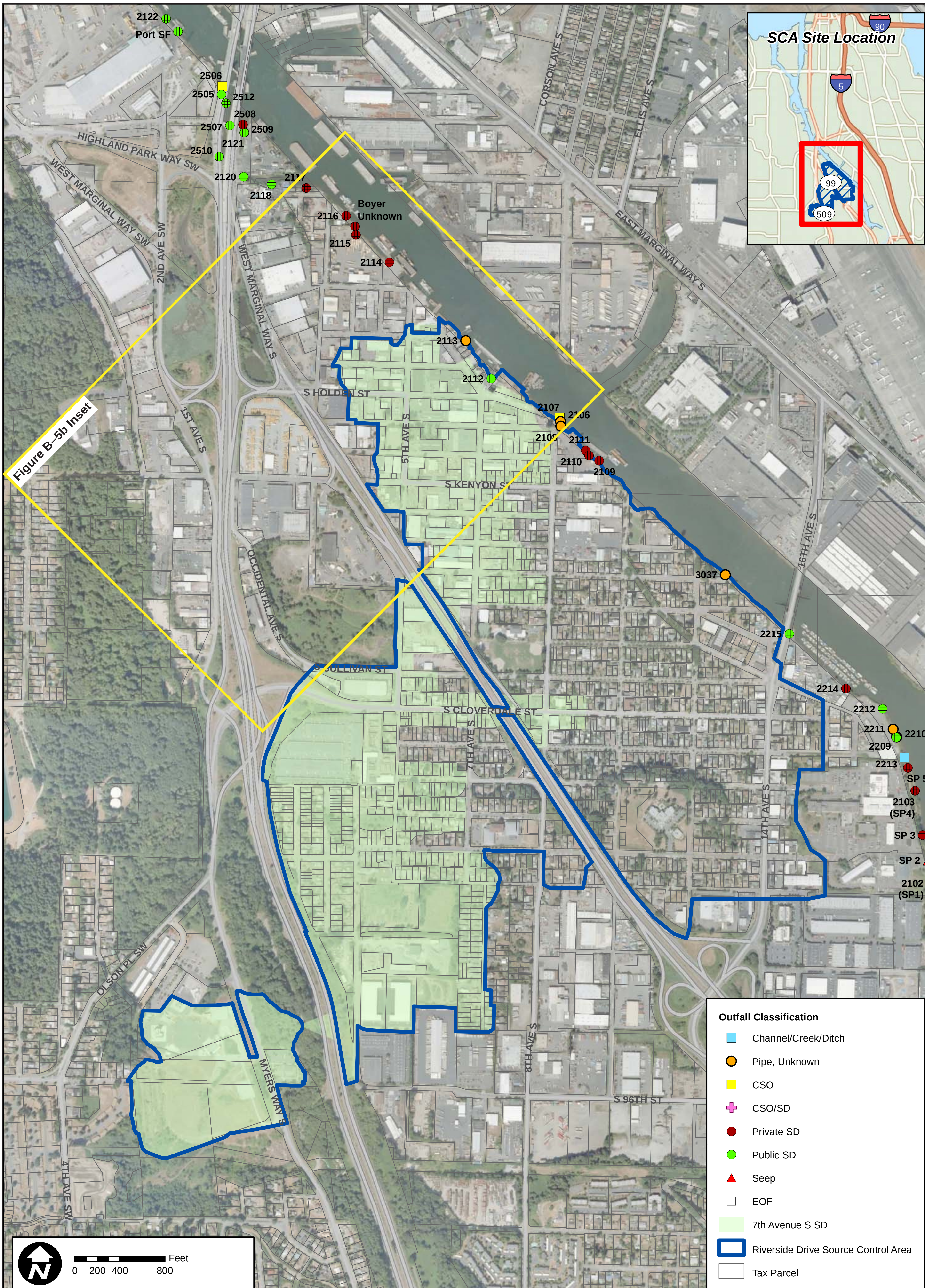

Figure B–5a. 1980 Aerial Photo Index

Figure B–5b. RM 2.2 to 3.4 (Riverside Drive): 1980 Aerial Photo

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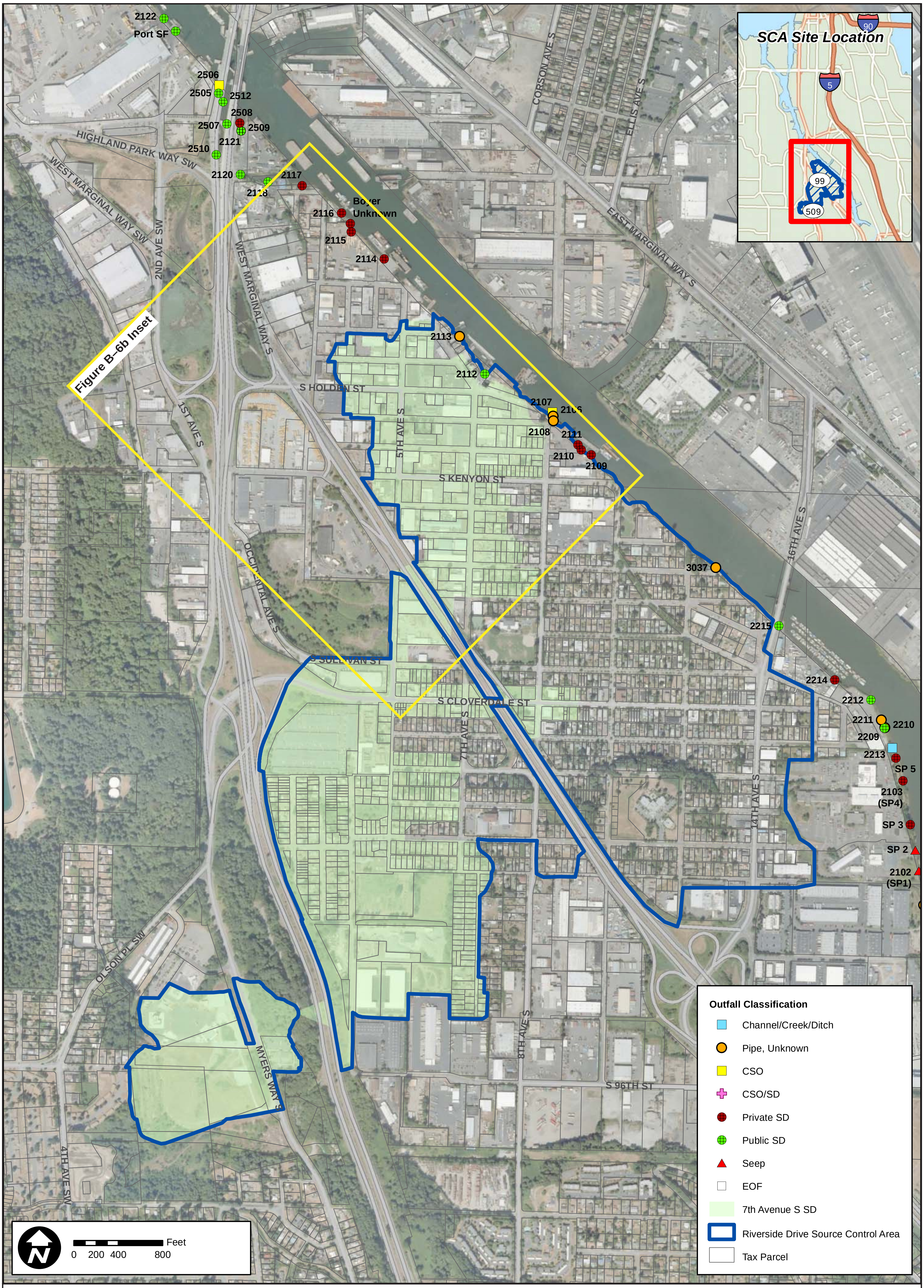

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Figure B–6a. 1995 Aerial Photo Index

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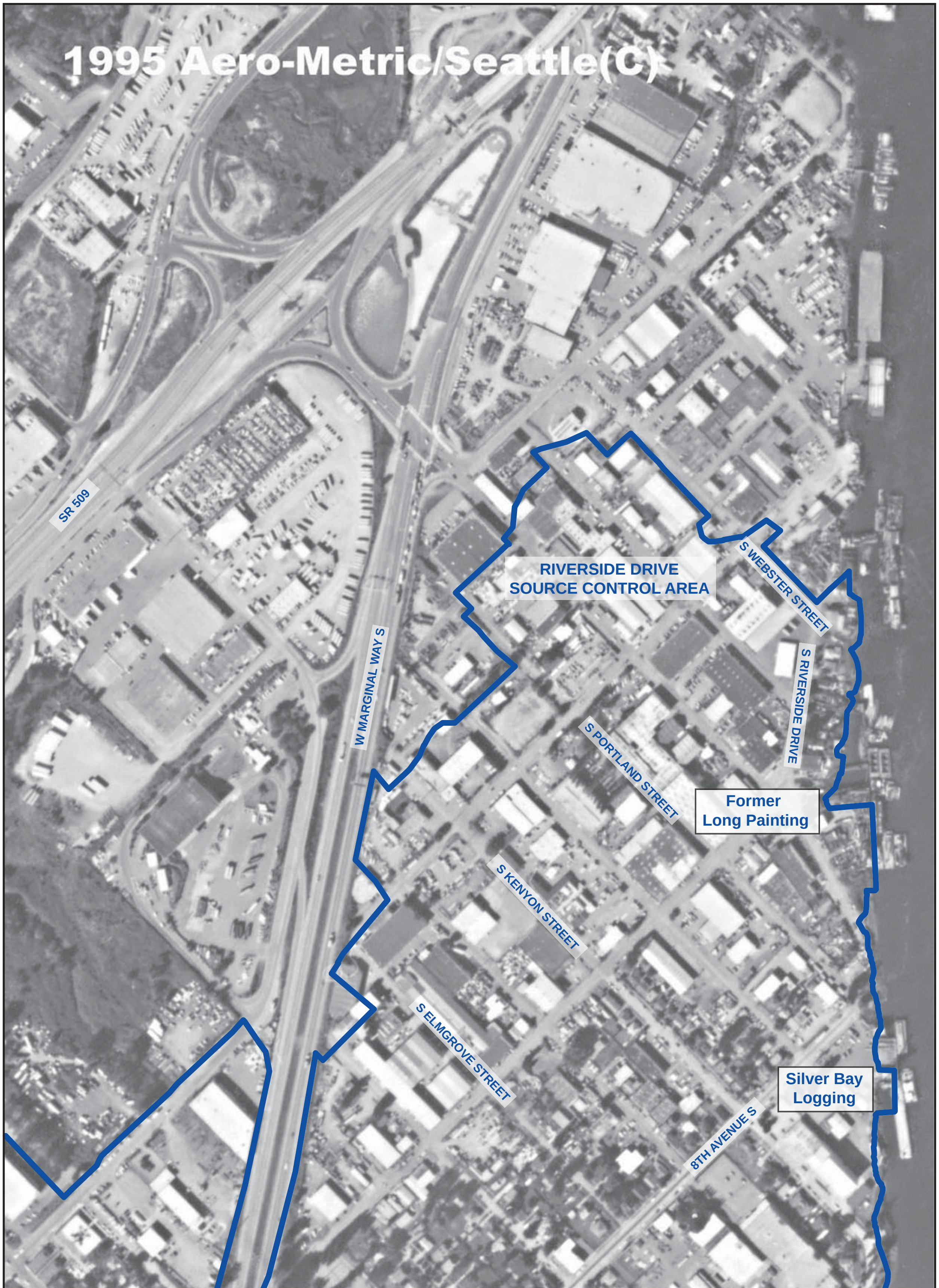

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Figure B–6b. RM 2.2 to 3.4 (Riverside Drive): 1995 Aerial Photo

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Figure B–7a. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2001

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Figure B–7b. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2001

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Figure B–7c. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2001

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Figure B–7d. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2001

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Figure B–7e. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2001

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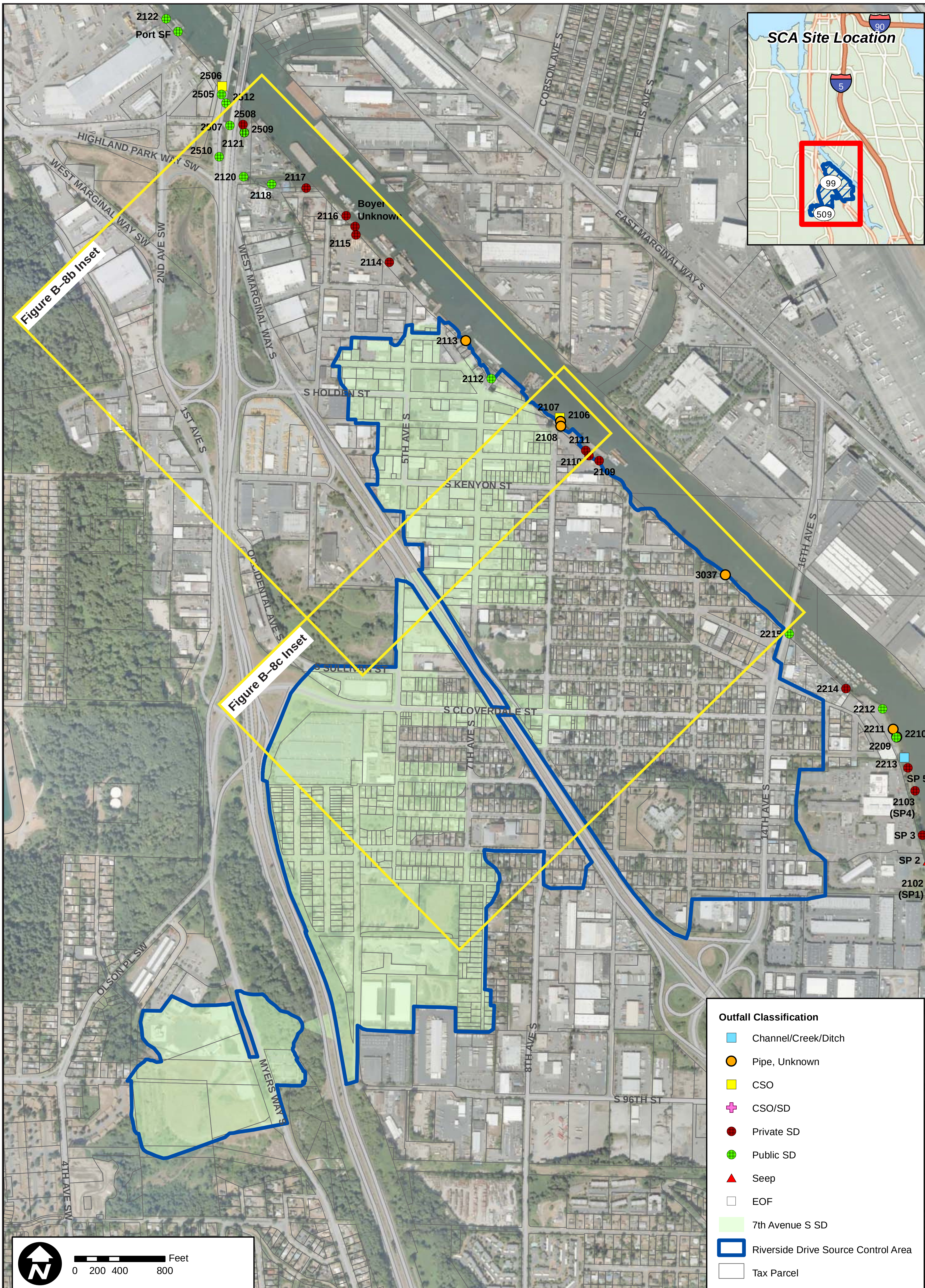

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Figure B–8a. 2004 Aerial Photo Index

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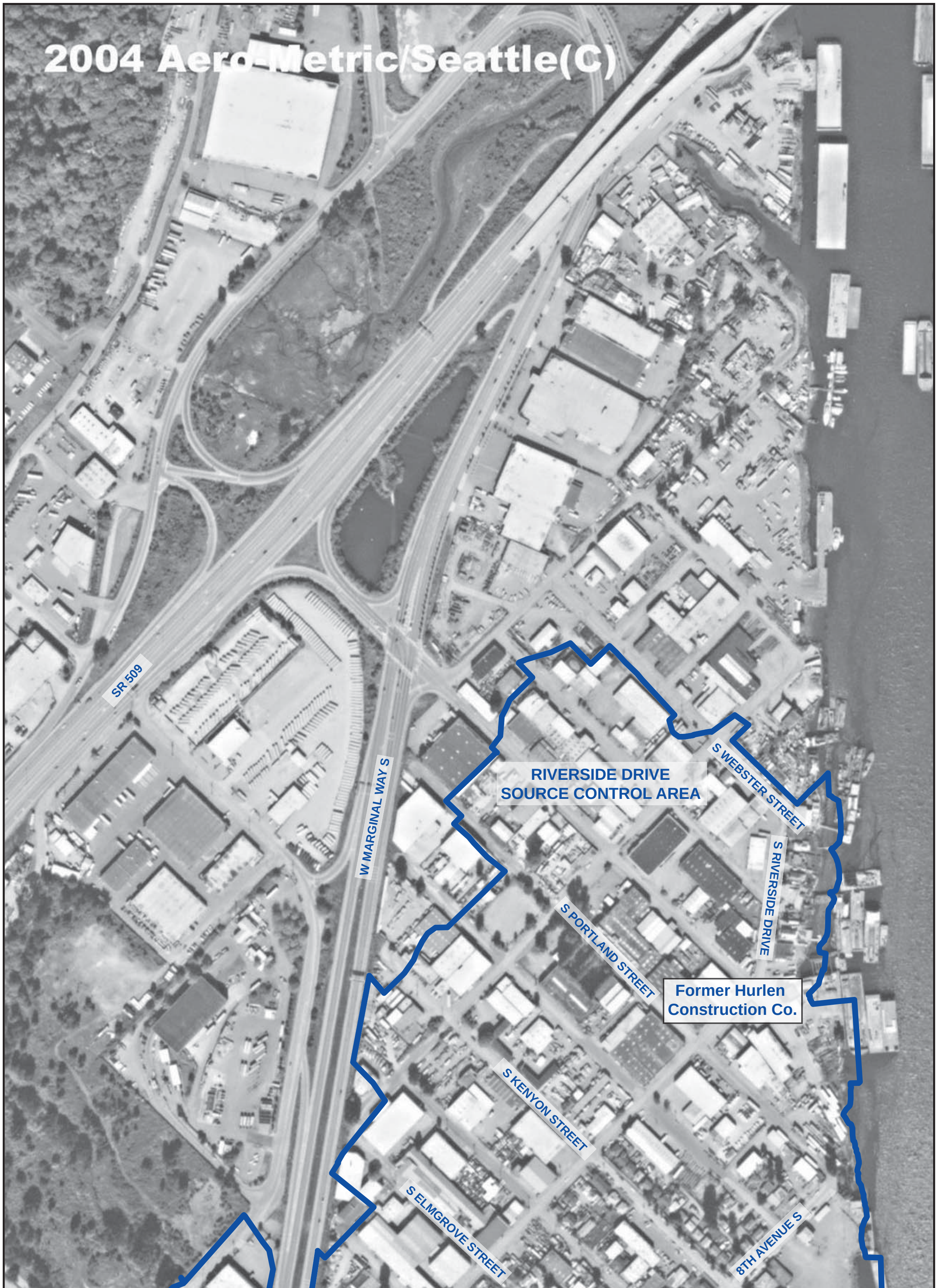

Figure B–8b. RM 2.2 to 3.4 (Riverside Drive):
2004 Aerial Photo, Northern Portion

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Figure B–8c. RM 2.2 to 3.4 (Riverside Drive): 2004 Aerial Photo, Southern Portion

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Figure B–9a. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2006

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Figure B–9b. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2006

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Figure B–9c. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2006

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Figure B–9d. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2006

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Figure B–9e. RM 2.2 to 3.4 (Riverside Drive): Shoreline Photo, 2006

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Appendix C
8th Avenue S CSO Maps and Facility Information

Appendix C–1
8th Avenue S CSO Basin Facilities

Table C-1

Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/Map ID[2]
3963	14th Avenue S Street Improvements	14th Avenue S, S Cloverdale & S Director	Riverside Drive								C2/192
46918719	1st Kenyon Drum	1st Avenue S & SW Kenyon Street	1st Avenue S SD								B2/106
15642	4th Avenue S & S Trenton Storm Drain	4th Avenue S & S Trenton Street	Riverside Drive								B2/194
64516429	5th Ave S Site	8229 5th Avenue S	1st Avenue S SD								B2/139
22726	640 S Riverside Dr	640 S Riverside Drive	Riverside Drive		●						B1/54
43565732	7 Eleven Food Store 230723931L	11657 Des Moines Way S	Restoration Areas					●			C4/311
97913617	ABC Metal Finishing	501 Elmgrove S	1st Avenue S SD								B2/146
10207	Absolute German	9510 14th Avenue S	Sea King Industrial Park			●					C3/275
2077	Ace Galvanizing Inc 96th	429 S 96th	Sea King Industrial Park	●	●	●		●		●	B3/284
2079	Advance Electroplating	9585 8th Ave S	Sea King Industrial Park	●	●					●	B3/273
82395194	Aero Lac Inc	420 S 96th Street Suite 11	Sea King Industrial Park								B2/270
72668839	African Northwest, Inc.	470 S Kenyon Street	Riverside Drive					●			B2/98
25327412	Ahrenius Manufacturing Inc	1425 S 93rd	Sea King Industrial Park								C2/233
6060	AIC International	736 S Chicago Street	Riverside Drive								B2/79
56256949	Alaska Cargo Transport Inc	6700 Marginal Way SW	Terminal 115								A1/11
22342251	All City Auto Wrecking & Sales Inc	9438 Des Moines Memorial Drive	Sea King Industrial Park						●		C3/276
5469634	Allied Body Works Inc	625 S 96th Street	Sea King Industrial Park	●							B3/285
63942573	Allied Bolt Co	8619 17th Avenue S	Terminal 117								C2/181
60993417	Aloha Cargo Transport Inc	6700 West Marginal Way SW Terminal 115	Terminal 115								A1/12
26135396	American Bathtub Refinishers Inc	1412 S Henderson Street	Riverside Drive	●							C2/201
77734273	American Plastic Manufacturing Incorporated	526 S Monroe Street	Riverside Drive								B2/125
21995	Architectural Stone Werkes	429 S 96th Street	Sea King Industrial Park			●					B3/282
73914265	ARCO Service Station 4375	11215 8th Avenue S	Sea King Industrial Park								B3/308
17746	Arrowhead Senior Housing Association	9200 2nd Avenue SW	1st Avenue S SD								B2/221
2882470	AT&T Wireless South Park	9128 10th Avenue S	Sea King Industrial Park								B2/227
8162841	ATC Distribution Group	401 S Webster	EAA-2		●			●			B1/43
16677	Atomic Fabrications	1605 S 93rd Street, Unit E R	Sea King Industrial Park								C2/245
53457146	Auto Site Automotive	11803 Des Moines Memorial Drive	Restoration Areas	●				●	●		C4/312
19959367	Bayside Automotive Storage Inc	NE Corner of 96th Street & 10th Avenue S	Sea King Industrial Park								B3/278
72626372	Beal Bucket Site	17th Place S 100 Yards E of Des Moines Way S	Restoration Areas								C3/291
82885756	BJ Truck Wrecking	7225 2nd Avenue S	EAA-2								B1/25
58835952	Boeing D & SG Oxbow Site	10700 West Marinal Way S	Restoration Areas	●							C3/294
60381981	Boeing South Park	1420 S Trenton Street	Terminal 117	●		●					C2/198
37926748	Boyer Logistics Inc	7318 4th Ave S	EAA-2	●		●				●	B1/29
15947	Boyer Towing	7318 4th Avenue S	EAA-2							●	B1/30
4328	Braicks Construction Inc	309 S Cloverdale Street, Suite B3	Riverside Drive								B2/185
24205	Brosson Co LLC	10808 Meyers Way S	Sea King Industrial Park								B3/300
3329	Bus Yard Site Preparation CSWGP	130 S Kenyon Street	1st Avenue S SD								B2/99
7503	Cain Bolt & Gasket	7724 7th Avenue S	Riverside Drive								B1/71
1866123	Carolyn M Burke Site	9326 7th Avenue S	Sea King Industrial Park								B2/234
4914795	CB Finishing	9587 8th Avenue S	Sea King Industrial Park								B3/274

Table C-1
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/Map ID[2]
11972772	Centimark Corp Seattle Office	430 S 96th Street 5	Sea King Industrial Park								B3/272
66498524	Chevron 306536	11845 Des Moines Way S	Restoration Areas								C4/313
43643315	Chevron 98484	8700 14th Avenue S						●			C2/187
38246778	Christian Brothers Floor Svc Inc	309 S Cloverdale Suite C20	Riverside Drive	●							B2/189
3479178	Cliff Housers Automotive	806 S 112th Street	Sea King Industrial Park					●			B3/307
1852542	Clyde West Inc	9615 West Marginal Way S	Restoration Areas	●							C3/287
4612472	Coach Maintenance	255 S Holden Street	Riverside Drive					●			B1/63
2430	Coast Crane Company	8250 5th Avenue S	Riverside Drive		●		●				B2/168
9604	Consistent Coatings, Inc.	719 S Riverside Drive	Riverside Drive								B1/67
67814731	Container Care Puget Sound	9600 8th Avenue S	Sea King Industrial Park			●					B2/250
15446	Craft Built	10714 1st Avenue S	Sea King Industrial Park								B3/295
98422914	Crowley Marine Services Inc Terminal 115	6020 West Marginal Way	Terminal 115					●			A1/13
39411556	Cunningham Manufacturing Co Inc	318 S Webster Street	EAA-2								B1/39
82818857	Custom Craiting	233 S Holden Street	Riverside Drive					●			B1/65
12865	Custom Metal Spinning LLC	9330 15th Avenue S, Unit C	Sea King Industrial Park								C2/239
61231536	Custom Roofing Inc	8001 5th Avenue S	1st Avenue S SD					●			B2/130
6915930	Delta Marine Industries	1608 S 96th Street	Sea King Industrial Park			●					C2/258
22978975	Delta Marine Industries Inc	1608 S 96th Street	Sea King Industrial Park	●							C2/259
89923232	DEOX	1605 S 93rd Street Building EC	Sea King Industrial Park								C2/241
21209	Diamond Painting	1601 S 92nd Place	Sea King Industrial Park								C2/223
2544945	Diamond Painting LLC 1601	1601 S 92nd Place, Suite B	Sea King Industrial Park								C2/224
97573251	Douglas Management Dock	7100 2nd Avenue SW	1st Avenue S SD		●			●			A1/17
75318226	Duwamish Manor	15th Avenue S & S 93rd st	Sea King Industrial Park	●							C2/235
2258	Eastern Supply Company	7745 1st Avenue S	1st Avenue S SD		●						A2/93
91926231	Eastmont Transfer Station	7155 West Marginal Way SW	1st Avenue S SD								A1/40
95735434	Ecolights Northwest LLC	9411 8th Avenue S Suite 3	Sea King Industrial Park	●							B2/257
15029	Emerald City Machine	160 S 108th Street	Sea King Industrial Park								B3/296
6955180	EMJ	1231A S Director Street	Sea King Industrial Park								B2/210
5542431	Exxon Co USA Div of Exxon Cor	7150 2nd Avenue SW	1st Avenue S SD								A1/19
11942	Fabrication Specialties Ltd Art	527 S Portland Street	Riverside Drive								B1/74
47625361	Federal Express Corp BFI	9320 15th Avenue S	Sea King Industrial Park								C2/240
3565459	Ferguson Construction	7433 5th Avenue S	EAA-2		●		●	●	●		B1/38
68488062	Fire King of Seattle, Inc.	240 S Holden Street	Riverside Drive								B1/57
90247719	First Student Seattle	130 S Kenyon Street	1st Avenue S SD			●					B2/95
1736255	Flamespray Northwest Inc	250 S Chicago Street	1st Avenue S SD								B2/80
10791	Flying Fish Express	7937 2nd Avenue S	1st Avenue S SD								B2/131
3533187	FMH Material Handling Solutions	1313 S 96th Street	Sea King Industrial Park	●	●			●			B3/280
14644	Former Airport Towing	301 S Sullivan Street	Riverside Drive								B1/70
29149762	Former Brown Engineering	550 S Monroe Street	Riverside Drive								B2/126
47552226	Former Burned Laundry	1414 S Concord Street	Riverside Drive								C2/195
92792171	Former Bus & Air Parcel Service Inc	9004 14th Avenue S	Riverside Drive		●			●			C2/203

Table C-1
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/Map ID[2]
93511879	Former Cascade Enterprises	8709 14th Avenue S	Riverside Drive								C2/188
88237831	Former Chemithon Surface Finishing Inc	521 S Monroe Street	Riverside Drive								B2/135
93927211	Former Crosby Auto Repair Shop	8621 14th Avenue S	Riverside Drive					●			C2/182
28226866	Former Discount Drive Axle of Seattle	309 S Cloverdale Street Suite A11	Riverside Drive								B2/179
38576231	Former Emerald Services Group	500 S Sullivan Street	Riverside Drive					●			B2/172
63168342	Former Glitsa American Inc	327 S Kenyon Street	Riverside Drive		●			●			B2/108
42127616	Former Hurlen Construction	700 S Riverside Drive	Riverside Drive		●			●		●	B1/59
2278	Former King Auto & Truck Wrecking	543 S Monroe Street	Riverside Drive						●		B2/132
1370584	Former KJM Electric Co	521 S Monroe Street	Riverside Drive								B2/136
71678662	Former Long Painting - 10th Avenue Facility	8025 10th Avenue S	Riverside Drive					●	●		B2/138
12724197	Former Magnetic Penetrant Services Co Inc	309 S Cloverdale Street Unit B20	Riverside Drive								B2/184
11457	Former Mikes Truck Repair & Fabrication	515 S Southern Street	Riverside Drive								B2/158
78952325	Former Mill Engineering & Supply Co	516 S Chicago Street	Riverside Drive								B2/83
6661875	Former Pipe Specialities Inc	531 S Portland Street	Riverside Drive								B2/76
92291647	Former Resource Recycling Technologies	8000 5th Avenue S	Riverside Drive								B2/140
26215242	Former Rockwell Automation	500 S Chicago Street	Riverside Drive								B2/90
64285373	Former Schauer Northwest Inc	8819 14th Avenue S	Riverside Drive								C2/196
41287367	Former Scott Andrews Property	8520 14th Avenue S	Riverside Drive					●			C2/178
18225132	Former Seattle Refrigeration and Manufacturing Co	1057 S Director Street	Riverside Drive								B2/213
48968474	Former South Park BP	8819 14th Avenue S	Riverside Drive					●			C2/197
13132191	Former Spencer Industries Inc	8410 Dallas Avenue S	Riverside Drive		●						B2/167
78879968	Former Superior Precision Analytical	309 S Cloverdale Street Suite B24	Riverside Drive								B2/183
23653754	Former Tom Thurber	1420 S Henderson Street	Riverside Drive					●			C2/200
45558857	Former Yale Materials Handling NW Inc	8101 7th Avenue S	Riverside Drive								B2/153
44534539	Formula Corp	7901 2nd Avenue S	1st Avenue S SD								B2/111
24384	Frog Hollow Corp	1425 S 93rd Street	Sea King Industrial Park								C2/232
27446996	Fruehauf Trailer Inc Seattle	9426 8th Avenue S	Sea King Industrial Park	●	●						B2/269
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	●	●	●		●			B2/208
5152950	Gasoline Service Station Former	12249 8th Avenue S							●		B4/315
93436287	Gear Works Seattle, Inc.	500 S Portland Street	Riverside Drive	●		●					B1/68
23498	Gene Summy Lumber	6000 West Marginal Way SW	Terminal 115							●	A1/10
18369741	Glen Acres Home Association	1000 S 112th	Sea King Industrial Park					●			B3/305
10128921	Global Fabricators Inc.	7619 5th Avenue S	Riverside Drive					●			B1/58
86343865	Global Intermodal Systems	1818 S 93rd Street	Sea King Industrial Park							●	C2/238
54287319	Gold Co	12459 Des Moines Way S	Restoration Areas		●			●			C4/318
73412486	Graham Trucking, Inc.	722 S Chicago Street	Riverside Drive							●	B2/85
7130166	Greg Peterson Duwamish River	None	1st Avenue S SD								A2/122
36385877	Guinns Automotive & Electric	245 S Austin Street	Riverside Drive	●							B1/51
1557860	Halfon Candy Co	9229 10th Avenue S	Sea King Industrial Park		●						B2/236
41888934	Hansen Machine Corp Seattle	712 S Portland Street	Riverside Drive								B1/73
73671237	Heartwood, Inc.	1414 S Director Street	Riverside Drive	●							C2/205

Table C-1

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82131388	HSD Highline Boulevard Park Warehouse	12833 20th Avenue S	Restoration Areas								C4/319
76764554	Hudson Bay Insulation	8230 5th Avenue S	Riverside Drive								B2/164
94892538	Hussman Corp West Marginal Way	7440 A West Marginal Way S	EAA-2								B1/36
93252843	Icon Materials Seattle Asphalt	1115 S 96th Street	Sea King Industrial Park		●			●	●		B3/286
9309618	Independent Metals Plant 1	747 S Monroe Street	Riverside Drive				●			●	B2/137
16139	Independent Metals Plant 2	816 S Kenyon Street	Riverside Drive			●				●	B2/89
23115	Industrial Battery	211 S Austin Street	EAA-2	●							B1/53
2154	Industrial Container Services WA LLC	7152 1st Avenue S	EAA-2	●	●		●			●	B1/23
99142846	International Construction Equipment	8101 Occidental Avenue S	1st Avenue S SD								B2/152
97992431	International Lubricants Inc	7930 Occidental S	1st Avenue S SD								B2/113
4154808	International Paint LLC	1541 S 92nd Place Suite C	Sea King Industrial Park	●							C2/214
25623222	Interstate Coatings Inc UST 9194	754 S Chicago Street	Riverside Drive					●			B2/87
2335	Interstate Coatings, Inc.	754 S Chicago Street	Riverside Drive		●						B2/91
2491	Jones Property	12441 20th Avenue S	Restoration Areas						●		C4/316
94931167	Jones Washington Stevedoring Co Ust2313	7245 West Marginal Way SW	1st Avenue S SD					●			A1/27
22294	Jons Recycling	7620 2nd Avenue S	EAA-2								B1/55
13389849	Joseph B Meder	12025 Des Moines Way S	Restoration Areas					●			C4/314
11249	JV Constructors Inc	325 S Kenyon Street	EAA-2								B2/115
11797661	Karawis Inc	10723 1st Avenue S	Sea King Industrial Park					●			B3/297
2489	Kaspac Chiyoda Property	1237 S Director Street	Sea King Industrial Park					●	●		C2/209
87373824	Kelly Ryan Inc South Park	7235 2nd Avenue S	EAA-2							●	B1/26
29892767	Kenyon Drum	Kenyon Street S at Transfer	Riverside Drive								B2/103
6292538	King County DOT Road Services Division	South Park Bridge Project	Terminal 117								C2/161
2404488	King Electrical Mfg Co	9131 10th Avenue S	Sea King Industrial Park	●							B2/222
12901	Koepping & Koepping	1705 S 93rd Street, Building F7	Sea King Industrial Park								C2/243
90355185	KRS Marine	1621 S 92nd Place	Sea King Industrial Park								C2/219
2320	Laidlaw	7739 1st Avenue S	1st Avenue S SD		●			●			B2/123
2010311	LDW 2nd Ave S Outfall	South Park Basin & Orchard Street	EAA-2								B1/21
16981594	Lion Trucking Inc	8425 1st Avenue S (share w/Old Dominion Freight)	1st Avenue S SD					●			A2/171
83549384	Liquid Air Corp of N America	7500 2nd Avenue S	EAA-2					●			B1/44
58864121	Lloyd Electric Apparatus Co	7126 West Marginal Way SW	Terminal 115	●							A1/20
39232961	Lukas Machine Inc	707 S Riverside Drive	Riverside Drive			●					B1/72
23949	M & M Grinding	10846 Meyers Way S									B3/303
21626	MacDonald Miller Co Inc	7717 Detroit Avenue SW	1st Avenue S SD								A1/75
36776588	MacDonald Miller Service Inc	7707 Detroit Avenue SW	1st Avenue S SD					●			A1/69
5885095	Machinist Inc Tooling Division	8201 7th Avenue S	Riverside Drive								B2/159
72567932	Machinists Inc Plant 2	509 S Austin Street	Riverside Drive								B1/50
22736	Machinists Inc.	7600 5th Avenue S	Riverside Drive			●					B1/56
46338473	Magnetic & Penetrant Services Co Inc	8135 1st Avenue S	1st Avenue S SD			●					B2/160
15761	Manufacturing Technologies, Inc.	7709 5th Avenue S	Riverside Drive								B1/62
38921541	Marine Lumber Service Inc	525 S Chicago Street	Riverside Drive			●		●			B2/97

Table C-1
Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	CSCSL	NPDES Permit	KCIW Discharge Authorization or Permit	UST	Ecology NFA Determination	EPA CERCLA Section 104(e) Request for Information	Map/Map ID[2]
73969348	Marine Lumber Service Shop	558 S Kenyon Street	Riverside Drive					●			B2/100
2263	Markey Property Parcel 4	9520 10th Avenue S	Sea King Industrial Park						●		B2/261
3546421	Mason Dixon Intermodal Inc	9515 10th Avenue S	Sea King Industrial Park	●							B2/260
7747737	Mccall Oil Seattle Home Heating Burien	11441 Des Moines Way						●	●		C4/309
15844	McFabco Steel Corporation	635 S Elmgrove Street	Riverside Drive								B2/147
36919863	McKinstry Co S Barton St	855 S Barton Street	Sea King Industrial Park					●			B2/229
9677878	Metro Holden Marginal Way	West Marginal Way SW &S Holden Street	1st Avenue S SD								B1/61
54346566	Metro Term 117	West Marginal Way S Terminal 117	1st Avenue S SD								B2/127
12326	Meyers Way Sand Pit	9400 Meyers Way	1st Avenue S SD								A2/228
2334	Mikes Aussie Machine Shop	12441 Des Moines Memorial Drive	Restoration Areas						●		C4/317
231954	MKT Southpark LLC	9525 14th Avenue S	Sea King Industrial Park								C2/265
8127	Modern Coach Modern Pattern	7601 5th Ave S	Riverside Drive								B1/52
25678771	Modern Machine Company	519 S Elmgrove Street	Riverside Drive								B2/148
95231135	Moimoi Property	10118 Des Moines Memorial Drive S	Restoration Areas		●						C3/293
42665774	Morgan Trucking Inc Seattle	9228 10th Avenue S	Sea King Industrial Park					●			B2/254
24615	National Products Inc.	8410 Dallas Avenue S	Riverside Drive								B2/166
16838	National Products S Elmgrove	1017 S Elmgrove Street	Riverside Drive				●				B2/149
4203517	Ness Cranes, Inc	500 S Sullivan Street	Riverside Drive								B2/173
14108	Nicos Auto Service	10819 Myers Way S	Sea King Industrial Park								B3/299
66671686	Nonferrous Metals Inc	230 S Chicago Street	1st Avenue S SD								B2/77
2347	Norman Property	11603 10th Avenue S	Sea King Industrial Park						●		B4/310
25963342	North Star Ice Equipment Inc	8151 Occidental Avenue S	1st Avenue S SD					●			B2/157
62275925	Northern Freight Lines Inc	730 S Chicago Street	Riverside Drive					●			B2/88
14839	Northwest Connecting Rod	1705 S 93rd Street, Unit F7	Sea King Industrial Park								C2/244
84427474	Northwest Container Services Inc	6110 West Marginal Way SW Terminal 115	Terminal 115				●				A1/4
2536	Northwest EnviroService 2	8105 1st Avenue S	1st Avenue S SD								B2/118
74745382	Northwest Grating Products, Inc.	9230 4th Avenue S	Riverside Drive			●					B2/231
7221	Northwind Marine	605 S Riiverside Drive	Riverside Drive								B1/47
24178231	NRC Environmental Sves Inc	20500 Richmond Beach Drive NW	Terminal 115	●				●			A1/18
74491434	NW Enviroservice 1st Ave Site	8105 1st Avenue S	1st Avenue S SD								B2/150
17445	Old Dominion Freight Line Inc	8425 1st Avenue S (share w/Lion Trucking)	1st Avenue S SD								A2/170
7969	Olsson Manufacturing Co	525 S Elmgrove Street	Riverside Drive								B2/145
45787437	Olympic Steel Door	7800 7th Avenue S	Riverside Drive		●			●			B2/94
72863999	Omnisource Inc	123 S Kenyon Street	1st Avenue S SD								A2/119
85495122	Omnisource Inc 121	121 1/2 S Kenyon Street	1st Avenue S SD								A2/121
82954349	Omnisource Inc 129	129 S Kenyon Street	1st Avenue S SD								A2/120
52276616	Pacific American Commercial Co	7400 2nd Avenue S	EAA-2								B1/34
9950	Pacific American Commercial Co Yard 2	7560 2nd Avenue S	EAA-2								B1/46
10293	Pacific American Commercial Co Yard 3	7601 2nd Avenue S	EAA-2								B1/49
1143511	Pacific Industrial Supply Director Street	1231 S Director Street	Sea King Industrial Park								B2/211
56779778	Pacific Pile & Marine	582 S Riverside Drive	Riverside Drive								B1/41

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5151	Pacific Plumbing Supply	7115 W Marginal Way SW	Terminal 115								A1/22
86136757	Pacific Utility Equipment Co	1303 S 96th Street	Sea King Industrial Park								B3/288
79459683	Patent Construction Systems	8111 1st Avenue S	1st Avenue S SD								B2/151
1992812	Petrocard Systems Inc	9014 14th Avenue S	Riverside Drive					●			C2/204
7170	Phils Custom Bindery	309 S Cloverdale Street, Suite A12	Riverside Drive								B2/180
3147742	Pioneer Industries Plant 2	7440 West Marginal Way S	Terminal 115								B1/37
15700	Port of Seattle Terminal 115 Berth 1	6375 West Marginal Way SW	Terminal 115								A1/9
7936495	Portable Sheds of America	7510 5th Avenue S	Riverside Drive					●			B1/48
2056	Precision Engineering Inc	1231 S Director Street	Sea King Industrial Park		●			●			B2/212
12264831	Professional Service Industrie	7400 3rd Avenue S	EAA-2					●			B1/32
9246491	Progressive Fastening Inc	837 S Director Street	Sea King Industrial Park	●							B2/206
67478551	Progressive Medical Corp	1600 S 92nd Avenue Suite H	Sea King Industrial Park								C2/226
96897184	Proliance International Inc Seattle	7951 2nd Avenue S	1st Avenue S SD								B2/116
29834194	Propulsion Controls Engineerin	1705 S 93rd Street F10	Sea King Industrial Park								C2/249
4210684	Protective Coating Consultants Inc	1501 S 92nd Place Suite A	Sea King Industrial Park	●							C2/220
76299717	PSF Industries Inc Field Yard	9322 14th Avenue S	Sea King Industrial Park								C2/252
18451551	PSF Mechanical Inc	9322 14th Avenue S	Sea King Industrial Park	●		●					C2/251
13397378	Puget Sound Coatings Inc	9400 8th Avenue S	Sea King Industrial Park						●	●	B2/255
97263627	Puget Sound Coatings Machinists Inc	9220 8th Avenue S	Sea King Industrial Park	●		●		●		●	B2/237
12462	Qual Fab Inc	1705 S 93rd Street, Building F Unit 11	Sea King Industrial Park								C2/242
96526349	R & J Autobody Inc	10832 Meyers Way S	Sea King Industrial Park								B3/302
78215825	Rainier Golf & Country Club	1856 S 112th	Restoration Areas		●			●			C3/304
81158515	Rasmussen Equipment Co Inc	415 S Cloverdale Street	Riverside Drive					●			B2/186
22497475	Rasmussen Equipment Company	8727 5th Avenue S	Riverside Drive								B2/190
83132785	Reamco Electronics	817 S Kenyon Street	Riverside Drive								B2/114
55695661	Recycle America	7901 1st Avenue S Clean up	1st Avenue S SD								B2/124
17130	Revere Group Seattle	9310 4th Avenue S	Riverside Drive	●							B2/253
66136556	Ricks Master Marine Inc	1411 S Thistle Street	Terminal 117	●						●	C2/169
18925	RMC Inc	10766 Myers Way S	Sea King Industrial Park								B3/298
59283333	Rogers Machinery Co Inc	7800 5TH Avenue S	Riverside Drive								B2/96
63293426	Ryder Student Transportation Services	130 S Kenyon Street	1st Avenue S SD		●			●			B2/101
2058	S 96th Street Ditch	S 96th Street & Duwamish River	Sea King Industrial Park		●						B3/277
3644425	S Chicago St Dump	251 S Chicago Street	Riverside Drive								B2/92
17878123	S Holden Abandoned Container	750 Block S Holden Street	Riverside Drive	●							B1/60
1852818	S Kenyon St	832 S Kenyon Street	Riverside Drive								B2/105
87983518	Safway Steel Products	7501 2nd Avenue S	EAA-2					●			B1/42
24041	Samson Tug & Barge Detroit Ave SW	7553 Detroit Avenue SW	1st Avenue S SD			●					A1/45
15539	Samson Tug Maintenance Shop	7739 1st Avenue S	1st Avenue S SD								A1/66
9401	Sea Mar Family Housing	1000 S Henderson	Riverside Drive								B2/199
11466114	Sea Pac Service Co	6100 West Marginal Way SW	Terminal 115								A1/3
82536515	Seafreeze Ltd Terminal 115	206 SW Michigan Street	Terminal 115	●			●	●		●	A1/15

Table C-1

Facilities in the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database

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91829569	Seattle City DOT West Seattle	9200 8th Avenue S	Sea King Industrial Park	●				●			B2/216
13152935	Seattle Fire Station 26	800 S Cloverdale Street	Riverside Drive					●			B2/177
6407	Seattle Heat Treaters, Inc.	521 S Holden Street	Riverside Drive								B1/64
4040072	Seattle Port Terminal 115	6020-6760 West Marginal Way SW	Terminal 115							●	A1/7
77377391	Seattle Public Utilities W Seattle Res	8820 3rd Avenue SW	1st Avenue S SD								A2/217
58482618	Seattle Sludge Interim Project	7417 4th Avenue S	EAA-2								B1/33
2175	Seattle South Transfer Station	8100 2nd Avenue S	1st Avenue S SD		●		●				B2/143
59692187	Seidehuber Iron & Bronze Works Inc	8009 7th Avenue S	Riverside Drive					●			B2/141
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	●	●	●		●			B3/281
15388822	Service Specialties Inc.	800 S Kenyon Street	Riverside Drive					●			B2/104
29633897	Shawnee Painting Sandblastin	8107 10th Avenue S	Riverside Drive								B2/142
39258864	Sherwin Williams Store 4317	9530 10th Ave S	Sea King Industrial Park	●							B2/262
861945	Silver Bay Logging Inc	7760 8th Avenue S	Riverside Drive								B2/86
2236438	Simplex Grinnell	9520 10th Avenue S Suite 100	Sea King Industrial Park								B2/264
6253396	Sirius Maritime Company	309 S Cloverdale D21	Riverside Drive								B2/193
21077	SKBA Buddhist Temple	8th Avenue S & S 100th Street	Sea King Industrial Park								B3/289
12429	Smith Berger Marine, Inc	7915 10th Avenue S	Riverside Drive								B2/129
81861618	Snyder Industries Inc	524 S Southern Street	Riverside Drive								B2/155
26432659	Sound Delivery Service	9999 8th Avenue S	Sea King Industrial Park	●							B3/290
6950604	Sound Propeller Services, Inc.	7916 8th Avenue S	Riverside Drive								B2/128
5776	Sound Propeller Systems Inc	9130 15th Place S	Sea King Industrial Park								C2/215
27778576	South Park Chevron	9525 14th Avenue S	Sea King Industrial Park					●			C2/266
42131353	South Park Truck Trailer Rep	7265 2nd Avenue S	EAA-2							●	B1/31
3665320	South Recycle & Disposal Station 5th Ave	8105 5th Avenue S	1st Avenue S SD								A2/163
3453	South Transfer Station	130 S Kenyon Street	1st Avenue S SD								B2/144
83597535	SPU Highline Well Boulevard Park	SW Corner of S 128th & 20th S	Restoration Areas								C4/320
81215768	SPU Highline Well Riverton Heights	NW Corner of S 148th & 24th S		●							C5/323
42718345	Standard Steel Fabricating Co Inc	8155 1st Avenue S	1st Avenue S SD			●		●			B2/165
48248356	Sunnydale Construction Company Inc	1119 S 96th	Sea King Industrial Park		●			●	●		B3/279
3291	Terex Utilities	9426 8th Avenue S	Sea King Industrial Park								B2/268
79578412	Teris LLC	9520 10th Avenue S Suite 150, Transfer Facility	Sea King Industrial Park	●							B2/263
74799553	Terrel Sommers Inc	9508 8th Avenue S	Sea King Industrial Park								B3/271
69951382	Thomas Equipment Rental	827 S Director Street									B2/207
12333317	Tierney Electrical Manufacturing Company	7901 7th Avenue S	Riverside Drive	●							B2/110
86979859	Tnemec Co Inc	7929 2nd Avenue S	1st Avenue S SD								B2/117
9457	Tours Northwest	8221 7th Avenue S	Riverside Drive								B2/162
2329	ToxGon Corp Seattle	631 S 96th Street	Sea King Industrial Park	●							B3/283
39937726	Transfer Sta Barrel	8100 Occidental Ave S 033	1st Avenue S SD								B2/156
4401006	Ultrapak Printing Inc Former Tenant	1600 S 92nd Place	Sea King Industrial Park	●							C2/218
78714998	United Iron Works Inc	7421 5th Avenue S	EAA-2	●		●		●		●	B1/35
7327447	United States Seafoods	1605 S 93rd Business Park Unit EH	Sea King Industrial Park	●							C2/246

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14193	Urban Hardwoods Sawmill	8427 1st Avenue S	1st Avenue S SD								A2/174
73123528	US DOJ DEA Kent Training	2450 S 142nd									C5/322
21141463	US EPA Technical Assistance Team Whse	1605 S 93rd Building E Unit R	Sea King Industrial Park								C2/248
9037205	US EPA Warehouse	1620 S 92nd Place Unit B	Sea King Industrial Park								C2/247
89337496	WA Argirculture King 2	8100 B 2nd Avenue S	1st Avenue S SD								B2/107
23821	Warner Transmission	10851 Meyers Way S									B3/301
1661671	Warner's Foreign Auto Repair	9001 14th Avenue S	Riverside Drive	●	●			●			C2/202
77384581	Washington Liftruck	700 S Chicago Street	Riverside Drive				●				B2/78
4709	Waste Management Cng Upgrades	149 SW Kenyon & 8111 1st Avenue S	1st Avenue S SD								B2/133
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD		●	●	●	●			A1/24
12494	West Coast Equipment 2	7746 Detroit Avenue SW	1st Avenue S SD								A2/81
2262	West Coast Equipment Inc	7777 Detroit Avenue SW	1st Avenue S SD		●						A2/84
18137296	West Coast Wire Rope & Rigging	7777 7th Avenue S	Riverside Drive	●		●					B2/82
70748294	West Fork Nelson	7918 8th Avenue S	Riverside Drive					●			B2/112
26116543	West Seattle Reservoir		1st Avenue S SD								A2/191
89886819	Westec Industries, Inc.	8111 7th Avenue S	Riverside Drive	●							B2/154
19739	Westeel Company	8001 7th Avenue S	Riverside Drive								B2/134
17467	Western Marine Construction	7245 2nd Avenue S	EAA-2							●	B1/28
2463219	Western United Fish Company	9411 8th Avenue S	Sea King Industrial Park				●				B2/256
56738526	WestFork Nelson Inc	7916 8th Avenue S	Riverside Drive					●			B2/109
95749157	Workboats Northwest Inc	7814 8th Avenue S	Riverside Drive								B2/102
18788836	YRC Inc Seattle	600 S 96th	Sea King Industrial Park								B2/267

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

- RM 1.6-2.1 West: Terminal 115
- RM 2.1 West: 1st Avenue S SD (pending)
- EAA-2: RM 2.1-2.2 West: Trotsky Inlet
- RM 2.2-3.4: Riverside Drive
- EAA-5: RM 3.4-3.8 West: Terminal 117
- RM 3.8-4.2 West: Sea King Industrial Park
- RM 4.2-4.8 West: Restoration Areas
- Facility not included in a Data Gaps report

●- Additional information regarding this facility is available on the accompanying table

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CSCSL - Confirmed or Suspected Contaminated Sites List
CSO - Combined Sewer Overflow
EAA - Early Action Area
EPA - U.S. Environmental Protection Agency
KCIW - King County Industrial Waste
LUST - Leaking Underground Storage Tank
NFA - No Further Action
NPDES - National Pollutant Discharge Elimination System
RM - River Mile
UST - Underground Storage Tank

Table C-2
Facilities in the 8th Avenue S CSO Basin with Active EPA Identification Numbers

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	Hazardous Waste Classification(s)					Map/Map ID[2]
					HWG	HW Other	HWP	Tier2	TRI	
2077	Ace Galvanizing Inc 96th	429 S 96th	Sea King Industrial Park	WAD009286881	●		●	●	●	B3/284
2079	Advance Electroplating	9585 8th Ave S	Sea King Industrial Park	WAD009278847	●		●	●	●	B3/273
5469634	Allied Body Works Inc	625 S 96th Street	Sea King Industrial Park	WAD988496196	●		●			B3/285
26135396	American Bathtub Refinishers Inc	1412 S Henderson Street	Riverside Drive	WAH000010512	●					C2/201
53457146	Auto Site Automotive	11803 Des Moines Memorial Drive	Restoration areas	WAD988495172	●					C4/312
58835952	Boeing D & SG Oxbow Site	10700 West Marinal Way S	Restoration areas	WAD981771017	●		●		●	C3/294
60381981	Boeing South Park	1420 S Trenton Street	Terminal 117	WAD980982672	●		●	●		C2/198
37926748	Boyer Logistics Inc	7318 4th Ave S	EAA-2	WAD045684990	●	●	●			B1/29
38246778	Christian Brothers Floor Svc Inc	309 S Cloverdale Suite C20	Riverside Drive	WAD988505046	●					B2/189
1852542	Clyde West Inc	9615 West Marginal Way S	Restoration areas	WAD082502865	●					C3/287
22978975	Delta Marine Industries Inc	1608 S 96th Street	Sea King Industrial Park	WAD052593480	●		●	●	●	C2/259
75318226	Duwamish Manor	15th Avenue S & S 93rd st	Sea King Industrial Park	WAD988510673	●					C2/235
95735434	Ecolights Northwest LLC	9411 8th Avenue S Suite 3	Sea King Industrial Park	WAH000012443	●	●				B2/257
3533187	FMH Material Handling Solutions	1313 S 96th Street	Sea King Industrial Park	WAD042803874	●		●			B3/280
27446996	Fruehauf Trailer Inc Seattle	9426 8th Avenue S	Sea King Industrial Park	WAD006009401	●					B2/269
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	WAD988499125	●					B2/208
93436287	Gear Works Seattle, Inc.	500 S Portland Street	Riverside Drive	WAD009247305	●		●			B1/68
36385877	Guinns Automotive & Electric	245 S Austin Street	Riverside Drive	WAH000004846	●					B1/51
73671237	Heartwood, Inc.	1414 S Director Street	Riverside Drive	WAD982656431	●		●			C2/205
23115	Industrial Battery	211 S Austin Street	EAA-2	WAH000034810	●					B1/53
2154	Industrial Container Services WA LLC	7152 1st Avenue S	EAA-2	WAD000066084	●		●	●		B1/23
4154808	International Paint LLC	1541 S 92nd Place Suite C	Sea King Industrial Park	WAH000026949	●	●				C2/214
2404488	King Electrical Mfg Co	9131 10th Avenue S	Sea King Industrial Park	WAH000033636	●					B2/222
58864121	Lloyd Electric Apparatus Co	7126 West Marginal Way SW	Terminal 115	WAD020245395	●		●			A1/20
3546421	Mason Dixon Intermodal Inc	9515 10th Avenue S	Sea King Industrial Park	WAH000034528	●	●				B2/260
24178231	NRC Environmental Sves Inc	20500 Richmond Beach Drive NW	Terminal 115	WAH000004549	●	●				A1/18
9246491	Progressive Fastening Inc	837 S Director Street	Sea King Industrial Park	WAH000032052	●					B2/206
4210684	Protective Coating Consultants Inc	1501 S 92nd Place Suite A	Sea King Industrial Park	WAH000031191	●	●				C2/220
18451551	PSF Mechanical Inc	9322 14th Avenue S	Sea King Industrial Park	WAD988497558	●			●		C2/251
97263627	Puget Sound Coatings Machinists Inc	9220 8th Avenue S	Sea King Industrial Park	WAD002838068	●		●	●	●	B2/237
17130	Revere Group Seattle	9310 4th Avenue S	Riverside Drive	WAH000035608	●					B2/253
66136556	Ricks Master Marine Inc	1411 S Thistle Street	Terminal 117	WA0000016113	●					C2/169
17878123	S Holden Abandoned Container	750 Block S Holden Street	Riverside Drive	WAD000463794	●					B1/60
82536515	Seafreeze Ltd Terminal 115	206 SW Michigan Street	Terminal 115	WAD988496725	●			●		A1/15
91829569	Seattle City DOT West Seattle	9200 8th Avenue S	Sea King Industrial Park	WAD981765183	●					B2/216
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	WAD988492427	●		●			B3/281
39258864	Sherwin Williams Store 4317	9530 10th Ave S	Sea King Industrial Park	WAH000013730	●		●			B2/262
26432659	Sound Delivery Service	9999 8th Avenue S	Sea King Industrial Park	WAD988515821	●					B3/290
81215768	SPU Highline Well Riverton Heights	NW Corner of S 148th & 24th S		CRK000025270				●		C5/323
79578412	Teris LLC	9520 10th Avenue S Suite 150, Transfer Facility	Sea King Industrial Park	WAH000019661		●				B2/263
12333317	Tierney Electrical Manufacturing Company	7901 7th Avenue S	Riverside Drive	WAD009249350	●					B2/110
2329	ToxGon Corp Seattle	631 S 96th Street	Sea King Industrial Park	WAD061669644	●	●				B3/283
4401006	Ultrapak Printing Inc Former Tenant	1600 S 92nd Place	Sea King Industrial Park	WAH000031246	●	●				C2/218
78714998	United Iron Works Inc	7421 5th Avenue S	EAA-2	WAH000008482	●					B1/35
7327447	United States Seafoods	1605 S 93rd Business Park Unit EH	Sea King Industrial Park	WAH000033336	●					C2/246

Table C-2

Facilities in the 8th Avenue S CSO Basin with Active EPA Identification Numbers

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Active EPA ID No.	Hazardous Waste Classification(s)					Map/Map ID[2]
					HWG	HW Other	HWP	Tier2	TRI	
1661671	Warner's Foreign Auto Repair	9001 14th Avenue S	Riverside Drive	WAD988495040	●					C2/202
18137296	West Coast Wire Rope & Rigging	7777 7th Avenue S	Riverside Drive	WAD027483775	●					B2/82
89886819	Westec Industries, Inc.	8111 7th Avenue S	Riverside Drive	WAD988476271	●					B2/154

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

- RM 1.6-2.1 West: Terminal 115
- RM 2.1 West: 1st Avenue S SD (pending)
- EAA-2: RM 2.1-2.2 West: Trotsky Inlet
- RM 2.2-3.4: Riverside Drive
- EAA-5: RM 3.4-3.8 West: Terminal 117
- RM 3.8-4.2 West: Sea King Industrial Park
- RM 4.2-4.8 West: Restoration Areas
- Facility not included in a Data Gaps report

CSO - Combined Sewer Overflow
EPA - U.S. Environmental Protection Agency
EAA - Early Action Area
RCRA - Resource Conservation and Recovery Act
RM - River Mile

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

HWG - Facilities that generate any quantity of hazardous waste
HW Other - Facilities that are required to have a RCRA Site ID, but do not generate or manage hazardous waste
HWP - Facilities that report under Section 313 of the Emergency Planning/Community Right-To-Know Act or that generate more than 2,640 pounds of hazardous waste per year.
Tier2 - Businesses that store 10,000 pounds or more of a hazardous chemical or 500 pounds or less, depending on the chemical, of an extremely hazardous chemical at any time must report annually.
TRI - Facilities in specific industries that manufacture, process or use more than the threshold amount of one or more of 600 listed toxic chemicals.

Table C-3
Facilities within the 8th Avenue S CSO Basin
Listed on Ecology's Confirmed or Suspected Contaminated Site List

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Media and Contaminants				Map/Map ID[2]
				Soil	Groundwater	Surface Water	Air	
22726	640 S Riverside Dr	640 S Riverside Drive	Riverside Drive	Confirmed Halogenated Organic Compounds EPA Priority Pollutants Petroleum Products PAH Arsenic	Confirmed Halogenated Organic Compounds EPA Priority Pollutants Petroleum Products Arsenic Below Cleanup Levels PAH			B1/54
2077	Ace Galvanizing Inc 96th	429 S 96th	Sea King Industrial Park	Suspected Reactive Wastes Corrosive Wastes Confirmed EPA Priority Pollutants Petroleum Products	Suspected Reactive Wastes Corrosive Wastes Confirmed EPA Priority Pollutants Petroleum Products			B3/284
2079	Advance Electroplating	9585 8th Ave S	Sea King Industrial Park	Suspected Corrosive Wastes Conventional Contaminants, Inorganic Confirmed Halogenated Organic Compounds EPA Priority Pollutants	Suspected Corrosive Wastes Conventional Contaminants, Inorganic Confirmed Halogenated Organic Compounds EPA Priority Pollutants	Suspected Corrosive Wastes Confirmed EPA Priority Pollutants Conventional Contaminants, Inorganic	Confirmed Halogenated Organic Compounds	B3/273
8162841	ATC Distribution Group	401 S Webster	EAA-2	Confirmed Petroleum Products	Confirmed Petroleum Products			B1/43
97573251	Douglas Management Dock	7100 2nd Avenue SW	1st Avenue S SD	Confirmed Base/Neutral/Acid Organics EPA Priority Pollutants PCBs Petroleum Products Arsenic	Suspected Petroleum Products Confirmed PCBs Petroleum Products Arsenic			A1/17
2258	Eastern Supply Company	7745 1st Avenue S	1st Avenue S SD	Confirmed Halogenated Organic Compounds	Confirmed Halogenated Organic Compounds			A2/93
92792171	Former Bus & Air Parcel Service Inc	9004 14th S	Riverside Drive	Suspected Petroleum Products	Confirmed Petroleum Products			C2/203
63168342	Former Glitsa American Inc	327 S Kenyon Street	Riverside Drive	Confirmed Petroleum Products Non-Halogenated Solvents	Confirmed Petroleum Products			B2/108
42127616	Former Hurlen Construction	700 S Riverside Drive	Riverside Drive	Suspected Petroleum Products				B1/59
13132191	Former Spencer Industries Inc	8410 Dallas Avenue S	Riverside Drive	Below Cleanup Levels Halogenated Organic Compounds	Confirmed Halogenated Organic Compounds			B2/167
27446996	Fruehauf Trailer Inc Seattle	9426 8th Avenue S	Sea King Industrial Park	Confirmed EPA Priority Pollutants Metals Non-Halogenated Solvents	Confirmed EPA Priority Pollutants Metals Non-Halogenated Solvents			B2/269
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	Confirmed Petroleum Products	Confirmed Petroleum Products			B2/208
54287319	Gold Co	12459 Des Moines Way S	Restoration Areas	Suspected EPA Priority Pollutants Petroleum Products Confirmed Petroleum Products				C4/318

Table C-3
Facilities within the 8th Avenue S CSO Basin
Listed on Ecology's Confirmed or Suspected Contaminated Site List

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Media and Contaminants				Map/Map ID[2]
				Soil	Groundwater	Surface Water	Air	
1557860	Halfon Candy Co	9229 10th Avenue S	Sea King Industrial Park	Suspected EPA Priority Pollutants Metals Corrosive Wastes Conventional Contaminants, Inorganic	Suspected EPA Priority Pollutants Metals Corrosive Wastes Conventional Contaminants, Inorganic	Suspected Corrosive Wastes Confirmed EPA Priority Pollutants Metals Conventional Contaminants, Inorganic		B2/236
2154	Industrial Container Services WA LLC	7152 1st Avenue S	EAA-2	Suspected Base/Neutral/Acid Organics Petroleum Products PCBs Confirmed Halogenated Organic Compounds EPA Priority Pollutants Metals Pesticides Phenolic Compounds Non-Halogenated Solvents PAH	Suspected Base/Neutral/Acid Organics Metals PCBs Confirmed Halogenated Organic Compounds EPA Priority Pollutants Pesticides Petroleum Products Phenolic Compounds Non-Halogenated Solvents	Suspected Halogenated Organic Compounds Metals Non-Halogenated Solvents Confirmed EPA Priority Pollutants		B1/23
2335	Interstate Coatings, Inc.	754 S Chicago	Riverside Drive	Suspected Halogenated Organic Compounds EPA Priority Pollutants Petroleum Products Non-Halogenated Solvents	Suspected Halogenated Organic Compounds EPA Priority Pollutants Petroleum Products Non-Halogenated Solvents	Suspected Halogenated Organic Compounds Non-Halogenated Solvents Confirmed EPA Priority Pollutants Petroleum Products	Suspected Halogenated Organic Compounds EPA Priority Pollutants Petroleum Products Non-Halogenated Solvents	B2/91
2320	Laidlaw	7739 1st Avenue S	1st Avenue S SD	Confirmed Halogenated Organic Compounds Petroleum Products	Confirmed Halogenated Organic Compounds Petroleum Products			B2/123
95231135	Moimoi Property	10118 Des Moines Memorial Drive S	Restoration Areas	Suspected EPA Priority Pollutants Conventional Contaminants, Organic	Confirmed EPA Priority Pollutants Petroleum Products			C3/293
45787437	Olympic Steel Door	7800 7th Avenue S	Riverside Drive	Confirmed Petroleum Products	Confirmed Petroleum Products			B2/94
2056	Precision Engineering Inc	1231 S Director Street	Sea King Industrial Park	Below Cleanup Levels EPA Priority Pollutants Confirmed Petroleum Products	Confirmed EPA Priority Pollutants Petroleum Products	Remediated EPA Priority Pollutants Petroleum Products	Remediated Petroleum Products	B2/212
78215825	Rainier Golf & Country Club	1856 S 112th	Restoration Areas	Below Cleanup Levels Petroleum Products				C3/304
63293426	Ryder Student Transportation Services	130 S Kenyon Street	1st Avenue S SD	Confirmed EPA Priority Pollutants Arsenic Petroleum Products	Confirmed PCBs Pesticides Petroleum Products Arsenic			B2/101

Table C-3
Facilities within the 8th Avenue S CSO Basin
Listed on Ecology's Confirmed or Suspected Contaminated Site List

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	Media and Contaminants				Map/Map ID[2]
				Soil	Groundwater	Surface Water	Air	
2058	S 96th Street Ditch	S 96th Street & Duwamish River	Sea King Industrial Park	Suspected Halogenated Organic Compounds PCBs, Pesticides Phenolic Compounds Non-Halogenated Solvents Dioxin Corrosive Wastes Radioactive Wastes Conventional Contaminants, Inorganic Asbestos Confirmed EPA Priority Pollutants Metals Petroleum Products PAH Conventional Contaminants, Organic	Suspected Halogenated Organic Compounds EPA Priority Pollutants Metals PCBs Pesticides Petroleum Products Phenolic Compounds Non-Halogenated Solvents Dioxin PAH Corrosive Wastes Radioactive Wastes Conventional Contaminants, Organic Conventional Contaminants, Inorganic Asbestos	Suspected Halogenated Organic Compounds EPA Priority Pollutants Metals PCBs Pesticides Petroleum Products Phenolic Compounds Non-Halogenated Solvents Dioxin PAH Corrosive Wastes Radioactive Wastes Conventional Contaminants, Organic Conventional Contaminants, Inorganic Asbestos	Suspected Halogenated Organic Compounds EPA Priority Pollutants Metals PCBs Pesticides Petroleum Products Phenolic Compounds Non-Halogenated Solvents Dioxin PAH Corrosive Wastes Radioactive Wastes Conventional Contaminants, Organic Conventional Contaminants, Inorganic Asbestos	B3/277
2175	Seattle South Transfer Station	8100 2nd Avenue S	1st Avenue S SD	Suspected Conventional Contaminants, Organic Conventional Contaminants, Inorganic	Suspected Conventional Contaminants, Organic Conventional Contaminants, Inorganic	Suspected Conventional Contaminants, Organic Conventional Contaminants, Inorganic		B2/143
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	Confirmed Petroleum Products	Confirmed Petroleum Products			B3/281
1661671	Warner's Foreign Auto Repair	9001 14th Avenue S	Riverside Drive	Confirmed Petroleum Products				C2/202
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD	Confirmed EPA Priority Pollutants Petroleum Products	Suspected EPA Priority Pollutants Confirmed Petroleum Products	Suspected EPA Priority Pollutants Petroleum Products		A1/24
2262	West Coast Equipment Inc	7777 Detroit Avenue SW	1st Avenue S SD	Suspected Halogenated Organic Compounds Non-Halogenated Solvents Confirmed Petroleum Products	Suspected Halogenated Organic Compounds Petroleum Products Non-Halogenated Solvents	Suspected Halogenated Organic Compounds Petroleum Products Non-Halogenated Solvents		A2/84

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

- RM 1.6-2.1 West: Terminal 115
- RM 2.1 West: 1st Avenue S SD (pending)
- EAA-2: RM 2.1-2.2 West: Trotsky Inlet
- RM 2.2-3.4: Riverside Drive
- EAA-5: RM 3.4-3.8 West: Terminal 117
- RM 3.8-4.2 West: Sea King Industrial Park
- RM 4.2-4.8 West: Restoration Areas
- Facility not included in a Data Gaps report

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

CSO - Combined Sewer Overflow
EAA - Early Action Area
PAHs - polynuclear aromatic
PCBs - polychlorinated biphenyls
RM - River Mile

Table C-4
Facilities in the 8th Avenue S CSO Basin with NPDES Permits

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	NPDES Permit No.	Map/Map ID[2]
10207	Absolute German	9510 14th Avenue S	Sea King Industrial Park	WAR125038	C3/275
2077	Ace Galvanizing Inc 96th	429 S 96th Street	Sea King Industrial Park	WAR000154	B3/284
21995	Architectural Stone Werkes	429 S 96th Street	Sea King Industrial Park	WAR004556	B3/282
60381981	Boeing South Park	1420 S Trenton Street	Terminal 117	WAR001009	C2/198
37926748	Boyer Logistics Inc	7318 4th Avenue S	EAA-2	WAR005598	B1/29
67814731	Container Care Puget Sound	9600 8th Avenue S	Sea King Industrial Park	WAR011548	B2/250
6915930	Delta Marine Industries	1608 S 96th Street	Sea King Industrial Park	WAG030091	C2/258
90247719	First Student Seattle	130 S Kenyon Street	1st Avenue S SD	WAR002329	B2/95
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	WAR003120	B2/208
93436287	Gear Works Seattle, Inc.	500 S Portland Street	Riverside Drive	WAR000763	B1/68
16139	Independent Metals Plant 2	816 S Kenyon Street	Riverside Drive	WAR009725	B2/89
39232961	Lukas Machine Inc	707 S Riverside Drive	Riverside Drive	WAR011064	B1/72
22736	Machinists Inc.	7600 5th Avenue S	Riverside Drive	WAR010782	B1/56
46338473	Magnetic & Penetrant Services Co Inc	8135 1st Avenue S	1st Avenue S SD	WAR011078	B2/160
38921541	Marine Lumber Service Inc	525 S Chicago Street	Riverside Drive	WAR011741	B2/97
74745382	Northwest Grating Products, Inc.	9230 4th Avenue S	Riverside Drive	WAR001918	B2/231
18451551	PSF Mechanical Inc	9322 14th Avenue S	Sea King Industrial Park	WAR000264	C2/251
97263627	Puget Sound Coatings Machinists Inc	9220 8th Avenue S	Sea King Industrial Park	WAR002142	B2/237
24041	Samson Tug & Barge Detroit Ave SW	7553 Detroit Avenue SW	1st Avenue S SD	WAR011800	A1/45
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	WAR000650	B3/281
42718345	Standard Steel Fabricating Co Inc	8155 1st Avenue S	1st Avenue S SD	WAR000617	B2/165
78714998	United Iron Works Inc	7421 5th Avenue S	EAA-2	WAR002137	B1/35
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD	WAR000581	A1/24
18137296	West Coast Wire Rope & Rigging	7777 7th Avenue S	Riverside Drive	WAR002111	B2/82

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

	RM 1.6-2.1 West: Terminal 115		RM 3.8-4.2 West: Sea King Industrial Park
	RM 2.1 West: 1st Avenue S SD (pending)		RM 4.2-4.8 West: Restoration Areas
	EAA-2: RM 2.1-2.2 West: Trotsky Inlet		Facility not included in a Data Gaps report
	RM 2.2-3.4: Riverside Drive		
	EAA-5: RM 3.4-3.8 West: Terminal 117		

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

CSO - Combined sewer overflow

EAA - Early Action Area

NPDES - National Pollutant Discharge Elimination System

RM - River Mile

Table C-5
Facilities in the 8th Avenue S CSO Basin with KCIW Discharge Permits

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	KCIW Discharge Permit Number	Description of Operation/Nature of Wastewater	Map/Map ID[2]
2430	Coast Crane Company	8250 5th Avenue S	Riverside Drive	788-01	Pressure Washing	B2/168
9309618	Independent Metals Plant 1	747 S Monroe Street	Riverside Drive	4158-01	Metals Recycling	B2/137
2154	Industrial Container Services WA LLC	7152 1st Avenue S	EAA-2	7130-04	Barrel Cleaning	B1/23
16838	National Products S Elmgrove	1017 S Elmgrove Street	Riverside Drive	7834-04	Metal Finishing	B2/149
84427474	Northwest Container Services Inc	6110 West Marginal Way SW Terminal 115	Terminal 115	651-03	Container Washing	A1/4
82536515	Seafreeze Ltd Terminal 115	206 SW Michigan Street	Terminal 115	621-03	Food Processing-Seafood	A1/15
2175	Seattle South Transfer Station	8100 2nd Avenue S	1st Avenue S SD	400-03	Solid Waste - Transfer Facility	B2/143
77384581	Washington Liftruck	700 S Chicago Street	Riverside Drive	806-01	Pressure Washing	B2/78
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD	785-02	General Type	A1/24
2463219	Western United Fish Company	9411 8th Avenue S	Sea King Industrial Park	7839-01	Food Processing-Seafood	B2/256

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

- RM 1.6-2.1 West: Terminal 115
- RM 2.1 West: 1st Avenue S SD (pending)
- EAA-2: RM 2.1-2.2 West: Trotsky Inlet
- RM 2.2-3.4: Riverside Drive
- EAA-5: RM 3.4-3.8 West: Terminal 117
- RM 3.8-4.2 West: Sea King Industrial Park
- RM 4.2-4.8 West: Restoration Areas
- Facility not included in a Data Gaps report

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

CSO - Combined sewer overflow

EAA - Early Action Area

KCIW - King County Industrial Waste

RM - River Mile

Table C-6

Facilities in the 8th Avenue S CSO Basin with Underground Storage Tanks or Leaking Underground Strorage Tanks

Facility/ Site ID	Facility Name	Facility Address	Data Gaps Report[1]	UST Information									LUST Information				Map/ Map ID[2]
				UST Site ID	Operational	Removed	Closed in place	Change in Service	Unknown	Exempt	Closure in Process	Temp Closed	LUST Release ID	Media Affected	Status	Status Date	
43565732	7 Eleven Food Store 230723931L	11657 Des Moines Way S	Restoration Areas	8678	3												C4/311
2077	Ace Galvanizing Inc 96th	429 S 96th	Sea King Industrial Park	3458		1											B3/284
72668839	African Northwest, Inc.	470 S Kenyon Street	Riverside Drive	1883		1											B2/98
8162841	ATC Distribution Group	401 S Webster	EAA-2	2703		2							3571	Soil/ GW	Cleanup Started	6/1/1995	B1/43
53457146	Auto Site Automotive	11803 Des Moines Memorial Drive	Restoration Areas	58		2											C4/312
3479178	Cliff Housers Automotive	806 S 112th Street	Sea King Industrial Park	9334		6							1202	Soil/ GW	NFA	1/21/199	B3/307
4612472	Coach Maintenance	255 S Holden Street	Riverside Drive	7524		2							3695	Soil	Cleanup Started	7/1/2011	B1/63
98422914	Crowley Marine Services Inc Terminal 115	6020 West Marginal Way	Terminal 115	6275	1	5	1						3249	Soil/ GW	Cleanup Started	6/1/1995	A1/13
82818857	Custom Craiting	233 S Holden Street	Riverside Drive	100876		2											B1/65
61231536	Custom Roofing Inc	8001 5th Avenue S	1st Avenue S SD	4900		2											B2/130
97573251	Douglas Management Dock	7100 2nd Avenue SW	1st Avenue S SD	100532		2							2514	Soil/ GW	Awaiting Cleanup	7/1/2011	A1/17
3565459	Ferguson Construction	7433 5th Avenue S	EAA-2	200658		1											B1/38
3533187	FMH Material Handling Solutions	1313 S 96th Street	Sea King Industrial Park	496565		3							6164	Soil/ GW	Cleanup Started	7/29/2003	B3/280
92792171	Former Bus & Air Parcel Service Inc	9004 14th S	Riverside Drive	5423		4							776	Soil	Cleanup Started	7/1/2011	C2/203
93927211	Former Crosby Auto Repair Shop	8621 14th Avenue S	Riverside Drive	545685			1						5589	Soil	Cleanup Started	9/13/2000	C2/182
38576231	Former Emerald Services Group	500 S Sullivan Street	Riverside Drive	7426		4											B2/172
63168342	Former Glitsa American Inc	327 S Kenyon Street	Riverside Drive	6178		1							2324	Soil/ GW	Cleanup Started	6/1/1995	B2/108
42127616	Former Hurlen Construction	700 S Riverside Drive	Riverside Drive	11414		2							3042	Soil	Cleanup Started	7/1/2011	B1/59
71678662	Former Long Painting - 10th Avenue Facility	8025 10th Avenue S	Riverside Drive	5585		4											B2/138
41287367	Former Scott Andrews Property	8520 14th Avenue S	Riverside Drive	565971		6							9038	Soil	Cleanup Started	12/20/2000	C2/178
48968474	Former South Park BP	8819 14th Avenue S	Riverside Drive	8179	3								3200	Soil/ GW	Cleanup Started	6/11/1995	C2/197
23653754	Former Tom Thurber	1420 S Henderson Street	Riverside Drive	101847		1											C2/200
7727938	Gary Merlino Construction Company	9125 10th Avenue S	Sea King Industrial Park	10284		2	1						5444	Soil/ GW	Cleanup Started	7/1/2011	B2/208
18369741	Glen Acres Home Association	1000 S 112th Street	Sea King Industrial Park	100897		4							1410	Soil	Reported Cleaned Up	8/23/2000	B3/305
10128921	Global Fabricators Inc.	7619 5th Avenue S	Riverside Drive	1496			1										B1/58
54287319	Gold Co	12459 Des Moines Way S	Restoration Areas	8142		3							747	Soil	Cleanup Started	7/1/2011	C4/318
93252843	Icon Materials Seattle Asphalt	1115 S 96th Street	Sea King Industrial Park	4980		6											B3/286

Table C-6

Facilities in the 8th Avenue S CSO Basin with Underground Storage Tanks or Leaking Underground Strorage Tanks

Facility/ Site ID	Facility Name	Facility Address	Data Gaps Report[1]	UST Information: UST Site ID	Operational	Removed	Closed in place	Change in Service	Unknown	Exempt	Closure in Process	Temp Closed	LUST Information: LUST Release ID	Media Affected	Status	Status Date	Map/ Map ID[2]
25623222	Interstate Coatings Inc UST 9194	754 S Chicago Street	Riverside Drive	9194		1							5238	Soil	Cleanup Started	9/23/1998	B2/87
94931167	Jones Washington Stevedoring Co Ust2313	7245 West Marginal Way SW	1st Avenue S SD	2313		3							3728	Soil	Cleanup Started	7/1/2011	A1/27
13389849	Joseph B Meder	12025 Des Moines Way S	Restoration Areas	9215		6											C4/314
11797661	Karawis Inc	10723 1st Avenue S	Sea King Industrial Park	100555	1							1					B3/297
2489	Kaspac Chiyoda Property	1237 S Director Street	Sea King Industrial Park	2283		1											C2/209
2320	Laidlaw	7739 1st Avenue S	1st Avenue S SD	12778		3							4546	Soil/ GW	NFA	8/31/199	B2/123
16981594	Lion Trucking Inc	8425 1st Avenue S (share w/Old Dominion Freight)	1st Avenue S SD	510118					3								A2/171
83549384	Liquid Air Corp of N America	7500 2nd Avenue S	EAA-2	7069		2											B1/44
36776588	MacDonald Miller Service Inc	7707 Detroit Avenue SW	1st Avenue S SD	101253			6										A1/69
38921541	Marine Lumber Service Inc	525 S Chicago Street	Riverside Drive	11327		2							3470	Soil	Cleanup Started	6/1/1995	B2/97
73969348	Marine Lumber Service Shop	558 S Kenyon Street	Riverside Drive	102380		2							3632	Soil/GW	Cleanup Started	6/1/1995	B2/100
7747737	Mccall Oil Seattle Home Heating Burien	11441 Des Moines Way		3802		6											C4/309
36919863	McKinstry Co S Barton St	855 S Barton Street	Sea King Industrial Park	8958					2								B2/229
42665774	Morgan Trucking Inc Seattle	9228 10th Avenue S	Sea King Industrial Park	844		2											B2/254
25963342	North Star Ice Equipment Inc	8151 Occidental Avenue S	1st Avenue S SD	3729			1										B2/157
62275925	Northern Freight Lines Inc	730 S Chicago Street	Riverside Drive	905		1											B2/88
24178231	NRC Environmental Sves Inc	20500 Richmond Beach Drive NW	Terminal 115	494604		2											A1/18
45787437	Olympic Steel Door	7800 7th Avenue S	Riverside Drive	516774		1							5406	Soil/ GW	Reported Cleaned Up	7/28/2003	B2/94
1992812	Petrocard Systems Inc	9014 14th Avenue S	Riverside Drive	436032	2												C2/204
7936495	Portable Sheds of America	7510 5th Avenue S	Riverside Drive	850					1								B1/48
2056	Precision Engineering Inc	1231 S Director Street	Sea King Industrial Park	8205						10							B2/212
12264831	Professional Service Industrie	7400 3rd Avenue S	EAA-2	53		1											B1/32
97263627	Puget Sound Coatings Machinists Inc	9220 8th Avenue S	Sea King Industrial Park	3936		1											B2/237
78215825	Rainier Golf & Country Club	1856 S 112th	Restoration Areas	2451		3							3387	Soil	Cleanup Started	7/1/2011	C3/304
81158515	Rasmussen Equipment Co Inc	415 S Cloverdale Street	Riverside Drive	721		2											B2/186
63293426	Ryder Student Transportation Services	130 S Kenyon Street	1st Avenue S SD	425723		4							4632	Soil/ GW	Reported Cleaned Up	8/13/1997	B2/101
87983518	Safway Steel Products	7501 2nd Avenue S	EAA-2	11683		1											B1/42
82536515	Seafreeze Ltd Terminal 115	206 SW Michigan Street	Terminal 115	666		1											A1/15
91829569	Seattle City DOT West Seattle	9200 8th Avenue S	Sea King Industrial Park	7932		2							1475	Soil	Reported Cleaned Up	9/27/1995	B2/216

Table C-6

Facilities in the 8th Avenue S CSO Basin with Underground Storage Tanks or Leaking Underground Strorage Tanks

Facility/ Site ID	Facility Name	Facility Address	Data Gaps Report[1]	UST Information									LUST Information				Map/ Map ID[2]
				UST Site ID	Operational	Removed	Closed in place	Change in Service	Unknown	Exempt	Closure in Process	Temp Closed	LUST Release ID	Media Affected	Status	Status Date	
13152935	Seattle Fire Station 26	800 S Cloverdale Street	Riverside Drive	7900		1											B2/177
59692187	Seidehuber Iron & Bronze Works Inc	8009 7th Avenue S	Riverside Drive	687	1	1											B2/141
37752719	Selland Auto Transport	615 S 96th Street	Sea King Industrial Park	12618		3	1						5392	Soil/ GW	Cleanup Started	9/29/1998	B3/281
15388822	Service Specialties Inc.	800 S Kenyon Street	Riverside Drive	6933			4										B2/104
27778576	South Park Chevron	9525 14th Avenue S	Sea King Industrial Park	587780	2												C2/266
42718345	Standard Steel Fabricating Co Inc	8155 1st Avenue S	1st Avenue S SD	1527		1											B2/165
48248356	Sunnydale Construction Company Inc	1119 S 96th	Sea King Industrial Park	9109		2	2										B3/279
78714998	United Iron Works Inc	7421 5th Avenue S	EAA-2	1019		1											B1/35
1661671	Warner's Foreign Auto Repair	9001 14th Avenue S	Riverside Drive	10726		3				1			1560	Soil	Awaiting Cleanup	7/1/2011	C2/202
2425	Waste Management of Seattle	7201 West Marginal Way SW	1st Avenue S SD	3446		1	3						2100	Soil/ GW/ Surface Water	Cleanup Started	6/1/1995	A1/24
70748294	West Fork Nelson	7918 8th Avenue S	Riverside Drive	101151		1											B2/112
56738526	WestFork Nelson Inc	7916 8th Avenue S	Riverside Drive	101576							1						B2/109

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

- RM 1.6-2.1 West: Terminal 115
- RM 2.1 West: 1st Avenue S SD (pending)
- EAA-2: RM 2.1-2.2 West: Trotsky Inlet
- RM 2.2-3.4: Riverside Drive
- EAA-5: RM 3.4-3.8 West: Terminal 117
- RM 3.8-4.2 West: Sea King Industrial Park
- RM 4.2-4.8 West: Restoration Areas
- Facility not included in a Data Gaps report

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

CSO - Combined sewer overflow

EAA - Early Action Area

UST - Underground Storage Tank

LUST - Leaking Underground Storage Tank

RM - River Mile

GW - Groundwater

Table C-7
Facilities in the 8th Avenue S CSO Basin that are Listed on Ecology's No Further Action List

Facility/Site ID	Facility Name	Facility Address	Data Gaps Report[1]	NFA Date	NFA Type	Map/Map ID[2]
22342251	All City Auto Wrecking & Sales Inc	9438 Des Moines Memorial Drive	Sea King Industrial Park	6/24/1999	NFA after assessment, IRAP, or VCP	C3/276
53457146	Auto Site Automotive	11803 Des Moines Memorial Drive	Restoration Areas	3/23/2009	NFA after assessment, IRAP, or VCP	C4/312
3565459	Ferguson Construction	7433 5th Avenue S	EAA-2	5/29/1996	NFA after assessment, IRAP, or VCP	B1/38
2278	Former King Auto & Truck Wrecking	543 S Monroe	Riverside Drive	7/21/2000	NFA after assessment, IRAP, or VCP	B2/132
71678662	Former Long Painting - 10th Avenue Facility	8025 10th Avenue S	Riverside Drive	2/4/2003	NFA after assessment, IRAP, or VCP	B2/138
5152950	Gasoline Service Station Former	12249 8th Avenue S		2/14/2005	NFA after assessment, IRAP, or VCP	B4/315
93252843	Icon Materials Seattle Asphalt	1115 S 96th Street	Sea King Industrial Park	10/3/2011	NFA - Initial Investigation	B3/286
2491	Jones Property	12441 20th Avenue S	Restoration Areas	12/20/1996	NFA after assessment, IRAP, or VCP	C4/316
2489	Kaspac Chiyoda Property	1237 S Director Street	Sea King Industrial Park	5/16/1998	NFA after assessment, IRAP, or VCP	C2/209
2263	Markey Property Parcel 4	9520 10th Avenue S	Sea King Industrial Park	9/21/2009	NFA after Ecology-supervised or conducted cleanup	B2/261
7747737	Mccall Oil Seattle Home Heating Burien	11441 Des Moines Way		10/3/2011	NFA - Initial Investigation	C4/309
2334	Mikes Aussie Machine Shop	12441 Des Moines Memorial Drive	Restoration Areas	3/2/2009	NFA after assessment, IRAP, or VCP	C4/317
2347	Norman Property	11603 10th Avenue S	Sea King Industrial Park	12/28/2005	NFA after assessment, IRAP, or VCP	B4/310
13397378	Puget Sound Coatings Inc	9400 8th Avenue S	Sea King Industrial Park	3/30/1999	NFA after assessment, IRAP, or VCP	B2/255
48248356	Sunnydale Construction Company Inc	1119 S 96th	Sea King Industrial Park	10/3/2011	NFA - Initial Investigation	B3/279

[1] This Column indicates that a facility is discussed in the Data Gaps report asssociated with the listed source control area:

	RM 1.6-2.1 West: Terminal 115
	RM 2.1 West: 1st Avenue S SD (pending)
	EAA-2: RM 2.1-2.2 West: Trotsky Inlet
	RM 2.2-3.4: Riverside Drive
	EAA-5: RM 3.4-3.8 West: Terminal 117
	RM 3.8-4.2 West: Sea King Industrial Park
	RM 4.2-4.8 West: Restoration Areas
	Facility not included in a Data Gaps report

[2]- See Appendix C, Maps A-1 through C-5. Map ID number identifies the facility

EAA - Early Action Area

NFA - No Further Action

IRAP - Independent Remedial Action Program

VCP - Voluntary Cleanup Program

Table C-8
Information for Facilities within the 8th Avenue S CSO Basin that are listed in the Ecology Facility/Site Database and Not Included in Another Source Control Area or Discussed in the Riverside Drive Data Gaps Report

Facility/ Site ID	Facility Name	Facility Address	SIC Code	SIC Description	NAICS Code	NAICS Description	Ecology Interaction(s)	Map/Map ID[1]
5152950	Gasoline Service Station Former	12249 8th Avenue S	NA	NA	NA	NA	VCP NW1376 - Inactive	B4/315
23949	M & M Grinding	10846 Meyers Way S	NA	NA	NA	NA	RSVP - Active Urban Waters - Active	B3/303
7747737	Mccall Oil Seattle Home Heating Burien	11441 Des Moines Way	NA	NA	NA	NA	UST ID 3802 - Active LUST ID 3802 - Inactive	C4/309
81215768	SPU Highline Well Riverton Heights	NW Corner of S 148th & 24th S	4941	Water Supply	NA	NA	Tier 2 CRK000025270 - Active	C5/323
69951382	Thomas Equipment Rental	827 S Director Street	7353	Heavy Construction Equipment Rental	NA	NA	HWG WA0000062901 - Inactive	B2/207
73123528	US DOJ DEA Kent Training	2450 S 142nd	9999	Nonclassifiable Establishments	NA	NA	HWG WAD988499786 - Inactive	C5/322
23821	Warner Transmission	10851 Meyers Way S	NA	NA	NA	NA	RSVP - Active Urban Waters - Active	B3/301

[1] - See Appendix C-2. Map identifies number/Map ID number identifies the facility.

Ecology Hazardous Waste Programs

HWG - Facilities that generate any quantity of a dangerous waste. They may be classified as SQG, MQG, or LQG depending on hazardous waste generated for a given month.

RSVP - Revised Site Visit Program - The Hazardous Waste and Toxics Reduction Program engages in a variety of field work, site visits, and contacts with sites.

Tier 2 - Businesses that store 10,000 pounds or more of a hazardous chemical or 500 pounds or less, depending on the chemical, of an extremely hazardous chemical on site at any one time must report annually. Reports are sent to the State Emergency Response Commission.

Urban Waters - The facility has received an inspection by an Ecology Urban Waters Inspector.

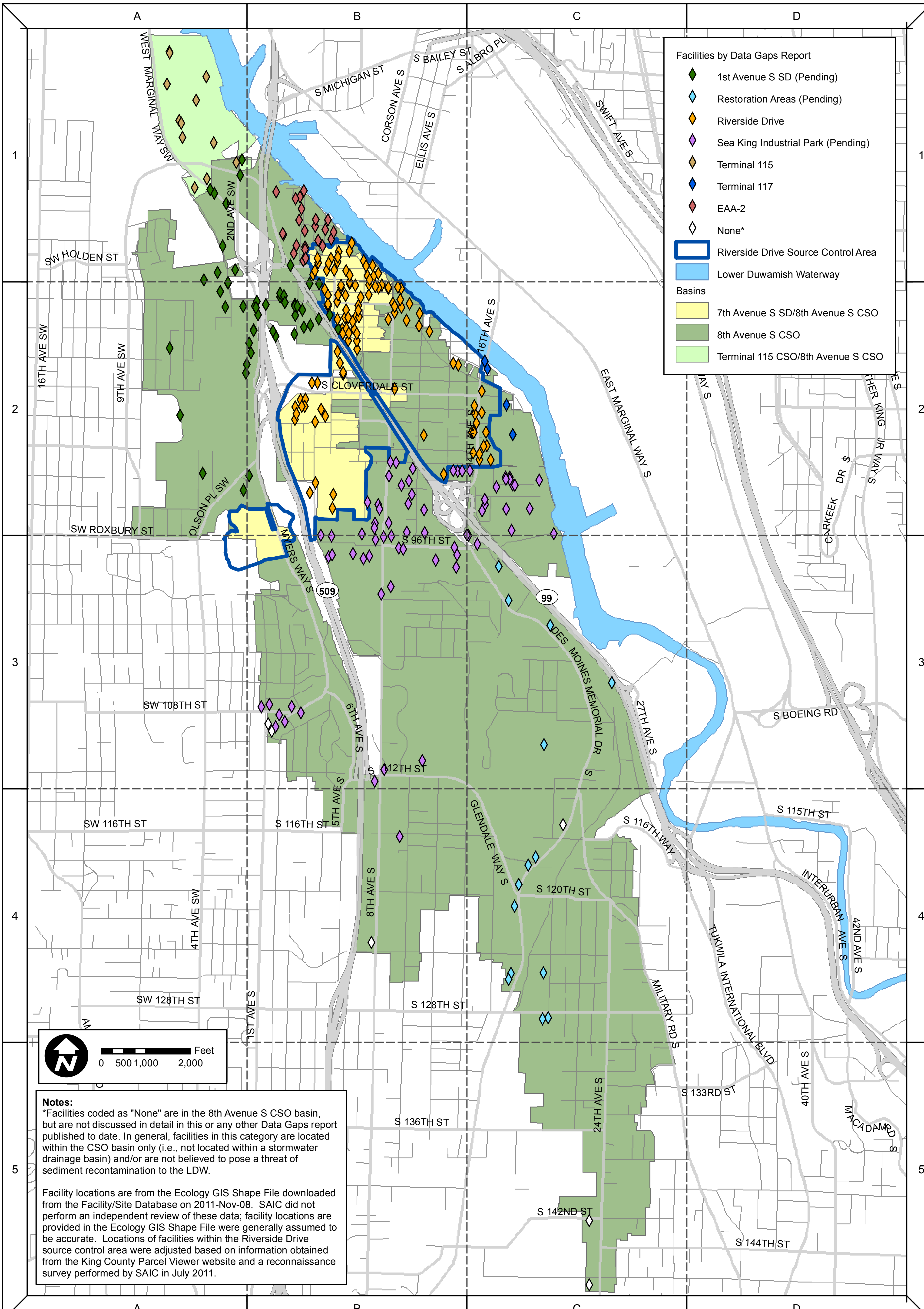
Ecology Toxics Program

LUST - Leaking Underground Storage Tank

UST - Underground Storage Tank

VCP - Voluntary Cleanup Program

Appendix C–2
8th Avenue S CSO Drainage Maps



Notes:
*Facilities coded as "None" are in the 8th Avenue S CSO basin, but are not discussed in detail in this or any other Data Gaps report published to date. In general, facilities in this category are located within the CSO basin only (i.e., not located within a stormwater drainage basin) and/or are not believed to pose a threat of sediment recontamination to the LDW.

Facility locations are from the Ecology GIS Shape File downloaded from the Facility/Site Database on 2011-Nov-08. SAIC did not perform an independent review of these data; facility locations are provided in the Ecology GIS Shape File were generally assumed to be accurate. Locations of facilities within the Riverside Drive source control area were adjusted based on information obtained from the King County Parcel Viewer website and a reconnaissance survey performed by SAIC in July 2011.

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Appendix C. Riverside Drive Source Control Area and 8th Avenue S CSO

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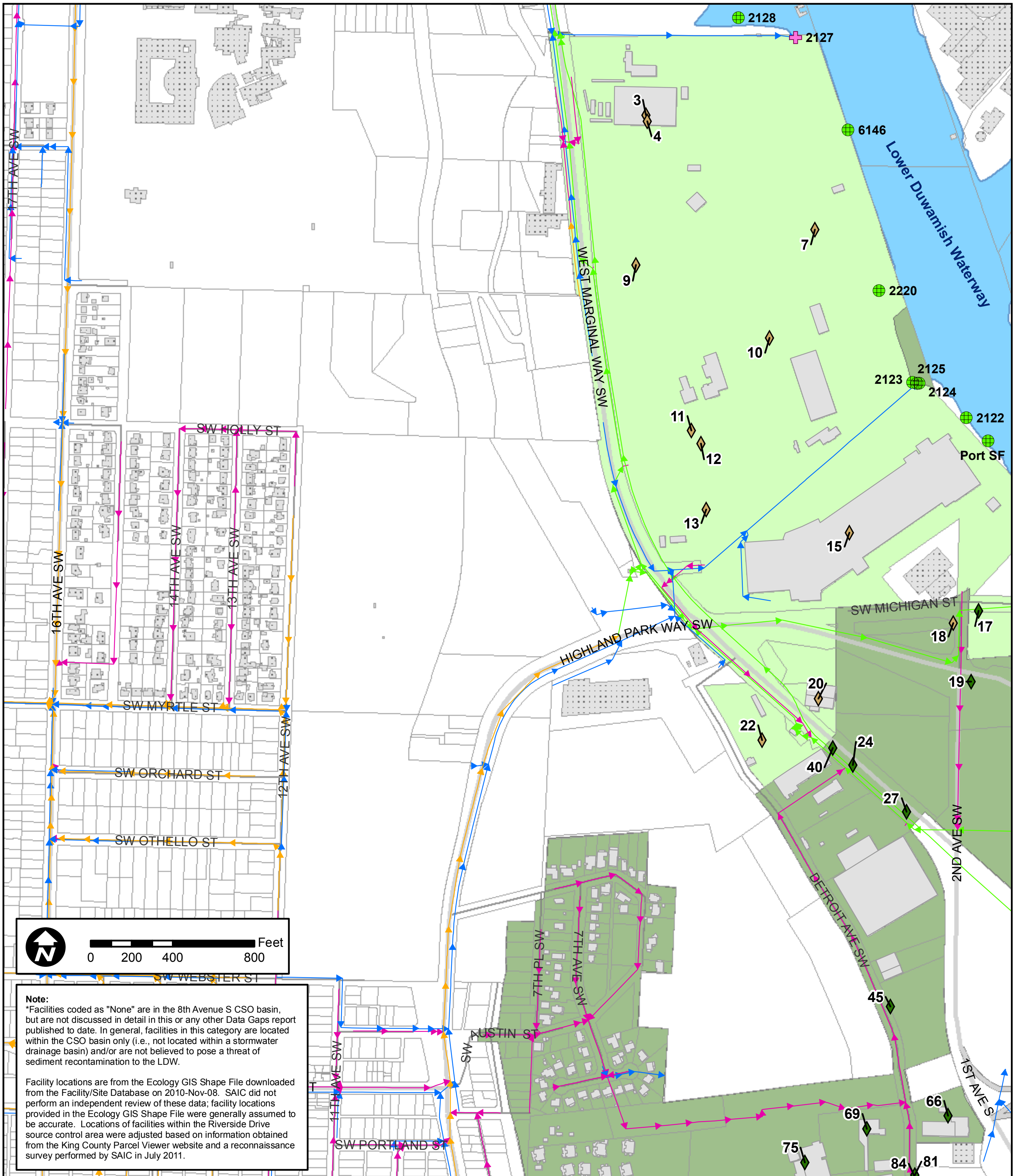
Coordinate System:
NAD 1983 StatePlane Washington North FIPS 4601 Feet
Prepared By: mlf
File: Appendix_C_Riverside_CSO-SD_DrainageFeatures.mxd
Illustrative purposes only.



Note:
*Facilities coded as "None" are in the 8th Avenue S CSO basin, but are not discussed in detail in this or any other Data Gaps report published to date. In general, facilities in this category are located within the CSO basin only (i.e., not located within a stormwater drainage basin) and/or are not believed to pose a threat of sediment recontamination to the LDW.

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8th Avenue S CSO Drainage Features - A1

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Facilities by Data Gaps Report
- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines
- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification
- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins
- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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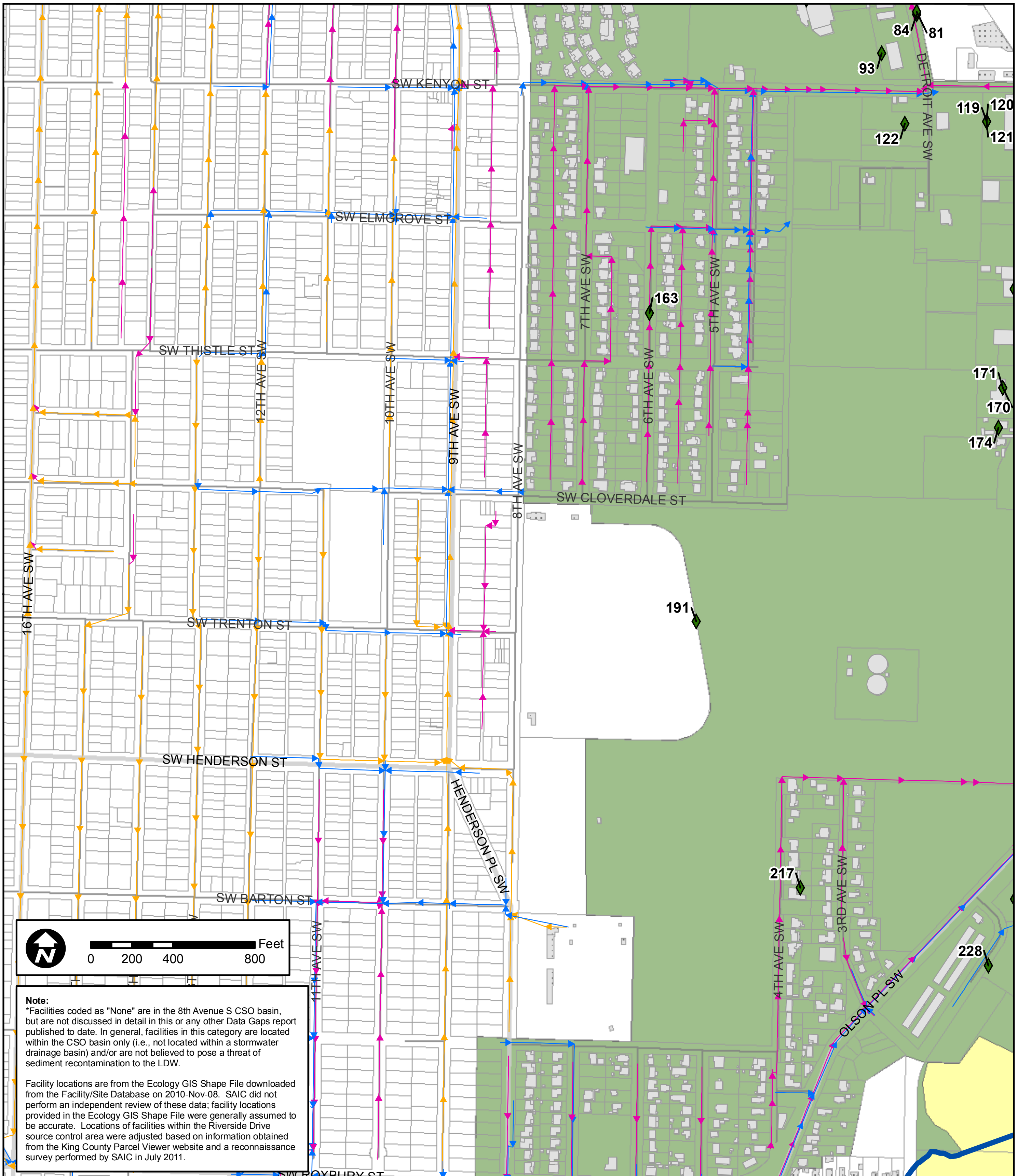
Coordinate System:
NAD 1983 StatePlane Washington
North FIPS 4601 Feet
Prepared By: mlf
File: figure-x_Facilities-Map-letter.mxd
Illustrative purposes only.



Note:
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8th Avenue S CSO Drainage Features - A2

Facilities by Data Gaps Report
- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines
- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification
- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins
- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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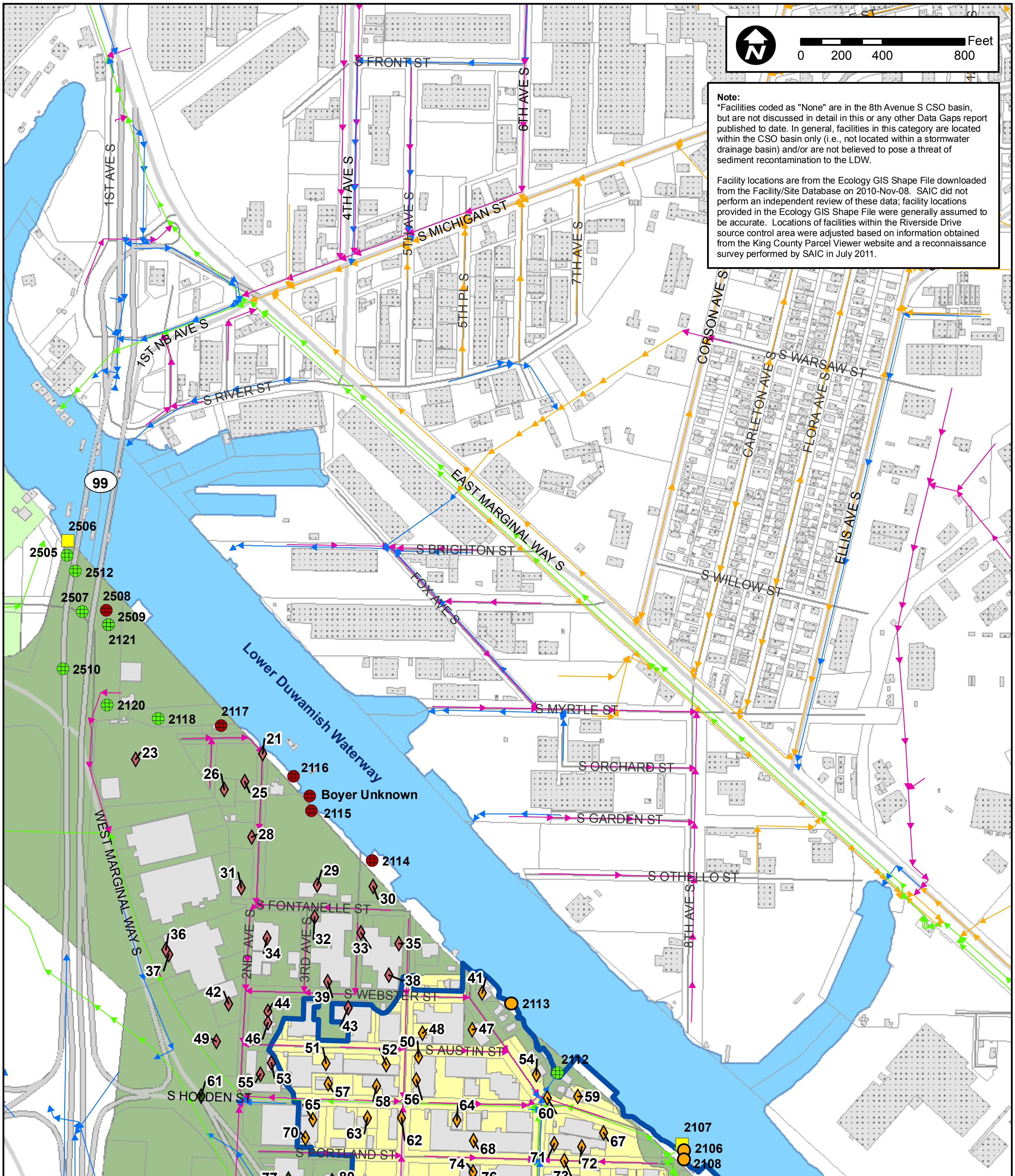

8th Avenue S CSO Drainage Features - B1

Facilities by Data Gaps Report

- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines

- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification

- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins

- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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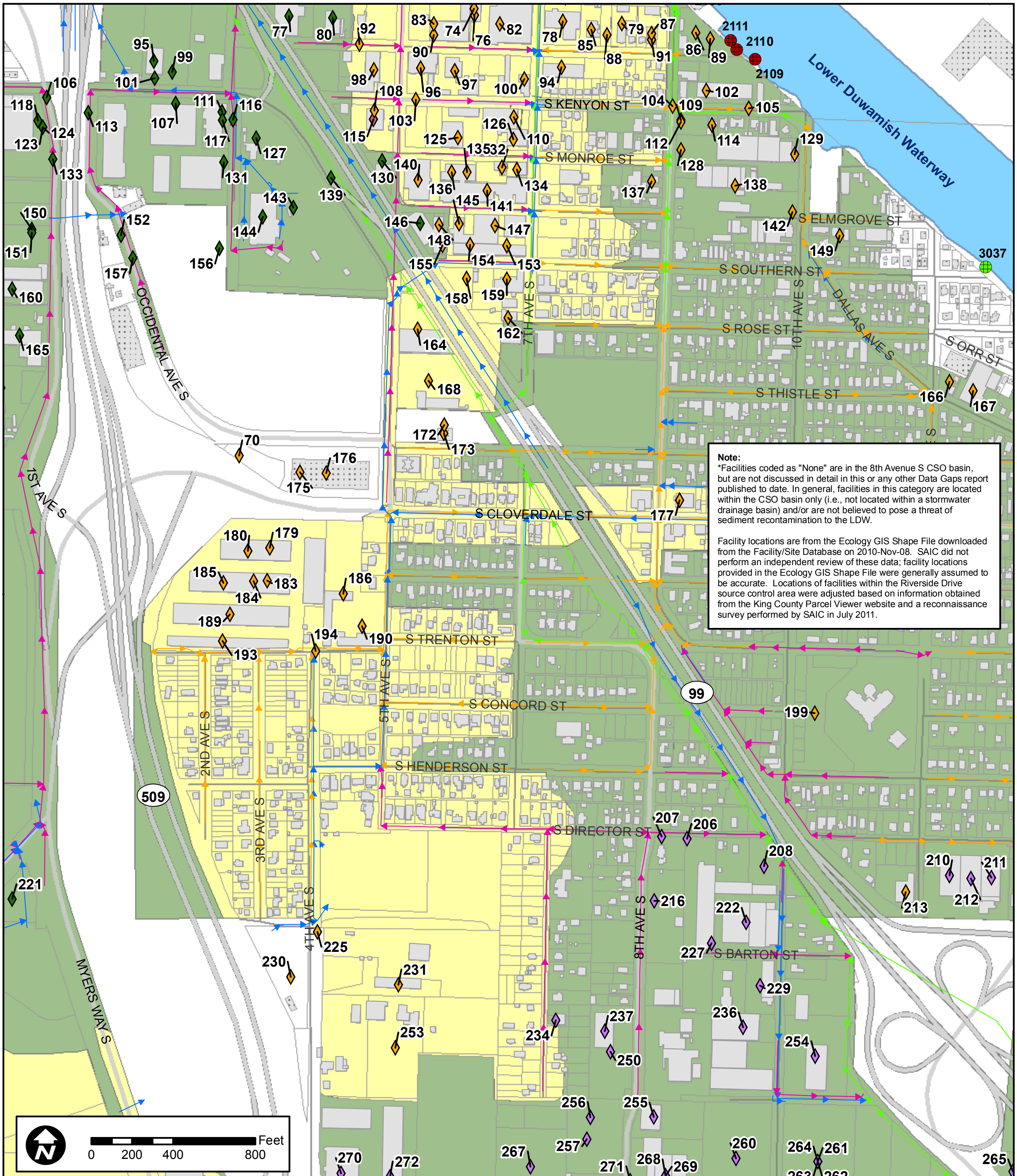

8th Avenue S CSO Drainage Features - B2

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Facilities by Data Gaps Report

- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines

- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification

- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins

- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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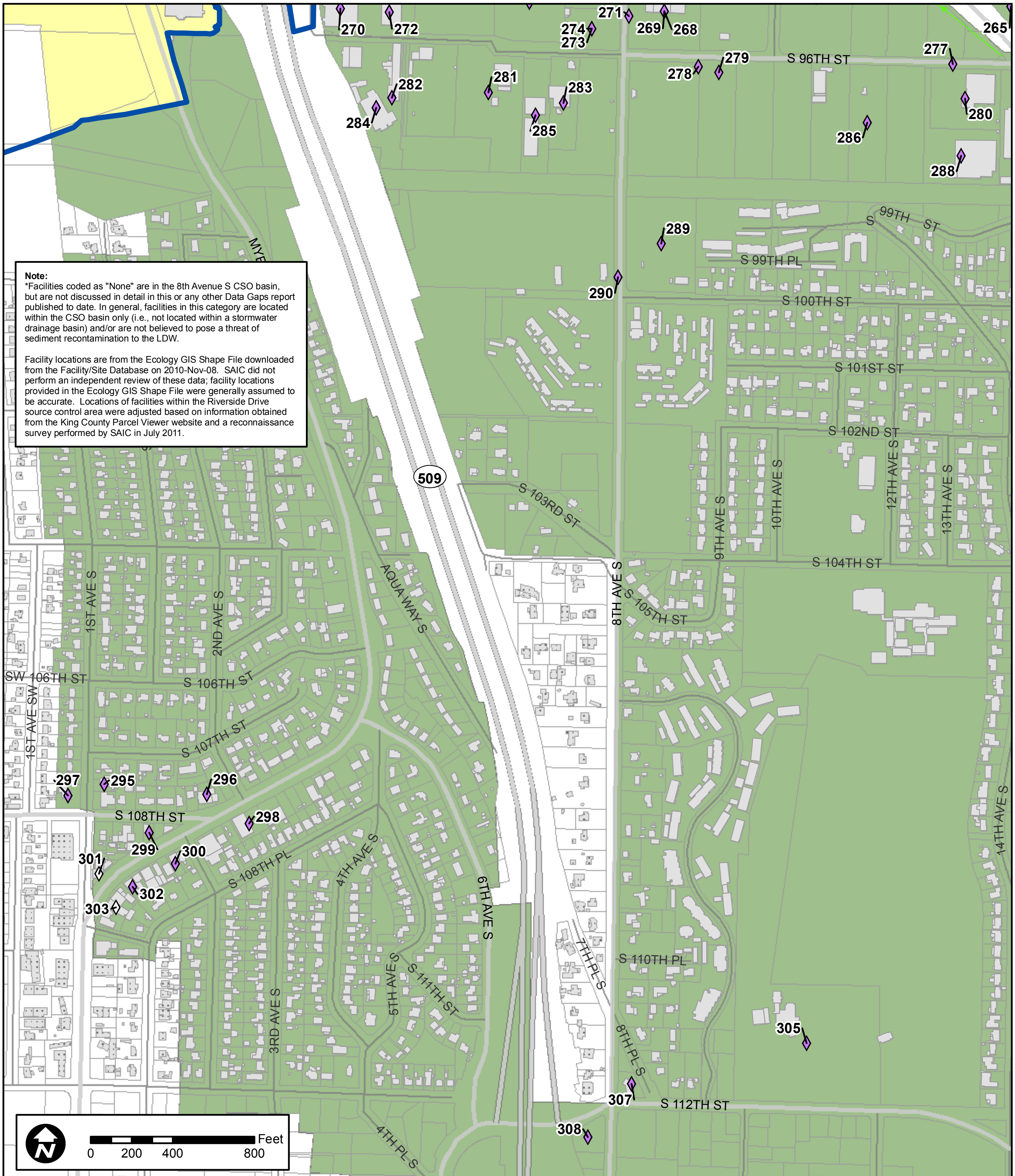

8th Avenue S CSO Drainage Features - B3

Facilities by Data Gaps Report
- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines
- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification
- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins
- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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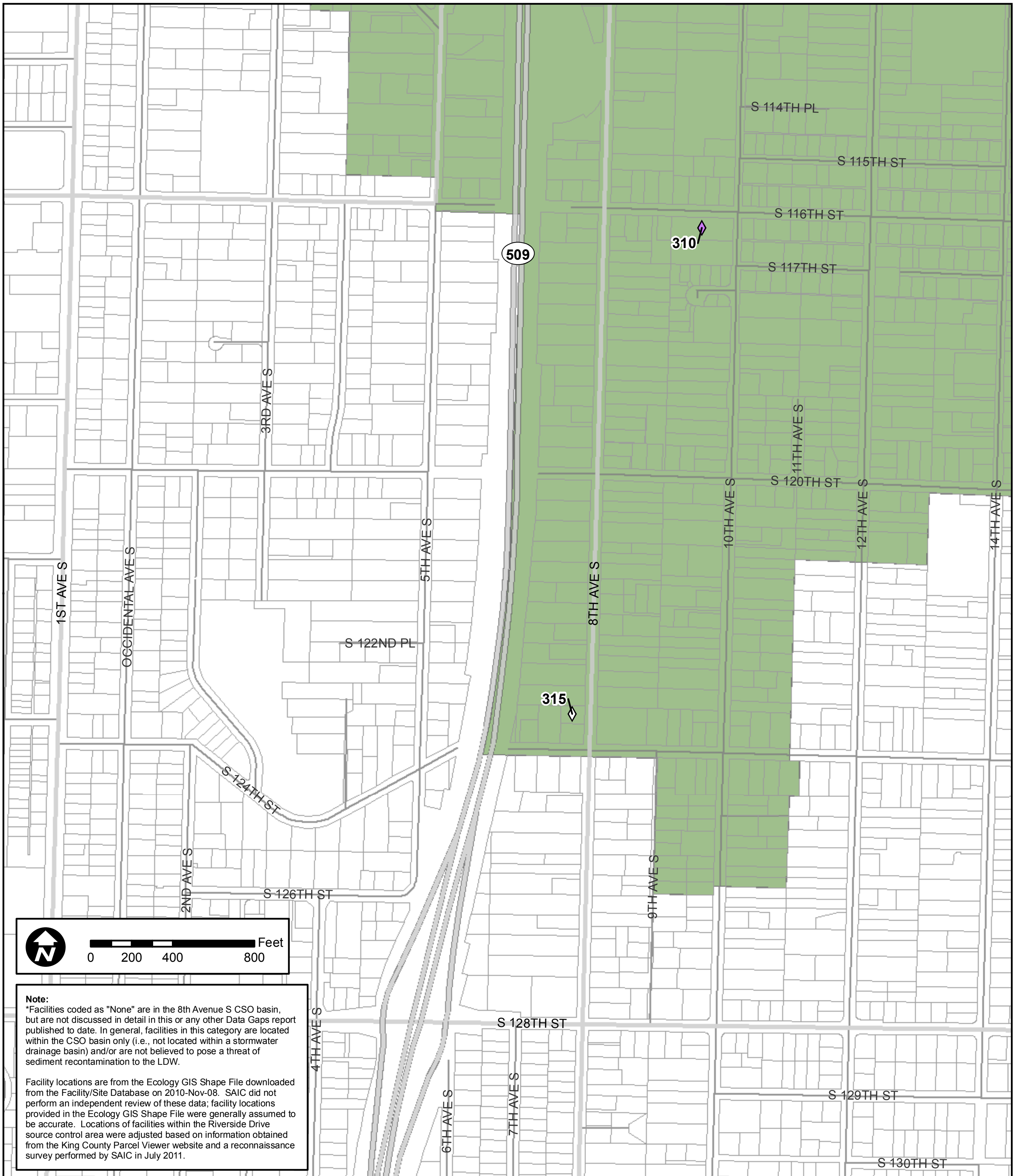

Note:
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Facility locations are from the Ecology GIS Shape File downloaded from the Facility/Site Database on 2010-Nov-08. SAIC did not perform an independent review of these data; facility locations provided in the Ecology GIS Shape File were generally assumed to be accurate. Locations of facilities within the Riverside Drive source control area were adjusted based on information obtained from the King County Parcel Viewer website and a reconnaissance survey performed by SAIC in July 2011.

8th Avenue S CSO Drainage Features - B4

DEPARTMENT OF ECOLOGY
State of Washington

Facilities by Data Gaps Report

- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines

- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification

- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins

- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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North FIPS 4601 Feet
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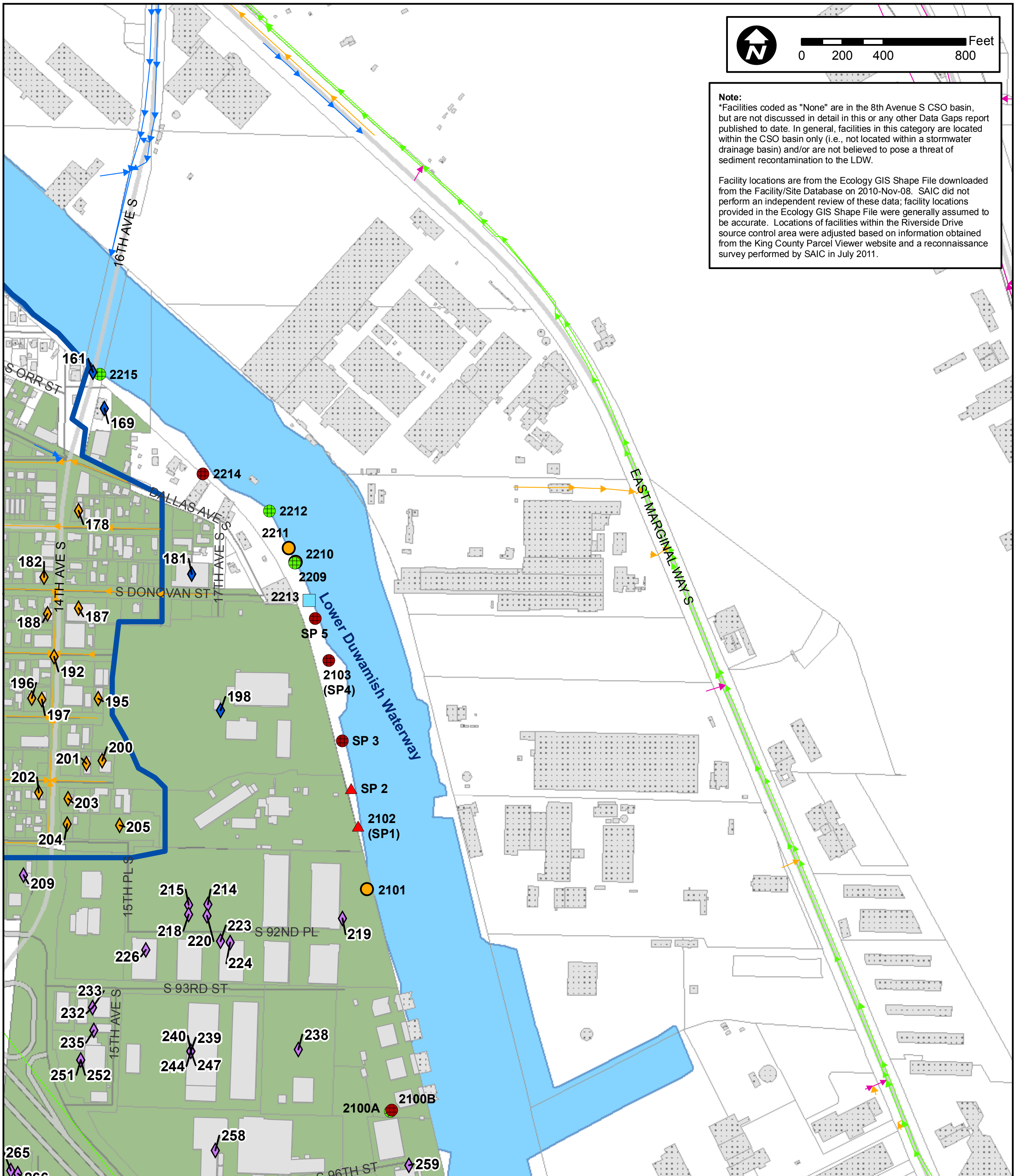

8th Avenue S CSO Drainage Features - C2

Facilities by Data Gaps Report
- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines
- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification
- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins
- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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NAD 1983 StatePlane Washington
North FIPS 4601 Feet
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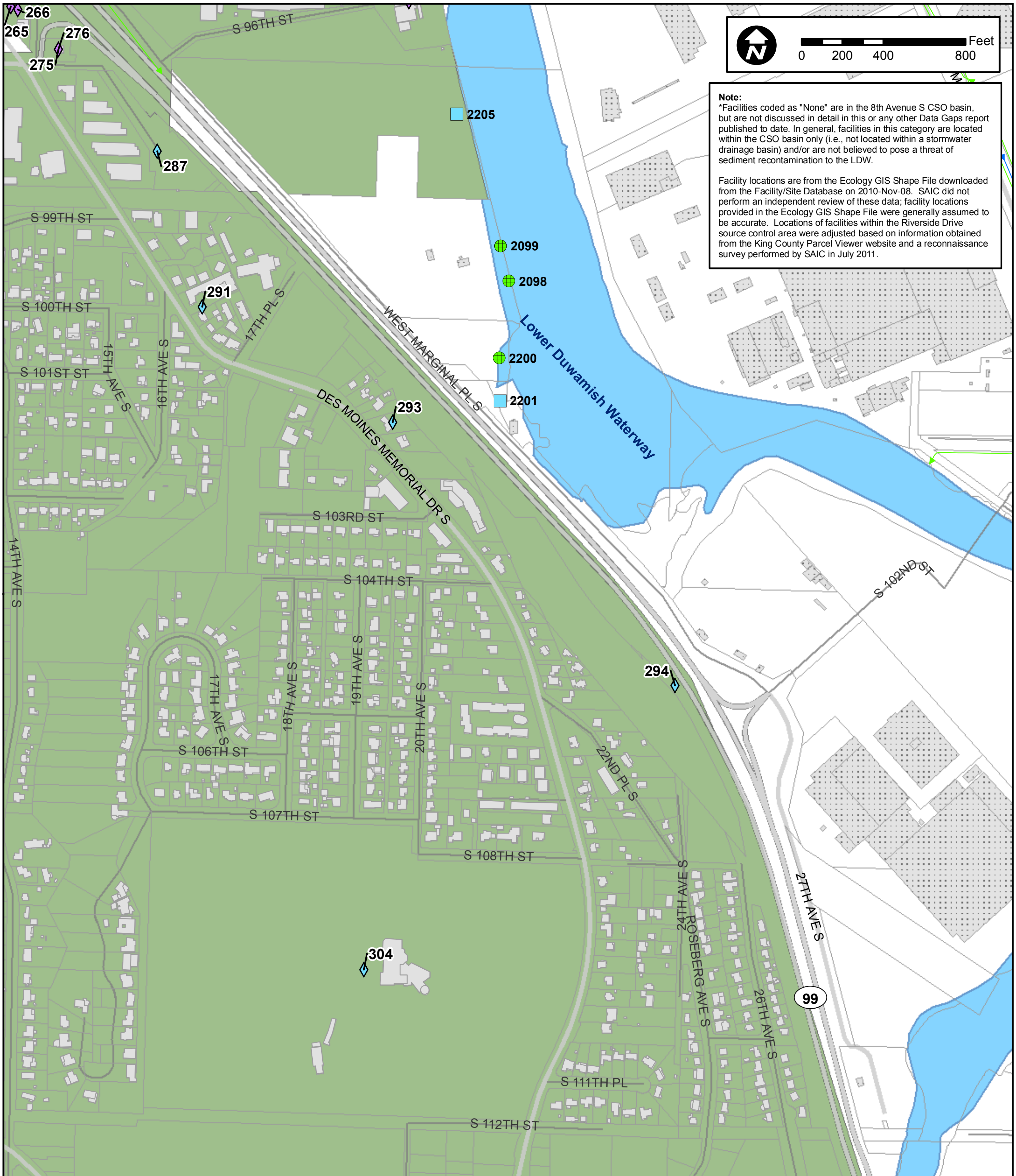

8th Avenue S CSO Drainage Features - C3

Facilities by Data Gaps Report

- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines

- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification

- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins

- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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Coordinate System:
NAD 1983 StatePlane Washington
North FIPS 4601 Feet
Prepared By: mlf
File: figure-x_Facilities-Map-letter.mxd
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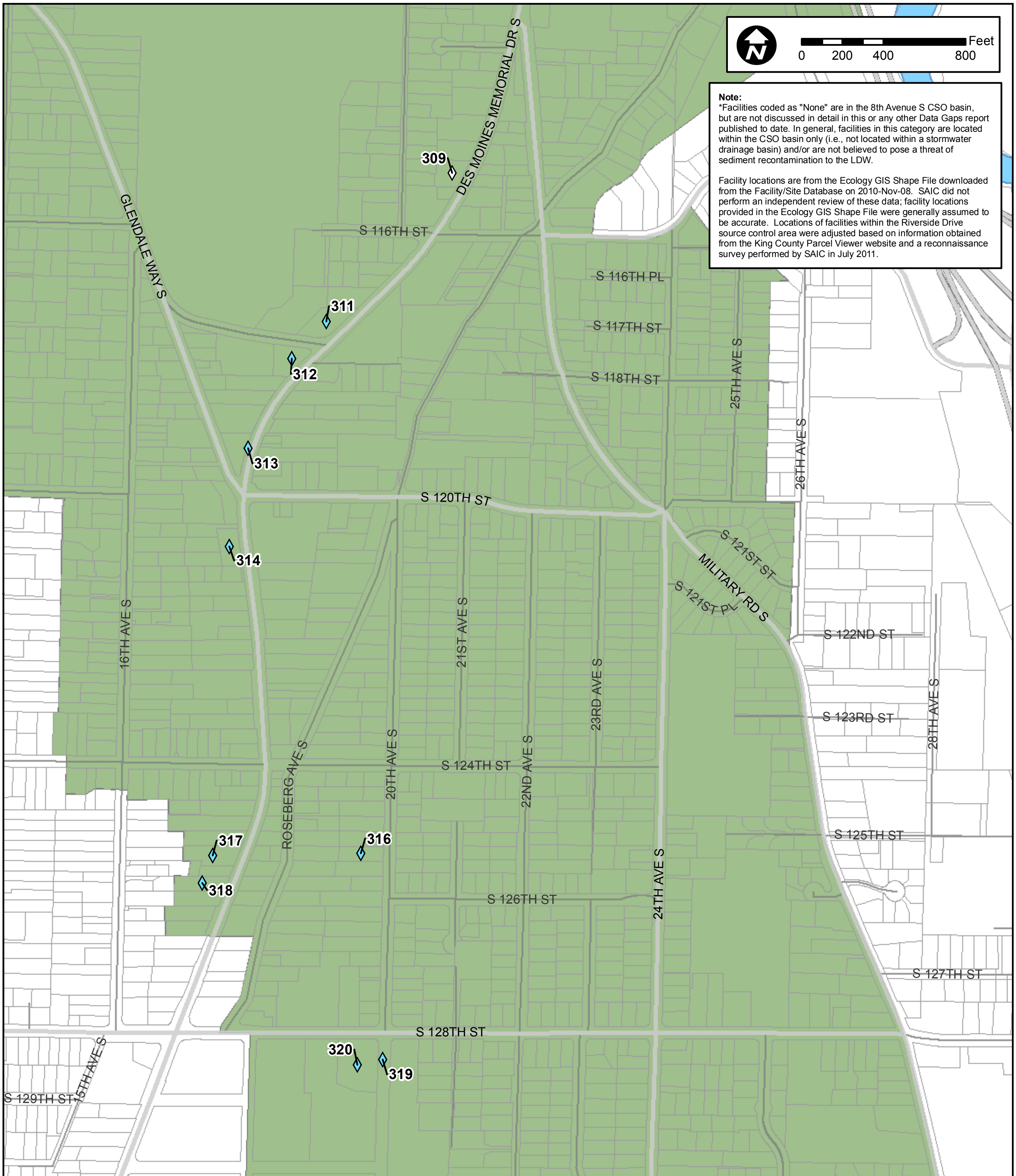

8th Avenue S CSO Drainage Features - C4

DEPARTMENT OF ECOLOGY
State of Washington

Facilities by Data Gaps Report

- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines

- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification

- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins

- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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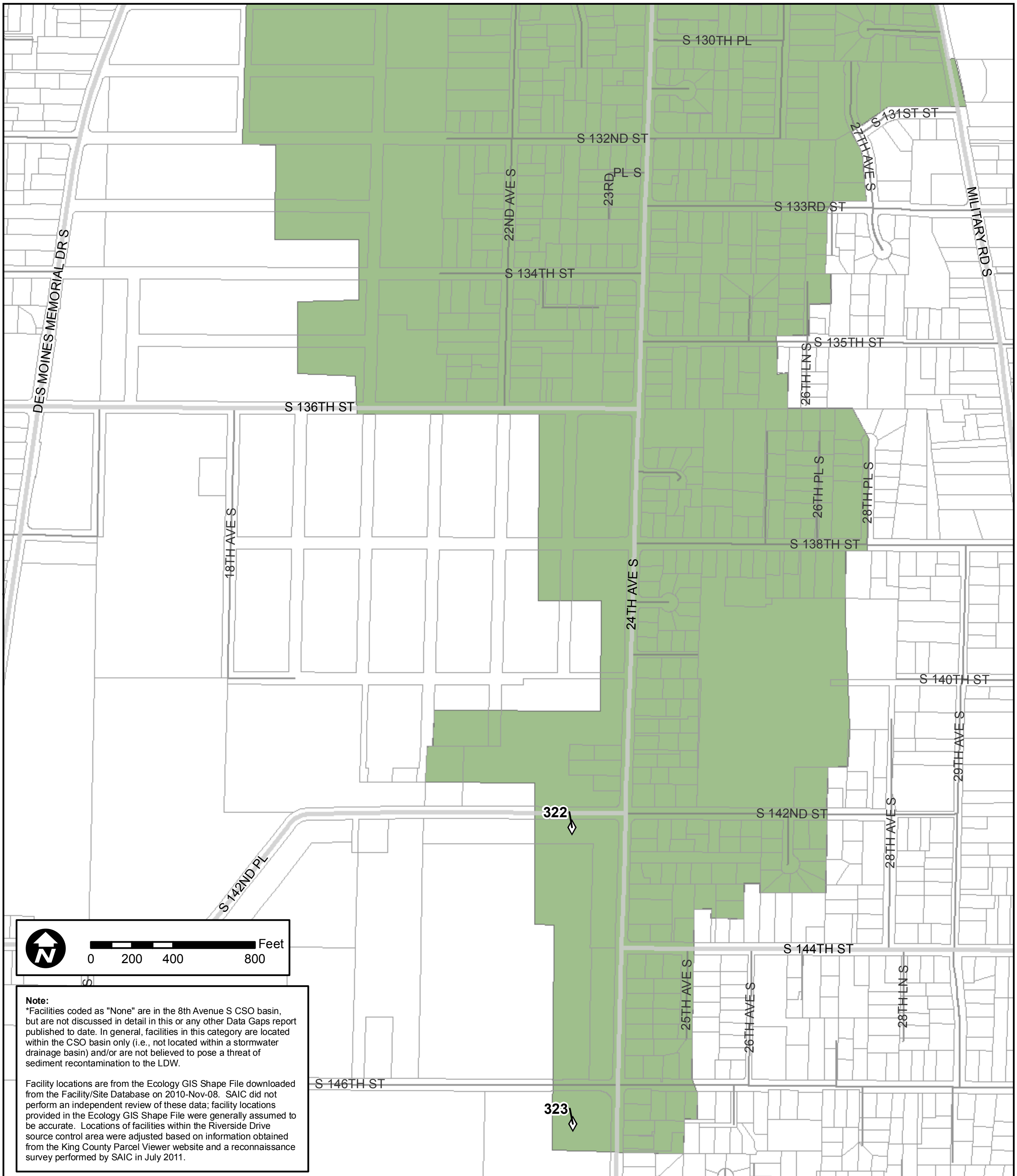
Coordinate System:
NAD 1983 StatePlane Washington
North FIPS 4601 Feet
Prepared By: mlf
File: figure-x_Facilities-Map-letter.mxd
Illustrative purposes only.



Note:
*Facilities coded as "None" are in the 8th Avenue S CSO basin, but are not discussed in detail in this or any other Data Gaps report published to date. In general, facilities in this category are located within the CSO basin only (i.e., not located within a stormwater drainage basin) and/or are not believed to pose a threat of sediment recontamination to the LDW.

Facility locations are from the Ecology GIS Shape File downloaded from the Facility/Site Database on 2010-Nov-08. SAIC did not perform an independent review of these data; facility locations provided in the Ecology GIS Shape File were generally assumed to be accurate. Locations of facilities within the Riverside Drive source control area were adjusted based on information obtained from the King County Parcel Viewer website and a reconnaissance survey performed by SAIC in July 2011.

8th Avenue S CSO Drainage Features - C5

DEPARTMENT OF ECOLOGY
State of Washington

Facilities by Data Gaps Report
- 1st Avenue S SD (Pending)
- Restoration Areas (Pending)
- Riverside Drive
- Sea King Industrial Park (Pending)
- Terminal 115
- Terminal 117
- EAA-2
- None*

Utility Lines
- Storm drain
- Sanitary sewer
- Combined
- King County

Outfall Classification
- Channel/Creek/Ditch
- Pipe, Unknown
- CSO
- CSO/SD
- Private SD
- Public SD
- Seep

Basins
- 7th Avenue S SD/8th Avenue S CSO
- 8th Avenue S CSO
- Terminal 115 CSO/8th Avenue S CSO
- Riverside Drive Source Control Area
- Lower Duwamish Waterway
- Building within Basin
- Building Outside Basin

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From Science to Solutions

Coordinate System:
NAD 1983 StatePlane Washington
North FIPS 4601 Feet
Prepared By: mlf
File: figure-x_Facilities-Map-letter.mxd
Illustrative purposes only.

Appendix D
Environmental Investigation
Soil and Groundwater Chemical Data

Table D-1
Chemicals Detected in Soil
Former Hurlen Construction Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
A1 Pump Service 1993	3/9/1993	Bottom Center Gas Tank	unknown	Gasoline-range hydrocarbons	256	100		2.6
A1 Pump Service 1993	3/9/1993	N End Gas Tank	unknown	Gasoline-range hydrocarbons	183	100		1.8
A1 Pump Service 1993	3/9/1993	Bottom Center Gas Tank	unknown	Xylenes	2.3	9		<1
A1 Pump Service 1993	3/9/1993	N End Gas Tank	unknown	Xylenes	1.7	9		<1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Depth to groundwater unknown at this property. Groundwater was not encountered during the environmental investigations.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.
Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-2
Chemicals Detected in Sediment Samples
Former Hurlen Construction Company

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Sediment Conc'n (mg/kg)	SQS/LAET (mg/kg)	CSL/2LAET (mg/kg)	Exceedance Factor
Ecology 1990b	8/31/1990	Rep 2	composite	2-Methylnaphthalene	2.1	0.67	1.4	3.1
Laucks 1984	1/25/1984	#2	composite	2-Methylnaphthalene	0.58	0.67	1.4	<1
Ecology 1990b	8/31/1990	Rep 1	composite	2-Methylnaphthalene	0.24	0.67	1.4	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Acenaphthylene	16	1.3	1.3	12
Ecology 1990b	8/31/1990	Rep 2	composite	Acenaphthylene	1.7	1.3	1.3	1.3
Ecology 1990b	8/31/1990	Rep 1	composite	Acenaphthylene	1.1	1.3	1.3	<1
Laucks 1984	1/25/1984	#2	composite	Acenaphthylene	0.780	1.3	1.3	<1
Laucks 1986	9/26/1986	#2	4	Acenaphthylene	0.68 D	1.3	1.3	<1
Laucks 1986	9/26/1986	#2	4	Acenaphthylene	0.67	1.3	1.3	<1
Ecology 1990b	8/31/1990	Rep 1	composite	Acenaphthylene	0.29	1.3	1.3	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Ammonia	9.9			
Ecology 1990b	8/31/1990	Rep 2	composite	Anthracene	6.6	0.96	4.4	6.9
Ecology 1990b	8/31/1990	Rep 1	composite	Anthracene	1.1	0.96	4.4	1.1
Laucks 1984	1/25/1984	#2	composite	Arsenic	8.9	57	93	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Arsenic	8.3	57	93	<1
Laucks 1986	9/26/1986	#2	4	Arsenic	6.4	57	93	<1
Laucks 1986	9/26/1986	#3	composite	Arsenic	6.3	57	93	<1
Laucks 1984	1/25/1984	#1	composite	Arsenic	5.5	57	93	<1
Laucks 1986	9/26/1986	#1	3.5-5	Arsenic	3.6	57	93	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Benzo(a)anthracene	5.9	1.3	1.6	4.5
Ecology 1990b	8/31/1990	Rep 1	composite	Benzo(a)anthracene	1.4	1.3	1.6	1.1
Laucks 1986	9/26/1986	#2	4	Benzo(a)anthracene	1.3 D	1.3	1.6	1
Laucks 1986	9/26/1986	#2	4	Benzo(a)anthracene	0.93	1.3	1.6	<1
Laucks 1984	1/25/1984	#2	composite	Benzo(a)pyrene	2.2	1.6	3	1.4
Ecology 1990b	8/31/1990	Rep 2	composite	Benzo(a)pyrene	2.2	1.6	3	1.4
Ecology 1990b	8/31/1990	Rep 1	composite	Benzo(a)pyrene	0.86	1.6	3	<1
Laucks 1986	9/26/1986	#2	4	Benzo(a)pyrene	0.61 D	1.6	3	<1
Laucks 1986	9/26/1986	#2	4	Benzo(a)pyrene	0.49	1.6	3	<1
Laucks 1984	1/25/1984	#2	composite	Benzo(g,h,i)perylene	1.3	0.67	0.72	1.9
Laucks 1986	9/26/1986	#2	4	Benzo(g,h,i)perylene	0.13	0.67	0.72	<1
Laucks 1986	9/26/1986	#2	4	Benzo(g,h,i)perylene	0.12 D	0.67	0.72	<1
Laucks 1986	9/26/1986	#2	4	Benzo(k)fluoranthene	1.1 D	3.2	3.6	<1
Laucks 1986	9/26/1986	#2	4	Benzo(k)fluoranthene	0.85	3.2	3.6	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Benzofluoranthenes	4	3.2	3.6	1.3
Ecology 1990b	8/31/1990	Rep 1	composite	Benzofluoranthenes	2.3	3.2	3.6	<1
Laucks 1984	1/25/1984	#1	composite	bis(2-ethylhexyl)phthalate	5.5			
Laucks 1984	1/25/1984	#2	composite	bis(2-ethylhexyl)phthalate	0.70			
Laucks 1986	9/26/1986	#2	4	bis(2-ethylhexyl)phthalate	0.41			

Table D-2
Chemicals Detected in Sediment Samples
Former Hurlen Construction Company

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Sediment Conc'n (mg/kg)	SQS/LAET (mg/kg)	CSL/2LAET (mg/kg)	Exceedance Factor
Laucks 1990	5/11/1990	Duwamish River	composite	Chromium	22	260	270	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Chrysene	4.9	1.4	2.8	3.5
Laucks 1986	9/26/1986	#2	4	Chrysene	1.2 D	1.4	2.8	<1
Ecology 1990b	8/31/1990	Rep 1	composite	Chrysene	1.2	1.4	2.8	<1
Laucks 1986	9/26/1986	#2	4	Chrysene	0.9	1.4	2.8	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Copper	69	390	390	<1
Laucks 1984	1/25/1984	#2	composite	Copper	56	390	390	<1
Laucks 1980	2/22/1980	#2	1.5-2	Copper	0	390	390	<1
Laucks 1980	2/22/1980	#3	1.5-2	Copper	0.005	390	390	<1
Laucks 1980	2/22/1980	#4	1.5-2	Copper	0.005	390	390	<1
Laucks 1980	2/22/1980	#1	1.5-2	Copper	0.003	390	390	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Dibenzo(a,h)anthracene	0.16	0.23	0.54	<1
Ecology 1990b	8/31/1990	Rep 1	composite	Dibenzo(a,h)anthracene	0.15	0.23	0.54	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Dibenzofuran	11	0.54	0.7	20
Laucks 1986	9/26/1986	#2	4	Dibenzofuran	1.0	0.54	0.7	1.9
Ecology 1990b	8/31/1990	Rep 1	composite	Dibenzofuran	0.67	0.54	0.7	1.2
Laucks 1984	1/25/1984	#2	composite	Dibenzofuran	0.41	0.54	0.7	<1
Laucks 1986	9/26/1986	#2	4	Dibenzofuran	0.26 D	0.54	0.7	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Fluoranthene	23	1.7	2.5	14
Laucks 1986	9/26/1986	#2	4	Fluoranthene	4.6 D	1.7	2.5	2.7
Ecology 1990b	8/31/1990	Rep 1	composite	Fluoranthene	3.9	1.7	2.5	2.3
Laucks 1984	1/25/1984	#2	composite	Fluoranthene	3.9	1.7	2.5	2.3
Laucks 1986	9/26/1986	#2	4	Fluoranthene	3.6	1.7	2.5	2.1
Ecology 1990b	8/31/1990	Rep 2	composite	Fluorene	16	0.54	1	30
Ecology 1990b	8/31/1990	Rep 1	composite	Fluorene	0.94	0.54	1	1.7
Laucks 1984	1/25/1984	#2	composite	Fluorene	0.750	0.54	1	1.4
Laucks 1986	9/26/1986	#2	4	Fluorene	0.36 D	0.54	1	<1
Laucks 1986	9/26/1986	#2	4	Fluorene	0.30	0.54	1	<1
Ecology 1990b	8/31/1990	Rep 2	composite	HPAH (total)	61.18	12	17	5.1
Ecology 1990b	8/31/1990	Rep 1	composite	HPAH (total)	17	12	17	1.4
Ecology 1990b	8/31/1990	Rep 2	composite	Indeno(1,2,3-cd)pyrene	0.45	0.6	0.69	<1
Ecology 1990b	8/31/1990	Rep 1	composite	Indeno(1,2,3-cd)pyrene	0.3	0.6	0.69	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Lead	22	450	530	<1
Laucks 1980	2/22/1980	#2	1.5-2	Lead	0.032	450	530	<1
Laucks 1980	2/22/1980	#3	1.5-2	Lead	0.023	450	530	<1
Laucks 1980	2/22/1980	#4	1.5-2	Lead	0.022	450	530	<1
Laucks 1980	2/22/1980	#1	1.5-2	Lead	0.018	450	530	<1
Ecology 1990b	8/31/1990	Rep 2	composite	LPAH (total)	108	5.2	13	21
Ecology 1990b	8/31/1990	Rep 1	composite	LPAH (total)	8.2	5.2	13	1.6

Table D-2
Chemicals Detected in Sediment Samples
Former Hurlen Construction Company

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Sediment Conc'n (mg/kg)	SQS/LAET (mg/kg)	CSL/2LAET (mg/kg)	Exceedance Factor
Laucks 1990	5/11/1990	Duwamish River	composite	Manganese	280			
Laucks 1984	1/25/1984	#2	composite	Mercury	0.2		0.41	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Naphthalene	11	2.1	2.4	5.2
Ecology 1990b	8/31/1990	Rep 1	composite	Naphthalene	0.99	2.1	2.4	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Nickel	18			
Laucks 1984	1/25/1984	#2	composite	PCBs	0.360	0.13	1	2.8
Ecology 1990b	8/31/1990	Rep 2	composite	Phenanthrene	55	1.5	5.4	37
Laucks 1984	1/25/1984	#2	composite	Phenanthrene	4.2	1.5	5.4	2.8
Ecology 1990b	8/31/1990	Rep 1	composite	Phenanthrene	4	1.5	5.4	2.7
Laucks 1986	9/26/1986	#2	4	Phenanthrene	1.7 D	1.5	5.4	1.1
Laucks 1986	9/26/1986	#2	4	Phenanthrene	1.3	1.5	5.4	<1
Ecology 1990b	8/31/1990	Rep 1	composite	Phenol	0.2	0.42	1.2	<1
Ecology 1990b	8/31/1990	Rep 2	composite	Pyrene	20	2.6	3.3	7.7
Ecology 1990b	8/31/1990	Rep 1	composite	Pyrene	6.8	2.6	3.3	2.6
Laucks 1984	1/25/1984	#2	composite	Pyrene	4.1	2.6	3.3	1.6
Laucks 1986	9/26/1986	#2	4	Pyrene	2.4 D	2.6	3.3	<1
Laucks 1984	1/25/1984	#2	composite	Zinc	100	410	960	<1
Laucks 1990	5/11/1990	Duwamish River	composite	Zinc	97	410	960	<1
Laucks 1986	9/26/1986	#2	4	Zinc	57	410	960	<1
Laucks 1984	1/25/1984	#1	composite	Zinc	51	410	960	<1
Laucks 1986	9/26/1986	#1	3.5-5	Zinc	47	410	960	<1
Laucks 1986	9/26/1986	#1	3.5-5	Zinc	47	410	960	<1
Laucks 1986	9/26/1986	#3	composite	Zinc	47	410	960	<1
Laucks 1980	2/22/1980	#2	1.5-2	Zinc	0.03	410	960	<1
Laucks 1980	2/22/1980	#4	1.5-2	Zinc	0.026	410	960	<1
Laucks 1980	2/22/1980	#1	1.5-2	Zinc	0.024	410	960	<1
Laucks 1980	2/22/1980	#3	1.5-2	Zinc	0.023	410	960	<1

ft - Feet
SQS - SMS Sediment Quality Standard
CSL - SMS Cleanup Screening Level
LAET - Lowest Apparent Effects Threshold
2LAET - Second LAET

Table presents detected chemicals only.
Organic chemicals were not normalized for organic carbon content during testing and these chemicals were compared with the LAET and 2LAET instead of the SQS and CSL.
Exceedance factors are the ratio of the detected concentrations to the SQS or CSL, exceedance factors are shown only if they are greater than 1.
Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	WQ7-2	2	1-Methylnaphthalene	10 D	35		<1
PGG 2008	1/17/2008	B-2A	2	1-Methylnaphthalene	9.7	35		<1
PGG 2009a	4/17/2009	WQ8-2	2	1-Methylnaphthalene	5.8	35		<1
PGG 2009a	4/16/2009	OY2-4	4	1-Methylnaphthalene	4.1	35		<1
PGG 2009a	4/18/2009	WQ9-4	4	1-Methylnaphthalene	0.93	35		<1
PGG 2009a	4/17/2009	WQ7-2	2	1-Methylnaphthalene	0.63	35		<1
PGG 2009a	4/17/2009	WQ9-2	2	1-Methylnaphthalene	0.57	35		<1
PGG 2009a	4/16/2009	OY2-2	2	1-Methylnaphthalene	0.51	35		<1
PGG 2009a	4/16/2009	PS1-6	6	1-Methylnaphthalene	0.2	35		<1
PGG 2009a	4/16/2009	PS2-6	6	1-Methylnaphthalene	0.02	35		<1
PGG 2008	1/17/2008	B-2A	2	2-Methylnaphthalene	13	35		<1
PGG 2009a	4/17/2009	WQ7-2	2	2-Methylnaphthalene	13 D	35		<1
PGG 2009a	4/17/2009	WQ8-2	2	2-Methylnaphthalene	6.8	35		<1
PGG 2009a	4/16/2009	OY2-4	4	2-Methylnaphthalene	4.6	35		<1
PGG 2009a	4/16/2009	OY2-2	2	2-Methylnaphthalene	0.9	35		<1
PGG 2009a	4/17/2009	WQ7-2	2	2-Methylnaphthalene	0.65	35		<1
PGG 2009a	4/18/2009	WQ9-4	4	2-Methylnaphthalene	0.62	35		<1
PGG 2009a	4/17/2009	WQ9-2	2	2-Methylnaphthalene	0.57	35		<1
PGG 2009a	4/16/2009	PS1-6	6	2-Methylnaphthalene	0.15	35		<1
PGG 2009a	4/16/2009	PS2-6	6	2-Methylnaphthalene	0.02	35		<1
PGG 2008	1/17/2008	B-2A	2	Acenaphthene	19	4,800	1.2	16
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthene	17 D	4,800	1.2	14
PGG 2009a	4/17/2009	WQ8-2	2	Acenaphthene	8.7	4,800	1.2	7.3
PGG 2009a	4/16/2009	OY2-4	4	Acenaphthene	6.8	4,800	1.2	5.7
PGG 2009a	4/16/2009	PS1-6	6	Acenaphthene	1.9	4,800	0.06	32
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthene	1.2	4,800	1.2	1.0
PGG 2009a	4/17/2009	WQ9-2	2	Acenaphthene	1.1	4,800	1.2	<1
PGG 2009a	4/18/2009	WQ9-4	4	Acenaphthene	0.81	4,800	1.2	<1
PGG 2009a	4/16/2009	OY2-2	2	Acenaphthene	0.43	4,800	1.2	<1
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthylene	12 D		1.4	8.6
PGG 2009a	4/17/2009	WQ8-2	2	Acenaphthylene	4		1.4	2.9
PGG 2008	1/17/2008	B-2A	2	Acenaphthylene	2.8		1.4	2.0

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/16/2009	OY2-4	4	Acenaphthylene	0.6		1.4	<1
PGG 2009a	4/17/2009	WQ9-2	2	Acenaphthylene	0.26		1.4	<1
PGG 2009a	4/17/2009	WQ7-2	2	Acenaphthylene	0.12		1.4	<1
PGG 2009a	4/18/2009	WQ9-4	4	Acenaphthylene	0.12		1.4	<1
PGG 2008	1/17/2008	B-2A	2	Anthracene	28	24,000	24	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Anthracene	27 D	24,000	24	1.1
PGG 2009a	4/17/2009	WQ8-2	2	Anthracene	13	24,000	24	<1
PGG 2009a	4/16/2009	OY2-4	4	Anthracene	10	24,000	24	<1
PGG 2009a	4/16/2009	PS1-6	6	Anthracene	3.4	24,000	1.2	2.8
PGG 2009a	4/17/2009	WQ9-2	2	Anthracene	2.0	24,000	24	<1
PGG 2009a	4/17/2009	WQ7-2	2	Anthracene	1.9	24,000	24	<1
PGG 2009a	4/18/2009	WQ9-4	4	Anthracene	1.4	24,000	24	<1
PGG 2009a	4/16/2009	OY2-2	2	Anthracene	0.45	24,000	24	<1
PGG 2009a	4/16/2009	PS2-6	6	Anthracene	0.12	24,000	1.2	<1
PGG 2009a	4/16/2009	PS1-3	3	Anthracene	0.07	24,000	24	<1
PGG 2009a	4/17/2009	WQ9-2	2	Arsenic	32	0.67	12,000	48
PGG 2009a	4/16/2009	OY2-2	2	Arsenic	11	0.67	12,000	16
PGG 2009a	4/16/2009	OY2-4	4	Arsenic	11	0.67	12,000	16
PGG 2009a	4/17/2009	WQ7-4	4	Arsenic	11	0.67	12,000	16
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	8.2 D	0.67	12,000	12
PGG 2009a	4/17/2009	OY3-2	2	Arsenic	7.9	0.67	12,000	12
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	7.8	0.67	12,000	12
PGG 2009a	4/17/2009	WQ7-2	2	Arsenic	7.4	0.67	12,000	11
PGG 2009a	4/16/2009	WQ5-1	1	Arsenic	6.9	0.67	12,000	10
PGG 2009a	4/17/2009	WQ8-2	2	Arsenic	6.9	0.67	12,000	10
PGG 2009a	4/17/2009	WQ9-4	4	Arsenic	6.7	0.67	12,000	10
PGG 2009a	4/16/2009	WQ1-2	2	Arsenic	5.8 D	0.67	12,000	8.7
PGG 2009a	4/16/2009	OY1-2	2	Arsenic	5.2	0.67	12,000	7.8
PGG 2008	1/17/2008	B-8S	2-3	Arsenic	5	0.67	12,000	7.0
PGG 2008	1/17/2008	B-2B	6.5-7	Barium	66	16,000		<1
PGG 2008	1/17/2008	B-2A	1.5-2	Barium	61	16,000		<1
PGG 2008	1/17/2008	B-8S	2-3	Barium	46	16,000		<1

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2008	1/17/2008	B-7S	2-3	Barium	39	16,000		<1
PGG 2008	1/17/2008	B-6S	1-2	Barium	24	16,000		<1
PGG 2010	12/10/2009	CS-2-3	3	Benzo(a)anthracene	259	1.37	5.4	189
PGG 2010	12/10/2009	CS-24-9	9	Benzo(a)anthracene	68	1.37	0.27	252
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)anthracene	56 D	1.37	5.4	41
PGG 2010	12/9/2009	CS-7-3	3	Benzo(a)anthracene	51	1.37	5.4	37
PGG 2010	12/10/2009	CS-24-6	6	Benzo(a)anthracene	43	1.37	5.4	31
PGG 2008	1/17/2008	B-2A	2	Benzo(a)anthracene	28	1.37	5.4	20
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(a)anthracene	22	1.37	5.4	16
PGG 2009a	4/16/2009	OY2-4	4	Benzo(a)anthracene	19	1.37	5.4	14
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)anthracene	15	1.37	5.4	11
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)anthracene	15 D	1.37	5.4	11
PGG 2010	12/10/2009	CS-1-3	3	Benzo(a)anthracene	7.1	1.37	5.4	5
PGG 2010	12/10/2009	CS-6-3	3	Benzo(a)anthracene	5	1.37	5.4	4
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(a)anthracene	4.8	1.37	5.4	4
PGG 2009a	4/16/2009	OY2-2	2	Benzo(a)anthracene	4.7	1.37	5.4	3
PGG 2010	12/10/2009	CS-5-3	3	Benzo(a)anthracene	4.3	1.37	5.4	3
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)anthracene	3.6	1.37	5.4	3
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(a)anthracene	1.7	1.37	5.4	1.2
PGG 2010	12/9/2009	CS-12-3	3	Benzo(a)anthracene	1	1.37	5.4	<1
PGG 2009a	4/16/2009	PS1-6	6	Benzo(a)anthracene	0.86	1.37	0.27	3
PGG 2010	12/10/2009	CS-5-3	3	Benzo(a)anthracene	0.54 D	1.37	5.4	<1
PGG 2010	12/10/2009	CS-2-9	9	Benzo(a)anthracene	0.13	1.37	0.27	<1
PGG 2010	12/10/2009	CS-3-9	9	Benzo(a)anthracene	0.09	1.37	0.27	<1
PGG 2010	12/10/2009	CS-24-15	15	Benzo(a)anthracene	0.058	1.37	0.27	<1
PGG 2010	12/10/2009	CS-2-3	3	Benzo(a)pyrene	74	0.1	4.2	740
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)pyrene	57 D	0.1	4.2	570
PGG 2010	12/10/2009	CS-24-6	6	Benzo(a)pyrene	36	0.1	0.21	360
PGG 2010	12/10/2009	CS-24-9	9	Benzo(a)pyrene	35	0.1	0.21	350
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(a)pyrene	22	0.1	4.2	220
PGG 2009a	4/16/2009	OY2-4	4	Benzo(a)pyrene	19	0.1	4.2	190
PGG 2008	1/17/2008	B-2A	2	Benzo(a)pyrene	18	0.1	4.2	180

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/9/2009	CS-7-3	3	Benzo(a)pyrene	11	0.1	4.2	110
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(a)pyrene	4.8	0.1	4.2	48
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(a)pyrene	3.6	0.1	4.2	36
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)pyrene	3.6 D	0.1	4.2	36
PGG 2010	12/9/2009	CS-3-3	3	Benzo(a)pyrene	3.3	0.1	4.2	33
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(a)pyrene	2	0.1	4.2	20
PGG 2010	12/10/2009	CS-1-3	3	Benzo(a)pyrene	1.9	0.1	4.2	19
PGG 2009a	4/16/2009	OY2-2	2	Benzo(a)pyrene	0.92	0.1	4.2	9.2
PGG 2010	12/10/2009	CS-6-3	3	Benzo(a)pyrene	0.43	0.1	4.2	4.3
PGG 2009a	4/16/2009	PS1-6	6	Benzo(a)pyrene	0.33	0.1	0.21	3.3
PGG 2009a	4/16/2009	PS1-3	3	Benzo(a)pyrene	0.27	0.1	4.2	2.7
PGG 2010	12/9/2009	CS-12-3	3	Benzo(a)pyrene	0.24	0.1	4.2	2.4
PGG 2009a	4/16/2009	PS2-6	6	Benzo(a)pyrene	0.23	0.1	0.21	2.3
PGG 2010	12/10/2009	CS-5-3	3	Benzo(a)pyrene	0.12 D	0.1	4.2	1.2
PGG 2010	12/10/2009	CS-2-3	3	Benzo(b)fluoranthene	68	1.4	9	49
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(b)fluoranthene	56 D	1.4	9	40
PGG 2010	12/10/2009	CS-24-9	9	Benzo(b)fluoranthene	35	1.4	0.45	78
PGG 2010	12/10/2009	CS-24-6	6	Benzo(b)fluoranthene	32	1.4	0.45	71
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(b)fluoranthene	23	1.4	9	16
PGG 2009a	4/16/2009	OY2-4	4	Benzo(b)fluoranthene	20	1.4	9	14
PGG 2010	12/9/2009	CS-7-3	3	Benzo(b)fluoranthene	9.3	1.4	9	7
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(b)fluoranthene	5.4	1.4	9	3.9
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(b)fluoranthene	3.7	1.4	9	2.6
PGG 2010	12/9/2009	CS-3-3	3	Benzo(b)fluoranthene	3.1 D	1.4	9	2.2
PGG 2010	12/9/2009	CS-3-3	3	Benzo(b)fluoranthene	2.6	1.4	9	1.9
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(b)fluoranthene	2.4	1.4	9	1.7
PGG 2010	12/10/2009	CS-1-3	3	Benzo(b)fluoranthene	1.8	1.4	9	1.3
PGG 2009a	4/16/2009	OY2-2	2	Benzo(b)fluoranthene	1.5	1.4	9	1.1
PGG 2010	12/10/2009	CS-6-3	3	Benzo(b)fluoranthene	0.66	1.4	9	<1
PGG 2009a	4/16/2009	PS1-6	6	Benzo(b)fluoranthene	0.51	1.4	0.45	1.1
PGG 2009a	4/16/2009	PS1-3	3	Benzo(b)fluoranthene	0.43	1.4	9	<1
PGG 2009a	4/16/2009	PS2-6	6	Benzo(b)fluoranthene	0.33	1.4	0.45	<1

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/9/2009	CS-12-3	3	Benzo(b)fluoranthene	0.16	1.4	9	<1
PGG 2010	12/10/2009	CS-5-3	3	Benzo(b)fluoranthene	0.11 D	1.4	9	<1
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(g,h,i)perylene	30 D		1.6	19
PGG 2008	1/17/2008	B-2A	2	Benzo(g,h,i)perylene	24		1.6	15
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(g,h,i)perylene	12		1.6	7.5
PGG 2009a	4/16/2009	OY2-4	4	Benzo(g,h,i)perylene	11		1.6	6.9
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(g,h,i)perylene	2.8		1.6	1.8
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(g,h,i)perylene	2.1		1.6	1.3
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(g,h,i)perylene	1		1.6	<1
PGG 2009a	4/16/2009	OY2-2	2	Benzo(g,h,i)perylene	0.94		1.6	<1
PGG 2009a	4/16/2009	PS2-6	6	Benzo(g,h,i)perylene	0.21		0.078	2.7
PGG 2009a	4/16/2009	PS1-3	3	Benzo(g,h,i)perylene	0.15		1.6	<1
PGG 2009a	4/16/2009	PS1-6	6	Benzo(g,h,i)perylene	0.14		0.078	1.8
PGG 2010	12/10/2009	CS-2-3	3	Benzo(k)fluoranthene	85	14	9	9
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(k)fluoranthene	69 D	14	9	8
PGG 2008	1/17/2008	B-2A	2	Benzo(k)fluoranthene	41	14	9	5
PGG 2010	12/10/2009	CS-24-9	9	Benzo(k)fluoranthene	34	14	0.45	76
PGG 2010	12/10/2009	CS-24-6	6	Benzo(k)fluoranthene	30	14	0.45	67
PGG 2010	12/9/2009	CS-7-3	3	Benzo(k)fluoranthene	12	14	9	1.3
PGG 2009a	4/17/2009	WQ8-2	2	Benzo(k)fluoranthene	8.3	14	9	<1
PGG 2009a	4/16/2009	OY2-4	4	Benzo(k)fluoranthene	6.6	14	9	<1
PGG 2010	12/9/2009	CS-3-3	3	Benzo(k)fluoranthene	4.3	14	9	<1
PGG 2010	12/9/2009	CS-3-3	3	Benzo(k)fluoranthene	4.1 D	14	9	<1
PGG 2009a	4/18/2009	WQ9-4	4	Benzo(k)fluoranthene	2.4	14	9	<1
PGG 2010	12/10/2009	CS-1-3	3	Benzo(k)fluoranthene	2.3	14	9	<1
PGG 2009a	4/17/2009	WQ9-2	2	Benzo(k)fluoranthene	2.0	14	9	<1
PGG 2009a	4/16/2009	OY2-2	2	Benzo(k)fluoranthene	1.7	14	9	<1
PGG 2009a	4/17/2009	WQ7-2	2	Benzo(k)fluoranthene	1.3	14	9	<1
PGG 2010	12/10/2009	CS-5-3	3	Benzo(k)fluoranthene	1.2	14	9	<1
PGG 2010	12/10/2009	CS-6-3	3	Benzo(k)fluoranthene	0.76	14	9	<1
PGG 2010	12/9/2009	CS-12-3	3	Benzo(k)fluoranthene	0.34	14	9	<1
PGG 2009a	4/16/2009	PS1-6	6	Benzo(k)fluoranthene	0.24	14	0.45	<1

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/16/2009	PS1-3	3	Benzo(k)fluoranthene	0.2	14	9	<1
PGG 2009a	4/16/2009	PS2-6	6	Benzo(k)fluoranthene	0.18	14	0.45	<1
PGG 2010	12/10/2009	CS-5-3	3	Benzo(k)fluoranthene	0.17 D	14	9	<1
PGG 2010	12/10/2009	CS-24-15	15	Benzo(k)fluoranthene	0.082	14	0.45	<1
PGG 2010	12/9/2009	CS-8-3	3	Benzo(k)fluoranthene	0.074	14	9	<1
PGG 2009a	4/16/2009	WQ1-2	2	Benzo(k)fluoranthene	0.02	14	9	<1
PGG 2008	1/17/2008	B-2A	1.5-2	Cadmium	0.9	2	34	<1
PGG 2008	1/17/2008	B-2A	1.5-2	Chromium (total)	29		5,400	<1
PGG 2008	1/17/2008	B-2B	6.5-7	Chromium (total)	15		270	<1
PGG 2008	1/17/2008	B-8S	2-3	Chromium (total)	14		5,400	<1
PGG 2008	1/17/2008	B-6S	1-2	Chromium (total)	9.4		5,400	<1
PGG 2008	1/17/2008	B-7S	2-3	Chromium (total)	7		5,400	<1
PGG 2010	12/10/2009	CS-2-3	3	Chrysene	85	140	9.2	9.2
PGG 2008	1/17/2008	B-2A	2	Chrysene	44	140	9.2	4.8
PGG 2010	12/10/2009	CS-24-9	9	Chrysene	43	140	0.46	93
PGG 2010	12/10/2009	CS-24-6	6	Chrysene	42	140	0.46	91
PGG 2009a	4/17/2009	WQ7-2	2	Chrysene	38 D	140	9.2	4.1
PGG 2009a	4/17/2009	WQ8-2	2	Chrysene	19	140	9.2	2.1
PGG 2009a	4/16/2009	OY2-4	4	Chrysene	15	140	9.2	1.6
PGG 2010	12/9/2009	CS-7-3	3	Chrysene	12	140	9.2	1.3
PGG 2009a	4/17/2009	WQ9-2	2	Chrysene	4.2	140	9.2	<1
PGG 2009a	4/16/2009	OY2-2	2	Chrysene	4.1	140	9.2	<1
PGG 2010	12/9/2009	CS-3-3	3	Chrysene	3.8 D	140	9.2	<1
PGG 2010	12/9/2009	CS-3-3	3	Chrysene	3.4	140	9.2	<1
PGG 2009a	4/17/2009	WQ7-2	2	Chrysene	3.2	140	9.2	<1
PGG 2010	12/10/2009	CS-1-3	3	Chrysene	2.2	140	9.2	<1
PGG 2009a	4/18/2009	WQ9-4	4	Chrysene	1.7	140	9.2	<1
PGG 2010	12/10/2009	CS-6-3	3	Chrysene	1.5	140	9.2	<1
PGG 2010	12/10/2009	CS-5-3	3	Chrysene	1.4	140	9.2	<1
PGG 2009a	4/16/2009	PS1-6	6	Chrysene	1	140	0.46	2.2
PGG 2010	12/9/2009	CS-12-3	3	Chrysene	0.3	140	9.2	<1
PGG 2009a	4/16/2009	PS2-6	6	Chrysene	0.25	140	0.46	<1

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-5-3	3	Chrysene	0.2 D	140	9.2	<1
PGG 2009a	4/16/2009	PS1-3	3	Chrysene	0.18	140	9.2	<1
PGG 2009a	4/16/2009	WQ3-2	2	Chrysene	0.09	140	9.2	<1
PGG 2009a	4/16/2009	OY1-2	2	Chrysene	0.03	140	9.2	<1
PGG 2009a	4/16/2009	OY3-2	2	Chrysene	0.03	140	9.2	<1
PGG 2009a	4/16/2009	WQ5-1	1	Chrysene	0.02	140	9.2	<1
PGG 2009a	4/16/2009	WQ5-3	3	Chrysene	0.02	140	9.2	<1
PGG 2010	12/10/2009	CS-4-12	12	cis-1,2-Dichloroethene	4	160		<1
PGG 2010	12/10/2009	CS-4-9	9	cis-1,2-Dichloroethene	1.4	160		<1
PGG 2010	2/1/2010	CS-30-12	12	cis-1,2-Dichloroethene	1.1	160		<1
PGG 2010	2/1/2010	CS-31-9	9	cis-1,2-Dichloroethene	0.48	160		<1
PGG 2010	2/1/2010	CS-33-12	12	cis-1,2-Dichloroethene	0.35	160		<1
PGG 2010	12/10/2009	CS-1-15	15	cis-1,2-Dichloroethene	0.27	160		<1
PGG 2010	12/10/2009	CS-11-12	12	cis-1,2-Dichloroethene	0.21	160		<1
PGG 2010	2/1/2010	CS-31-12	12	cis-1,2-Dichloroethene	0.14	160		<1
PGG 2010	2/1/2010	CS-30-9	9	cis-1,2-Dichloroethene	0.11	160		<1
PGG 2010	12/11/2009	CS-15-9	9	cis-1,2-Dichloroethene	0.085	160		<1
PGG 2010	12/11/2009	CS-16-9	9	cis-1,2-Dichloroethene	0.07	160		<1
PGG 2010	12/11/2009	CS-16-7	7	cis-1,2-Dichloroethene	0.055	160		<1
PGG 2010	2/1/2010	CS-39-9	9	cis-1,2-Dichloroethene	0.05	160		<1
PGG 2010	12/11/2009	CS-15-12	12	cis-1,2-Dichloroethene	0.048	160		<1
PGG 2010	12/10/2009	CS-14-9	9	cis-1,2-Dichloroethene	0.044	160		<1
PGG 2010	12/11/2009	CS-22-9	9	cis-1,2-Dichloroethene	0.029	160		<1
PGG 2010	12/10/2009	CS-4-6	6	cis-1,2-Dichloroethene	0.025	160		<1
PGG 2010	12/10/2009	CS-14-6	6	cis-1,2-Dichloroethene	0.02	160		<1
PGG 2010	2/1/2010	CS-32-12	12	cis-1,2-Dichloroethene	0.02	160		<1
PGG 2010	12/11/2009	CS-21-12	12	cis-1,2-Dichloroethene	0.019	160		<1
PGG 2010	12/11/2009	CS-15-6	6	cis-1,2-Dichloroethene	0.016	160		<1
PGG 2010	12/10/2009	CS-2-6	6	cis-1,2-Dichloroethene	0.013	160		<1
PGG 2010	12/11/2009	CS-11-9	9	cis-1,2-Dichloroethene	0.011	160		<1
PGG 2010	2/1/2010	CS-28-12	12	cis-1,2-Dichloroethene	0.011	160		<1
PGG 2010	2/1/2010	CS-29-12	12	cis-1,2-Dichloroethene	0.01	160		<1

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-2-3	3	Dibenzo(a,h)anthracene	8.9	0.14	0.66	64
PGG 2009a	4/17/2009	WQ7-2	2	Dibenzo(a,h)anthracene	5.0 D	0.14	0.66	36
PGG 2009a	4/16/2009	OY2-4	4	Dibenzo(a,h)anthracene	4.4	0.14	0.66	31
PGG 2010	12/10/2009	CS-24-6	6	Dibenzo(a,h)anthracene	3.7	0.14	0.033	112
PGG 2010	12/10/2009	CS-24-9	9	Dibenzo(a,h)anthracene	3.5	0.14	0.033	106
PGG 2008	1/17/2008	B-2A	2	Dibenzo(a,h)anthracene	3.4	0.14	0.66	24
PGG 2009a	4/17/2009	WQ8-2	2	Dibenzo(a,h)anthracene	1.6	0.14	0.66	11
PGG 2010	12/9/2009	CS-7-3	3	Dibenzo(a,h)anthracene	1.1	0.14	0.66	7.9
PGG 2009a	4/17/2009	WQ9-2	2	Dibenzo(a,h)anthracene	0.52	0.14	0.66	3.7
PGG 2010	12/9/2009	CS-3-3	3	Dibenzo(a,h)anthracene	0.34	0.14	0.66	2.4
PGG 2010	12/9/2009	CS-3-3	3	Dibenzo(a,h)anthracene	0.33 D	0.14	0.66	2.4
PGG 2010	12/10/2009	CS-1-3	3	Dibenzo(a,h)anthracene	0.32	0.14	0.66	2.3
PGG 2009a	4/16/2009	OY2-2	2	Dibenzo(a,h)anthracene	0.31	0.14	0.66	2.2
PGG 2009a	4/17/2009	WQ7-2	2	Dibenzo(a,h)anthracene	0.15	0.14	0.66	1.1
PGG 2010	12/10/2009	CS-6-3	3	Dibenzo(a,h)anthracene		0.14	0.66	<1
PGG 2009a	4/16/2009	OY2-4	4	Diesel-range hydrocarbons	25,000	2,000		13
PGG 2009a	4/17/2009	WQ7-2	2	Diesel-range hydrocarbons	740 D	2,000		<1
PGG 2009a	4/17/2009	WQ7-2	2	Diesel-range hydrocarbons	480	2,000		<1
PGG 2009a	4/17/2009	WQ8-2	2	Diesel-range hydrocarbons	290	2,000		<1
PGG 2009a	4/17/2009	WQ9-4	4	Diesel-range hydrocarbons	270	2,000		<1
PGG 2009a	4/17/2009	PS1-6	6	Diesel-range hydrocarbons	160	2,000		<1
PGG 2009a	4/17/2009	WQ9-2	2	Diesel-range hydrocarbons	140	2,000		<1
PGG 2009a	4/16/2009	WQ1-2	2	Diesel-range hydrocarbons	60	2,000		<1
PGG 2008	1/17/2008	B-2A	2	Fluoranthene	84	3,200	24	3.5
PGG 2009a	4/17/2009	WQ7-2	2	Fluoranthene	74 D	3,200	24	3.1
PGG 2009a	4/17/2009	WQ8-2	2	Fluoranthene	52	3,200	24	2.2
PGG 2009a	4/17/2009	WQ9-2	2	Fluoranthene	9.5	3,200	24	<1
PGG 2009a	4/17/2009	WQ7-2	2	Fluoranthene	8.1	3,200	24	<1
PGG 2009a	4/16/2009	OY2-4	4	Fluoranthene	5.5	3,200	24	<1
PGG 2009a	4/16/2009	PS1-6	6	Fluoranthene	4.6	3,200	1.2	3.8
PGG 2009a	4/18/2009	WQ9-4	4	Fluoranthene	4.3	3,200	24	<1
PGG 2009a	4/16/2009	PS2-6	6	Fluoranthene	0.63	3,200	1.2	<1

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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/16/2009	OY2-2	2	Fluoranthene	0.41	3,200	24	<1
PGG 2009a	4/16/2009	PS1-3	3	Fluoranthene	0.2	3,200	24	<1
PGG 2009a	4/16/2009	WQ3-2	2	Fluoranthene	0.12	3,200	24	<1
PGG 2009a	4/16/2009	WQ5-1	1	Fluoranthene	0.03	3,200	24	<1
PGG 2009a	4/16/2009	OY1-2	2	Fluoranthene	0.03	3,200	24	<1
PGG 2009a	4/16/2009	OY3-2	2	Fluoranthene	0.03	3,200	24	<1
PGG 2009a	4/16/2009	WQ1-2	2	Fluoranthene	0.02	3,200	24	<1
PGG 2009a	4/16/2009	WQ5-3	3	Fluoranthene	0.02	3,200	24	<1
PGG 2009a	4/16/2009	OY2-4	4	Fluorene	40	3,200	1.6	25
PGG 2008	1/17/2008	B-2A	2	Fluorene	15	3,200	1.6	9.4
PGG 2009a	4/17/2009	WQ7-2	2	Fluorene	14 D	3,200	1.6	8.8
PGG 2009a	4/17/2009	WQ8-2	2	Fluorene	7.6	3,200	1.6	4.8
PGG 2009a	4/16/2009	PS1-6	6	Fluorene	2.3	3,200	0.081	28
PGG 2009a	4/16/2009	OY2-2	2	Fluorene	1.4	3,200	1.6	<1
PGG 2009a	4/17/2009	WQ9-2	2	Fluorene	0.94	3,200	1.6	<1
PGG 2009a	4/18/2009	WQ9-4	4	Fluorene	0.88	3,200	1.6	<1
PGG 2009a	4/17/2009	WQ7-2	2	Fluorene	0.86	3,200	1.6	<1
PGG 2009a	4/17/2009	WQ9-2	2	Heavy oil-range hydrocarbons	7,700	2,000		3.9
PGG 2010	12/10/2009	CS-7-3	3	Heavy oil-range hydrocarbons	3,700	2,000		1.9
PGG 2009a	4/16/2009	OY2-2	2	Heavy oil-range hydrocarbons	3,000	2,000		1.5
PGG 2010	12/10/2009	CS-2-3	3	Heavy oil-range hydrocarbons	2,500	2,000		1.3
PGG 2009a	4/16/2009	OY2-4	4	Heavy oil-range hydrocarbons	2,100	2,000		1.1
PGG 2009a	4/17/2009	WQ8-2	2	Heavy oil-range hydrocarbons	1,700	2,000		<1
PGG 2010	12/10/2009	CS-5-3	3	Heavy oil-range hydrocarbons	1,300	2,000		<1
PGG 2010	12/10/2009	CS-24-3	3	Heavy oil-range hydrocarbons	830	2,000		<1
PGG 2009a	4/17/2009	PS1-6	6	Heavy oil-range hydrocarbons	790	2,000		<1
PGG 2010	12/9/2009	CS-3-3	3	Heavy oil-range hydrocarbons	540 D	2,000		<1
PGG 2010	12/10/2009	CS-1-3	3	Heavy oil-range hydrocarbons	490	2,000		<1
PGG 2009a	4/17/2009	WQ7-2	2	Heavy oil-range hydrocarbons	360 D	2,000		<1
PGG 2010	12/10/2009	CS-5-3	3	Heavy oil-range hydrocarbons	270	2,000		<1
PGG 2009a	4/17/2009	PS2-6	6	Heavy oil-range hydrocarbons	260	2,000		<1
PGG 2009a	4/17/2009	WQ9-4	4	Heavy oil-range hydrocarbons	240	2,000		<1
PGG 2009a	4/17/2009	PS1-3	3	Heavy oil-range hydrocarbons	230	2,000		<1

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Chemicals Detected in Soil Samples
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/9/2009	CS-3-3	3	Heavy oil-range hydrocarbons	220	2,000		<1
PGG 2009a	4/17/2009	PS3-6	6	Heavy oil-range hydrocarbons	130	2,000		<1
PGG 2010	12/10/2009	CS-2-6	6	Heavy oil-range hydrocarbons	130	2,000		<1
PGG 2010	12/10/2009	CS-2-3	3	Indeno(1,2,3-c,d)pyrene	324	1.4	1.8	231
PGG 2008	1/17/2008	B-2A	2	Indeno(1,2,3-c,d)pyrene	73	1.4	1.8	52
PGG 2009a	4/17/2009	WQ7-2	2	Indeno(1,2,3-c,d)pyrene	41 D	1.4	1.8	29
PGG 2010	12/10/2009	CS-24-9	9	Indeno(1,2,3-c,d)pyrene	20	1.4	0.088	227
PGG 2010	12/10/2009	CS-24-6	6	Indeno(1,2,3-c,d)pyrene	18	1.4	0.088	205
PGG 2009a	4/17/2009	WQ8-2	2	Indeno(1,2,3-c,d)pyrene	17	1.4	1.8	12
PGG 2009a	4/16/2009	OY2-4	4	Indeno(1,2,3-c,d)pyrene	15	1.4	1.8	11
PGG 2010	12/10/2009	CS-1-3	3	Indeno(1,2,3-c,d)pyrene	13	1.4	1.8	9.3
PGG 2010	12/9/2009	CS-7-3	3	Indeno(1,2,3-c,d)pyrene	12	1.4	1.8	8.6
PGG 2010	12/10/2009	CS-5-3	3	Indeno(1,2,3-c,d)pyrene	6.4	1.4	1.8	4.6
PGG 2010	12/9/2009	CS-3-3	3	Indeno(1,2,3-c,d)pyrene	4.3	1.4	1.8	3.1
PGG 2010	12/9/2009	CS-3-3	3	Indeno(1,2,3-c,d)pyrene	4.1 D	1.4	1.8	2.9
PGG 2009a	4/17/2009	WQ9-2	2	Indeno(1,2,3-c,d)pyrene	4.0	1.4	1.8	<1
PGG 2009a	4/17/2009	WQ7-2	2	Indeno(1,2,3-c,d)pyrene	2.7	1.4	1.8	1.9
PGG 2009a	4/18/2009	WQ9-4	4	Indeno(1,2,3-c,d)pyrene	1.3	1.4	1.8	<1
PGG 2010	12/10/2009	CS-6-3	3	Indeno(1,2,3-c,d)pyrene	1.2	1.4	1.8	<1
PGG 2009a	4/16/2009	OY2-2	2	Indeno(1,2,3-c,d)pyrene	0.81	1.4	1.8	<1
PGG 2010	12/10/2009	CS-5-3	3	Indeno(1,2,3-c,d)pyrene	0.64 D	1.4	1.8	<1
PGG 2010	12/9/2009	CS-12-3	3	Indeno(1,2,3-c,d)pyrene	0.34	1.4	1.8	<1
PGG 2009a	4/16/2009	PS2-6	6	Indeno(1,2,3-c,d)pyrene	0.29	1.4	0.088	3.3
PGG 2009a	4/16/2009	PS1-3	3	Indeno(1,2,3-c,d)pyrene	0.24	1.4	1.8	<1
PGG 2009a	4/16/2009	PS1-6	6	Indeno(1,2,3-c,d)pyrene	0.18	1.4	0.088	2.0
PGG 2010	12/10/2009	CS-2-9	9	Indeno(1,2,3-c,d)pyrene	0.06	1.4	0.088	<1
PGG 2009a	4/17/2009	WQ9-2	2	Lead	57,000	250	1,300	228
PGG 2009a	4/16/2009	OY2-2	2	Lead	23,000	250	1,300	92
PGG 2010	12/9/2009	CS-3-3	3	Lead	11,000 D	250	1,300	44
PGG 2010	12/9/2009	CS-3-3	3	Lead	7,600	250	1,300	30
PGG 2010	12/10/2009	CS-1-3	3	Lead	4,200	250	1,300	17
PGG 2010	12/9/2009	CS-7-3	3	Lead	3,500	250	1,300	14

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Chemicals Detected in Soil Samples
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-6-3	3	Lead	3,300	250	1,300	13
PGG 2009a	4/17/2009	PS1-3	3	Lead	2,900	250	1,300	12
PGG 2010	12/10/2009	CS-5-3	3	Lead	2,900	250	1,300	12
PGG 2010	12/10/2009	CS-2-6	6	Lead	2,200	250	67	33
PGG 2009a	4/16/2009	OY2-4	4	Lead	1,400	250	1,300	5.6
PGG 2009a	4/17/2009	PS1-6	6	Lead	1,200	250	67	18
PGG 2009a	4/17/2009	PS2-6	6	Lead	830	250	67	12
PGG 2010	12/10/2009	CS-2-3	3	Lead	800	250	1,300	3.2
PGG 2009a	4/17/2009	PS3-6	6	Lead	470	250	67	7.0
PGG 2010	12/10/2009	CS-1-6	6	Lead	370	250	67	5.5
PGG 2009a	4/17/2009	WQ7-2	2	Lead	350	250	1,300	1.4
PGG 2009a	4/17/2009	WQ9-4	4	Lead	340	250	1,300	1.4
PGG 2009a	4/17/2009	WQ8-2	2	Lead	310	250	1,300	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Lead	300 D	250	1,300	1.2
PGG 2009a	4/17/2009	WQ7-2	2	Lead	280	250	1,300	1.1
PGG 2008	1/17/2008	B-2A	1.5-2	Lead	260	250	1,300	1.0
PGG 2009a	4/17/2009	PS2-3	3	Lead	230	250	1,300	<1
PGG 2009a	4/17/2009	PS2-3	3	Lead	230 D	250	1,300	<1
PGG 2009a	4/16/2009	WQ5-3	3	Lead	180	250	1,300	<1
PGG 2010	12/10/2009	CS-5-3	3	Lead	180	250	1,300	<1
PGG 2010	12/10/2009	CS-24-6	6	Lead	180	250	67	2.7
PGG 2009a	4/16/2009	OY1-2	2	Lead	140	250	1,300	<1
PGG 2009a	4/17/2009	OY3-2	2	Lead	130	250	1,300	<1
PGG 2009a	4/16/2009	WQ5-1	1	Lead	120	250	1,300	<1
PGG 2010	12/10/2009	CS-24-3	3	Lead	120	250	1,300	<1
PGG 2009a	4/16/2009	OY1-2	2	Lead	110 D	250	1,300	<1
PGG 2010	12/10/2009	CS-2-9	9	Lead	110	250	67	1.6
PGG 2009a	4/17/2009	WQ7-4	4	Lead	91	250	1,300	<1
PGG 2009a	4/16/2009	WQ3-2	2	Lead	86	250	1,300	<1
PGG 2009a	4/16/2009	WQ1-2	2	Lead	70 D	250	1,300	<1
PGG 2010	12/10/2009	CS-4-6	6	Lead	60	250	67	<1
PGG 2009a	4/16/2009	WQ2-2	2	Lead	51	250	1,300	<1

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PGG 2009a	4/16/2009	WQ1-2	2	Lead	50	250	1,300	<1
PGG 2009a	4/16/2009	OY4-2	2	Lead	50	250	1,300	<1
PGG 2010	12/10/2009	CS-3-6	6	Lead	38	250	67	<1
PGG 2009a	4/16/2009	OY1-4	2	Lead	36	250	1,300	<1
PGG 2010	12/9/2009	CS-12-3	3	Lead	29	250	1,300	<1
PGG 2010	12/9/2009	CS-19-3	3	Lead	24	250	1,300	<1
PGG 2010	12/9/2009	CS-18-3	3	Lead	18 D	250	1,300	<1
PGG 2009a	4/16/2009	YP1-6	6	Lead	16	250	67	<1
PGG 2010	12/10/2009	CS-2-7	7	Lead	16	250	67	<1
PGG 2009a	4/16/2009	YP1-3	3	Lead	15	250	1,300	<1
PGG 2010	12/9/2009	CS-13-3	3	Lead	15	250	1,300	<1
PGG 2010	12/10/2009	CS-14-3	3	Lead	15	250	1,300	<1
PGG 2009a	4/16/2009	WQ6-4	4	Lead	13	250	1,300	<1
PGG 2009a	4/16/2009	WQ4-2	2	Lead	11	250	1,300	<1
PGG 2009a	4/17/2009	OY3-4	4	Lead	11	250	1,300	<1
PGG 2010	12/9/2009	CS-7-6	6	Lead	11	250	67	<1
PGG 2010	12/10/2009	CS-6-6	6	Lead	11	250	67	<1
PGG 2009a	4/16/2009	YP3-6	6	Lead	10	250	67	<1
PGG 2008	1/17/2008	B-8S	2-3	Lead	9.2	250	1,300	<1
PGG 2010	12/9/2009	CS-23-3	3	Lead	8.4	250	1,300	<1
PGG 2009a	4/17/2009	YP4-3	3	Lead	8.0	250	1,300	<1
PGG 2010	12/9/2009	CS-12-6	6	Lead	7.5	250	67	<1
PGG 2009a	4/17/2009	YP5-6	6	Lead	6.9	250	67	<1
PGG 2010	12/10/2009	CS-2-12	12	Lead	6.9	250	67	<1
PGG 2009a	4/17/2009	YP4-6	6	Lead	6.5	250	67	<1
PGG 2010	12/11/2009	CS-11-3	3	Lead	3.4	250	1,300	<1
PGG 2010	12/9/2009	CS-8-3	3	Lead	3	250	1,300	<1
PGG 2010	12/10/2009	CS-4-3	3	Lead	2.8	250	1,300	<1
PGG 2010	12/9/2009	CS-18-3	3	Lead	2.3	250	1,300	<1
PGG 2010	12/10/2009	CS-9-3	3	Lead	2.1	250	1,300	<1
PGG 2010	12/10/2009	CS-5-9	9	Lead	2.1	250	67	<1
PGG 2010	12/11/2009	CS-20-3	3	Lead	2.1	250	1,300	<1

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Chemicals Detected in Soil Samples
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/11/2009	CS-16-3	3	Lead	1.8	250	1,300	<1
PGG 2010	12/11/2009	CS-15-3	3	Lead	1.7	250	1,300	<1
PGG 2010	12/11/2009	CS-21-3	3	Lead	1.7	250	1,300	<1
PGG 2010	12/11/2009	CS-10-3	3	Lead	1.6	250	1,300	<1
PGG 2010	12/10/2009	CS-2-15	15	Lead	1.5	250	67	<1
PGG 2010	12/11/2009	CS-22-3	3	Lead	1.1	250	1,300	<1
PGG 2008	1/17/2008	B-2A	2	Naphthalene	21	5	3.8	5.5
PGG 2008	1/17/2008	B-2A	1.5-2	Naphthalene	21	5	3.8	5.5
PGG 2009a	4/17/2009	WQ7-2	2	Naphthalene	21 D	5	3.8	5.5
PGG 2009a	4/17/2009	WQ8-2	2	Naphthalene	12	5	3.8	3.2
PGG 2009a	4/16/2009	OY2-4	4	Naphthalene	8.7	5	3.8	2.3
PGG 2009a	4/18/2009	WQ9-4	4	Naphthalene	4.5	5	3.8	1.2
PGG 2009a	4/16/2009	OY2-2	2	Naphthalene	2.2	5	3.8	<1
PGG 2009a	4/17/2009	WQ7-2	2	Naphthalene	1.0	5	3.8	<1
PGG 2009a	4/17/2009	WQ9-2	2	Naphthalene	0.78	5	3.8	<1
PGG 2009a	4/17/2009	WQ8-2	2	Naphthalene	0.104	5	3.8	<1
PGG 2009a	4/16/2009	PS1-6	6	Naphthalene	0.07	5	0.2	<1
PGG 2009a	4/17/2009	WQ7-2	2	Phenanthrene	89 D		9.7	9.2
PGG 2008	1/17/2008	B-2A	2	Phenanthrene	86		9.7	8.9
PGG 2009a	4/17/2009	WQ8-2	2	Phenanthrene	61		9.7	6.3
PGG 2009a	4/16/2009	OY2-4	4	Phenanthrene	45		9.7	4.6
PGG 2009a	4/17/2009	WQ9-2	2	Phenanthrene	9.0		9.7	<1
PGG 2009a	4/17/2009	WQ7-2	2	Phenanthrene	8.4		9.7	<1
PGG 2009a	4/16/2009	PS1-6	6	Phenanthrene	7.2		0.49	15
PGG 2009a	4/18/2009	WQ9-4	4	Phenanthrene	5.8		9.7	<1
PGG 2009a	4/16/2009	OY2-2	2	Phenanthrene	2.4		9.7	<1
PGG 2009a	4/16/2009	PS2-6	6	Phenanthrene	0.54		0.49	1.1
PGG 2009a	4/16/2009	PS1-3	3	Phenanthrene	0.19		9.7	<1
PGG 2008	1/17/2008	B-2A	2	Pyrene	82	2,400	28	2.9
PGG 2009a	4/17/2009	WQ7-2	2	Pyrene	78 D	2,400	28	2.8
PGG 2009a	4/17/2009	WQ8-2	2	Pyrene	51	2,400	28	1.8
PGG 2009a	4/16/2009	OY2-4	4	Pyrene	40	2,400	28	1.4

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Chemicals Detected in Soil Samples
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2009a	4/17/2009	WQ9-2	2	Pyrene	9.6	2,400	28	<1
PGG 2009a	4/17/2009	WQ7-2	2	Pyrene	8.0	2,400	28	<1
PGG 2009a	4/18/2009	WQ9-4	4	Pyrene	4.2	2,400	28	<1
PGG 2009a	4/16/2009	PS1-6	6	Pyrene	2.6	2,400	1.4	1.9
PGG 2009a	4/16/2009	OY2-2	2	Pyrene	1.3	2,400	28	<1
PGG 2009a	4/16/2009	PS2-6	6	Pyrene	0.56	2,400	1.4	<1
PGG 2009a	4/16/2009	PS1-3	3	Pyrene	0.24	2,400	28	<1
PGG 2009a	4/16/2009	WQ3-2	2	Pyrene	0.13	2,400	28	<1
PGG 2009a	4/16/2009	OY1-2	2	Pyrene	0.04	2,400	28	<1
PGG 2009a	4/16/2009	WQ5-1	1	Pyrene	0.03	2,400	28	<1
PGG 2009a	4/16/2009	OY3-2	2	Pyrene	0.03	2,400	28	<1
PGG 2009a	4/16/2009	WQ5-3	3	Pyrene	0.02	2,400	28	<1
PGG 2010	12/10/2009	CS-4-12	12	Tetrachloroethene (PCE)	1.9	0.05		38
PGG 2010	12/10/2009	CS-4-6	6	Tetrachloroethene (PCE)	1.4	0.05		28
PGG 2010	12/10/2009	CS-4-9	9	Tetrachloroethene (PCE)	1.4	0.05		28
PGG 2010	2/1/2010	CS-30-9	9	Tetrachloroethene (PCE)	1.3	0.05		26
PGG 2010	2/1/2010	CS-33-6	6	Tetrachloroethene (PCE)	0.76	0.05		15
PGG 2009a	4/17/2009	WQ7-2	2	Tetrachloroethene (PCE)	0.41	0.05		8.2
PGG 2010	2/2/2010	CS-40-9	9	Tetrachloroethene (PCE)	0.37	0.05		7.4
PGG 2010	2/1/2010	CS-30-6	6	Tetrachloroethene (PCE)	0.33	0.05		6.6
PGG 2010	12/11/2009	CS-16-9	9	Tetrachloroethene (PCE)	0.32	0.05		6.4
PGG 2010	2/1/2010	CS-32-9	9	Tetrachloroethene (PCE)	0.3	0.05		6.0
PGG 2009a	4/16/2009	YP6-3	3	Tetrachloroethene (PCE)	0.25	0.05		5.0
PGG 2009a	4/17/2009	WQ7-2	2	Tetrachloroethene (PCE)	0.25 D	0.05		5.0
PGG 2010	2/2/2010	CS-36-6	6	Tetrachloroethene (PCE)	0.25	0.05		5.0
PGG 2009a	4/17/2009	WQ7-4	4	Tetrachloroethene (PCE)	0.24	0.05		4.8
PGG 2010	2/1/2010	CS-29-6	6	Tetrachloroethene (PCE)	0.23	0.05		4.6
PGG 2010	12/11/2009	CS-16-7	7	Tetrachloroethene (PCE)	0.21	0.05		4.2
PGG 2010	2/2/2010	CS-36-9	9	Tetrachloroethene (PCE)	0.21	0.05		4.2
PGG 2009a	4/16/2009	YP5-6	6	Tetrachloroethene (PCE)	0.17	0.05		3.4
PGG 2010	2/2/2010	CS-42-9	9	Tetrachloroethene (PCE)	0.17	0.05		3.4
PGG 2010	2/1/2010	CS-31-6	6	Tetrachloroethene (PCE)	0.13	0.05		2.6

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Chemicals Detected in Soil Samples
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	2/1/2010	CS-39-9	9	Tetrachloroethene (PCE)	0.13	0.05		2.6
PGG 2010	12/11/2009	CS-16-6	6	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	2/1/2010	CS-33-9	9	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	2/1/2010	CS-38-9	9	Tetrachloroethene (PCE)	0.12	0.05		2.4
PGG 2010	12/11/2009	CS-16-12	12	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/1/2010	CS-39-6	6	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/2/2010	CS-41-9	9	Tetrachloroethene (PCE)	0.11	0.05		2.2
PGG 2010	2/1/2010	CS-29-9	9	Tetrachloroethene (PCE)	0.1	0.05		2.0
PGG 2010	2/2/2010	CS-42-6	6	Tetrachloroethene (PCE)	0.095 D	0.05		1.9
PGG 2010	2/1/2010	CS-33-12	12	Tetrachloroethene (PCE)	0.093	0.05		<1
PGG 2010	2/2/2010	CS-41-6	6	Tetrachloroethene (PCE)	0.08	0.05		1.6
PGG 2009a	4/16/2009	OY2-2	2	Tetrachloroethene (PCE)	0.072	0.05		1.4
PGG 2009a	4/17/2009	WQ8-2	2	Tetrachloroethene (PCE)	0.066	0.05		1.3
PGG 2010	2/2/2010	CS-37-6	6	Tetrachloroethene (PCE)	0.055	0.05		1.1
PGG 2010	2/2/2010	CS-37-9	9	Tetrachloroethene (PCE)	0.053	0.05		1.1
PGG 2010	2/2/2010	CS-42-6	6	Tetrachloroethene (PCE)	0.046	0.05		<1
PGG 2010	12/11/2009	CS-21-6	6	Tetrachloroethene (PCE)	0.045	0.05		<1
PGG 2009a	4/17/2009	WQ9-2	2	Tetrachloroethene (PCE)	0.044	0.05		<1
PGG 2010	12/10/2009	CS-1-15	15	Tetrachloroethene (PCE)	0.043	0.05		<1
PGG 2010	2/1/2010	CS-26-12	12	Tetrachloroethene (PCE)	0.042	0.05		<1
PGG 2010	2/1/2010	CS-26-9	9	Tetrachloroethene (PCE)	0.041	0.05		<1
PGG 2010	2/1/2010	CS-30-12	12	Tetrachloroethene (PCE)	0.04	0.05		<1
PGG 2010	2/2/2010	CS-43-6	6	Tetrachloroethene (PCE)	0.04	0.05		<1
PGG 2010	2/2/2010	CS-43-9	9	Tetrachloroethene (PCE)	0.037	0.05		<1
PGG 2010	2/1/2010	CS-26-6	6	Tetrachloroethene (PCE)	0.035	0.05		<1
PGG 2010	12/10/2009	CS-6-6	6	Tetrachloroethene (PCE)	0.033	0.05		<1
PGG 2010	2/1/2010	CS-32-6	6	Tetrachloroethene (PCE)	0.03	0.05		<1
PGG 2010	2/1/2010	CS-38-6	6	Tetrachloroethene (PCE)	0.03	0.05		<1
PGG 2010	2/2/2010	CS-40-6	6	Tetrachloroethene (PCE)	0.03	0.05		<1
PGG 2010	2/1/2010	CS-35-9	9	Tetrachloroethene (PCE)	0.027	0.05		<1
PGG 2009a	4/16/2009	PS3-6	6	Tetrachloroethene (PCE)	0.024	0.05		<1
PGG 2010	12/11/2009	CS-15-9	9	Tetrachloroethene (PCE)	0.023	0.05		<1

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	2/1/2010	CS-35-6	6	Tetrachloroethene (PCE)	0.022	0.05		<1
PGG 2009a	4/16/2009	OY5-3	3	Tetrachloroethene (PCE)	0.021	0.05		<1
PGG 2010	12/11/2009	CS-11-3	3	Tetrachloroethene (PCE)	0.02	0.05		<1
PGG 2010	2/1/2010	CS-29-12	12	Tetrachloroethene (PCE)	0.02	0.05		<1
PGG 2010	12/10/2009	CS-14-9	9	Tetrachloroethene (PCE)	0.018	0.05		<1
PGG 2010	12/11/2009	CS-10-3	3	Tetrachloroethene (PCE)	0.017	0.05		<1
PGG 2010	12/11/2009	CS-22-6	6	Tetrachloroethene (PCE)	0.012	0.05		<1
PGG 2010	2/1/2010	CS-32-12	12	trans-1,2-Dichloroethene	0.17	1600		<1
PGG 2010	12/11/2009	CS-11-6	6	trans-1,2-Dichloroethene	0.15	1600		<1
PGG 2010	12/10/2009	CS-4-12	12	trans-1,2-Dichloroethene	0.078	1600		<1
PGG 2010	12/10/2009	CS-4-9	9	trans-1,2-Dichloroethene	0.026	1600		<1
PGG 2010	12/10/2009	CS-10-6	6	trans-1,2-Dichloroethene	0.016	1600		<1
PGG 2010	12/10/2009	CS-4-12	12	Trichloroethene (TCE)	4.7	0.03		157
PGG 2010	2/1/2010	CS-30-9	9	Trichloroethene (TCE)	0.37	0.03		12
PGG 2010	2/2/2010	CS-42-6	6	Trichloroethene (TCE)	0.36	0.03		12
PGG 2010	12/10/2009	CS-5-12	12	Trichloroethene (TCE)	0.26	0.03		8.7
PGG 2010	2/1/2010	CS-33-12	12	Trichloroethene (TCE)	0.18	0.03		6.0
PGG 2010	2/1/2010	CS-31-9	9	Trichloroethene (TCE)	0.16	0.03		5.3
PGG 2010	12/11/2009	CS-20-6	6	Trichloroethene (TCE)	0.13	0.03		4.3
PGG 2010	2/2/2010	CS-36-6	6	Trichloroethene (TCE)	0.098	0.03		3.3
PGG 2010	2/2/2010	CS-42-9	9	Trichloroethene (TCE)	0.09	0.03		3.0
PGG 2009a	4/16/2009	YP6-3	3	Trichloroethene (TCE)	0.084	0.03		2.8
PGG 2010	12/11/2009	CS-11-6	6	Trichloroethene (TCE)	0.084	0.03		2.8
PGG 2010	12/11/2009	CS-16-9	9	Trichloroethene (TCE)	0.081	0.03		2.7
PGG 2010	2/2/2010	CS-36-9	9	Trichloroethene (TCE)	0.081	0.03		2.7
PGG 2010	2/1/2010	CS-39-6	6	Trichloroethene (TCE)	0.08	0.03		2.7
PGG 2010	2/2/2010	CS-42-6	6	Trichloroethene (TCE)	0.071	0.03		2.4
PGG 2009a	4/17/2009	WQ7-4	4	Trichloroethene (TCE)	0.065	0.03		2.2
PGG 2010	2/1/2010	CS-39-9	9	Trichloroethene (TCE)	0.06	0.03		2.0
PGG 2010	2/2/2010	CS-41-9	9	Trichloroethene (TCE)	0.06	0.03		2.0
PGG 2010	12/10/2009	CS-5-3	3	Trichloroethene (TCE)	0.058 D	0.03		1.9
PGG 2010	12/10/2009	CS-4-9	9	Trichloroethene (TCE)	0.054	0.03		1.8

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/11/2009	CS-16-6	6	Trichloroethene (TCE)	0.054	0.03		1.8
PGG 2010	12/11/2009	CS-16-7	7	Trichloroethene (TCE)	0.051	0.03		1.7
PGG 2010	2/1/2010	CS-38-9	9	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	2/2/2010	CS-41-6	6	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	2/2/2010	CS-40-9	9	Trichloroethene (TCE)	0.05	0.03		1.7
PGG 2010	12/11/2009	CS-21-6	6	Trichloroethene (TCE)	0.049	0.03		1.6
PGG 2010	2/2/2010	CS-40-6	6	Trichloroethene (TCE)	0.04	0.03		1.3
PGG 2009a	4/16/2009	YP5-6	6	Trichloroethene (TCE)	0.037	0.03		1.2
PGG 2009a	4/17/2009	WQ7-2	2	Trichloroethene (TCE)	0.036	0.03		1.2
PGG 2010	12/11/2009	CS-15-9	9	Trichloroethene (TCE)	0.036	0.03		1.2
PGG 2010	12/10/2009	CS-5-3	3	Trichloroethene (TCE)	0.033	0.03		1.1
PGG 2010	2/2/2010	CS-43-9	9	Trichloroethene (TCE)	0.026	0.03		<1
PGG 2010	2/2/2010	CS-37-6	6	Trichloroethene (TCE)	0.021	0.03		<1
PGG 2010	2/2/2010	CS-37-9	9	Trichloroethene (TCE)	0.02	0.03		<1
PGG 2010	12/10/2009	CS-2-6	6	Trichloroethene (TCE)	0.019	0.03		<1
PGG 2010	12/10/2009	CS-4-6	6	Trichloroethene (TCE)	0.018	0.03		<1
PGG 2010	12/10/2009	CS-14-9	9	Trichloroethene (TCE)	0.016	0.03		<1
PGG 2010	12/10/2009	CS-6-6	6	Trichloroethene (TCE)	0.014	0.03		<1
PGG 2010	12/11/2009	CS-15-6	6	Trichloroethene (TCE)	0.014	0.03		<1
PGG 2010	12/11/2009	CS-22-6	6	Trichloroethene (TCE)	0.012	0.03		<1
PGG 2010	12/9/2009	CS-23-15	15	Trichloroethene (TCE)	0.011	0.03		<1
PGG 2010	12/10/2009	CS-10-6	6	Trichloroethene (TCE)	0.01	0.03		<1
PGG 2010	2/1/2010	CS-31-12	12	Vinyl Chloride	0.61	240		<1
PGG 2010	12/10/2009	CS-4-12	12	Vinyl Chloride	0.59	240		<1
PGG 2010	2/1/2010	CS-32-12	12	Vinyl Chloride	0.16	240		<1
PGG 2010	12/11/2009	CS-11-6	6	Vinyl Chloride	0.13	240		<1
PGG 2010	12/11/2009	CS-11-9	9	Vinyl Chloride	0.037	240		<1
PGG 2010	12/11/2009	CS-11-7	7	Vinyl Chloride	0.036	240		<1
PGG 2010	2/1/2010	CS-31-9	9	Vinyl Chloride	0.025	240		<1
PGG 2010	2/2/2010	CS-36-9	9	Vinyl Chloride	0.0089	240		<1
PGG 2010	12/10/2009	CS-14-12	12	Vinyl Chloride	0.0072	240		<1
PGG 2010	12/10/2009	CS-4-9	9	Vinyl Chloride	0.0058	240		<1

Table D-3
Chemicals Detected in Soil Samples
640 S Riverside Drive

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
PGG 2010	12/10/2009	CS-9-9	9	Vinyl Chloride	0.0054	240		<1
PGG 2010	12/11/2009	CS-15-9	9	Vinyl Chloride	0.0052	240		<1
PGG 2010	12/11/2009	CS-16-9	9	Vinyl Chloride	0.0051	240		<1
PGG 2010	2/1/2010	CS-30-12	12	Vinyl Chloride	0.005	240		<1
PGG 2010	12/11/2009	CS-22-9	9	Vinyl Chloride	0.0048	240		<1
PGG 2010	12/10/2009	CS-1-15	15	Vinyl Chloride	0.0037	240		<1
PGG 2010	2/1/2010	CS-35-12	12	Vinyl Chloride	0.0034	240		<1
PGG 2010	12/11/2009	CS-16-7	7	Vinyl Chloride	0.003	240		<1
PGG 2010	12/11/2009	CS-10-9	9	Vinyl Chloride	0.0026	240		<1
PGG 2010	12/10/2009	CS-14-9	9	Vinyl Chloride	0.0022	240		<1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
D - Duplicate
sample
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Groundwater encountered at 6 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.
Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-4
Chemicals Detected in Groundwater
640 S Riverside Drive

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
PGG 2008	1/17/2008	B-3	1,1,2,2-Tetrachloroethane	3.4	0.22		15
PGG 2009a	4/17/2009	YP6-GW	1,1,2-Trichloroethane	1.4	1		1.8
PGG 2009a	4/17/2009	YP6-GW	1,1-Dichloroethane	1.6			
Herrera 2008	11/21/2007	EB-1	1,1-Dichloroethane	0.76			
Herrera 2008	11/21/2007	EB-3	1,1-Dichloroethane	0.36			
Herrera 2008	11/21/2007	EB-2	1-Methylnaphthalene	19	1.50		13
Herrera 2008	11/21/2007	EB-2	Acenaphthene	2.4	960	9.3	<1
PGG 2009a	4/17/2009	YP6-GW	Acetone	24			
PGG 2009a	4/17/2009	WQ8-GW	Arsenic	12	0.06	370	200
PGG 2009a	4/17/2009	WQ8-GW	Arsenic	10 D	0.06	370	167
PGG 2009a	4/17/2009	PS2-GW	Arsenic	9.3	0.06	370	155
PGG 2009a	4/17/2009	YP6-GW	Arsenic	4.3	0.06	370	72
Herrera 2008	11/21/2007	EB-3	Arsenic	3.3	0.06	370	55
PGG 2009a	4/17/2009	PS1-GW	Arsenic	2.3 D	0.06	370	38
PGG 2009a	4/17/2009	PS1-GW	Arsenic	2.1	0.06	370	35
PGG 2008	1/17/2008	B-2	Barium	150			
PGG 2008	1/17/2008	B-1	Barium	90			
PGG 2008	1/17/2008	B-3	Barium	47			
PGG 2008	1/17/2008	B-8	Barium	18			
PGG 2008	1/17/2008	B-6	Barium	17			
PGG 2008	1/17/2008	B-6	Barium	10 D			
PGG 2008	1/17/2008	B-9	Benzene	1.0	0.8		1.3
Herrera 2008	11/21/2007	EB-3	Benzene	0.81	0.8		1.0
PGG 2009a	4/17/2009	WQ8-GW	Chloromethane	1.3 D			
PGG 2009a	4/17/2009	YP6-GW	Chloromethane	1.0			

Table D-4
Chemicals Detected in Groundwater
640 S Riverside Drive

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
PGG 2009a	4/17/2009	YP6-GW	cis-1,2-Dichloroethene	740			
PGG 2010	2/2/2010	CS-36-GW	cis-1,2-Dichloroethene	49			
PGG 2009a	4/17/2009	WQ8-GW	cis-1,2-Dichloroethene	27 D			
PGG 2008	1/17/2008	B-2	cis-1,2-Dichloroethene	12			
PGG 2010	2/1/2010	CS-16-GW	cis-1,2-Dichloroethene	9.8			
PGG 2009a	4/17/2009	PS1-GW	cis-1,2-Dichloroethene	7.8			
PGG 2009a	4/17/2009	WQ8-GW	cis-1,2-Dichloroethene	3.4			
Herrera 2008	11/21/2007	EB-3	cis-1,2-Dichloroethene	3.2			
PGG 2009a	4/17/2009	PS2-GW	cis-1,2-Dichloroethene	1.2			
Herrera 2008	11/21/2007	EB-2	Diesel-range hydrocarbons	260	500		<1
Herrera 2008	11/21/2007	EB-2	Fluorene	1.5		7	<1
PGG 2008	1/17/2008	B-2	Lead	37	15	13	2.8
Herrera 2008	11/21/2007	EB-2	Naphthalene	0.17	160	92	<1
Herrera 2008	11/21/2007	EB-2	n-Butylbenzene	0.25			
Herrera 2008	11/21/2007	EB-2	sec-Butylbenzene	0.54			
PGG 2010	2/1/2010	CS-16-GW	Tetrachloroethene (PCE)	73	5		15
PGG 2009a	4/17/2009	YP6-GW	Tetrachloroethene (PCE)	36	5		7.2
PGG 2009a	4/17/2009	WQ8-GW	Tetrachloroethene (PCE)	25 D	5		5.0
PGG 2010	2/2/2010	CS-36-GW	Tetrachloroethene (PCE)	17	5		3.4
PGG 2008	1/17/2008	B-3	Tetrachloroethene (PCE)	5.9	5		1.2
PGG 2008	1/17/2008	B-4	Tetrachloroethene (PCE)	4.8	5		<1
PGG 2008	1/17/2008	B-2	Tetrachloroethene (PCE)	1.4	5		<1
PGG 2009a	4/17/2009	WQ8-GW	Tetrachloroethene (PCE)	1.3	5		<1
PGG 2009a	4/17/2009	PS2-GW	Tetrachloroethene (PCE)	1.0	5		<1
PGG 2009a	4/17/2009	WQ8-GW	trans-1,2-Dichloroethene	5.1 D			
PGG 2010	2/2/2010	CS-36-GW	trans-1,2-Dichloroethene	3.1			
Herrera 2008	11/21/2007	EB-3	trans-1,2-Dichloroethene	1.8			

Table D-4
Chemicals Detected in Groundwater
640 S Riverside Drive

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
PGG 2009a	4/17/2009	YP6-GW	Trichloroethene (TCE)	600	5		120
PGG 2009a	4/17/2009	WQ8-GW	Trichloroethene (TCE)	15 D	5		3.0
PGG 2010	2/2/2010	CS-36-GW	Trichloroethene (TCE)	13	5		2.6
PGG 2010	2/1/2010	CS-16-GW	Trichloroethene (TCE)	6.3	5		1.3
PGG 2009a	4/17/2009	WQ8-GW	Trichloroethene (TCE)	2.3	5		<1
PGG 2008	1/17/2008	B-2	Trichloroethene (TCE)	1.6	5		<1
PGG 2008	1/17/2008	B-3	Trichloroethene (TCE)	1.3	5		<1
Herrera 2008	11/21/2007	EB-3	Vinyl chloride	40	0.2		200
PGG 2010	2/2/2010	CS-36-GW	Vinyl chloride	18	0.2		90
PGG 2009a	4/17/2009	WQ8-GW	Vinyl chloride	11 D	0.2		55
PGG 2009a	4/17/2009	YP6-GW	Vinyl chloride	3.9	0.2		20
PGG 2009a	4/17/2009	WQ8-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2009a	4/17/2009	PS2-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2009a	4/17/2009	PS1-GW	Vinyl chloride	1.1	0.2		5.5
PGG 2010	2/1/2010	CS-16-GW	Vinyl chloride	1.0	0.2		5.0

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL (SAIC 2006).

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-5
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Kleinfelder 2000c	7/18/2000	SB-4	4	1,1,1-Trichloroethane	0.52	2		<1
Kleinfelder 2000c	7/18/2000	SB-4	4	1,2,4-Trimethylbenzene	0.18			
Kleinfelder 2000c	7/18/2000	SB-4	4	1,3,5-Trimethylbenzene	0.11	800		<1
AGRA 1997b	8/25/1997	B-7	Surface	Arsenic	82	0.67	12,000	122
Kleinfelder 2000c	7/18/2000	SB-3	4	Arsenic	21	0.67	12,000	31
Kleinfelder 2000c	7/18/2000	SB-14	4	Arsenic	11	0.67	12,000	16
Kleinfelder 2000c	7/18/2000	SB-6	4	Arsenic	8.1	0.67	12,000	12
Kleinfelder 2000c	7/18/2000	SB-5	4	Arsenic	6.8	0.67	12,000	10
Kleinfelder 2000c	7/18/2000	SB-9	4	Arsenic	5.8	0.67	12,000	8.7
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Arsenic	5.2	0.67	12,000	7.8
Kleinfelder 2000c	7/18/2000	SB-15	4	Arsenic	4.6	0.67	12,000	6.9
Kleinfelder 2000c	7/18/2000	SB-10	4	Arsenic	4.2	0.67	12,000	6.3
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Arsenic	4	0.67	12,000	6.0
Kleinfelder 2000c	7/18/2000	SB-16	4	Arsenic	3.8	0.67	12,000	5.7
Kleinfelder 2000c	7/18/2000	SB-1	4	Arsenic	3.6	0.67	12,000	5.4
Kleinfelder 2000c	7/18/2000	SB-7	4	Arsenic	3	0.67	12,000	5.1
Kleinfelder 2000c	7/18/2000	SB-12	4	Arsenic	3.4	0.67	12,000	5.1
Kleinfelder 2000c	7/18/2000	SB-8	4	Arsenic	2.7	0.67	12,000	4.0
Kleinfelder 2000c	7/18/2000	SB-13	4	Arsenic	2.3	0.67	12,000	3.4
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Arsenic	1.9	0.67	12,000	2.8
Kleinfelder 2000c	7/18/2000	SB-2	4	Arsenic	1.7	0.67	12,000	2.5
AGRA 1997b	8/25/1997	B-7	Surface	Barium	130	16,000		<1
AGRA 1997b	8/26/1997	B-4	3	Barium	43	16,000		<1
AGRA 1997b	8/25/1997	B-7	Surface	Cadmium	0.6	2	34	<1
AGRA 1997b	8/25/1997	B-7	Surface	Chromium	52		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-14	4	Chromium	24		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-3	4	Chromium	17		5,400	<1
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Chromium	12		5,400	<1

Table D-5
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Kleinfelder 2000c	7/18/2000	SB-6	4	Chromium	10		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-5	4	Chromium	9.7		5,400	<1
AGRA 1997b	8/26/1997	B-4	3	Chromium	9.6		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-12	4	Chromium	9.1		5,400	<1
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Chromium	9.1		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-10	4	Chromium	8.1		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-15	4	Chromium	7.8		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-1	4	Chromium	6.6		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-13	4	Chromium	6.6		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-9	4	Chromium	6.4		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-16	4	Chromium	5.4		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-7	4	Chromium	5		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-2	4	Chromium	4.4		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-8	4	Chromium	4.4		5,400	<1
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Chromium	4.4		5,400	<1
Kleinfelder 2000c	7/18/2000	SB-3	4	Copper	41	3,200	780	<1
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Copper	36	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-5	4	Copper	20	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-6	4	Copper	20	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-12	4	Copper	20	3,200	780	<1
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Copper	16	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-10	4	Copper	13	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-15	4	Copper	13	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-9	4	Copper	12	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-1	4	Copper	11	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-7	4	Copper	10	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-14	4	Copper	10	3,200	780	<1
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Copper	10	3,200	780	<1

Table D-5
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Kleinfelder 2000c	7/18/2000	SB-8	4	Copper	7.8	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-16	4	Copper	6.9	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-2	4	Copper	6.6	3,200	780	<1
Kleinfelder 2000c	7/18/2000	SB-13	4	Copper	5.6	3,200	780	<1
AGRA 1998	10/20/1998	N2	10	Diesel-range hydrocarbons	11.3	2,000		<1
AGRA 1997b	8/25/1997	B-7	Surface	Lead	170	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-14	4	Lead	140	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-1	4	Lead	100	250	1,300	<1
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Lead	97	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-3	4	Lead	77	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-5	4	Lead	37	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-6	4	Lead	31	250	1,300	<1
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Lead	20	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-12	4	Lead	11	250	1,300	<1
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Lead	4.6	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-2	4	Lead	3.9	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-9	4	Lead	3.1	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-10	4	Lead	2.1	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-15	4	Lead	2	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-16	4	Lead	1.5	250	1,300	<1
Kleinfelder 2000c	7/18/2000	SB-13	4	Lead	1.3	250	1,300	<1
AGRA 1997b	8/26/1997	B-4	3	Methylene chloride	0.24	0.02		12
AGRA 1997b	8/25/1997	B-5	8	Methylene chloride	0.2	0.02		10
AGRA 1997b	8/25/1997	B-8	7	Methylene chloride	0.17	0.02		8.5
Kleinfelder 2000c	7/18/2000	SB-12	4	Nickel	18			
Kleinfelder 2000c	7/18/2000	SB-3	4	Nickel	14			
Kleinfelder 2000c	7/18/2000	SB-14	4	Nickel	13			
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Nickel	12			

Table D-5
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Kleinfelder 2000c	7/18/2000	SB-6	4	Nickel	11			
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Nickel	5.5			
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Nickel	4.3			
Kleinfelder 2000c	7/18/2000	SB-15	4	Nickel	3.3			
Kleinfelder 2000c	7/18/2000	SB-9	4	Nickel	3.1			
Kleinfelder 2000c	7/18/2000	SB-7	4	Nickel	2.4			
Kleinfelder 2000c	7/18/2000	SB-8	4	Nickel	2.1			
Kleinfelder 2000c	7/18/2000	SB-2	4	Nickel	1.8			
Kleinfelder 2000c	7/18/2000	SB-5	4	Nickel	1.6			
Kleinfelder 2000c	7/18/2000	SB-13	4	Nickel	1.6			
Kleinfelder 2000c	7/18/2000	SB-1	4	Nickel	1.3			
Kleinfelder 2000c	7/18/2000	SB-4	4	Tetrachloroethene	1.1	0.05		22
Kleinfelder 2000c	7/18/2000	SB-12	4	Tetrachloroethene	0.11	0.05		2.2
Kleinfelder 2000c	7/18/2000	SB-15	4	Tetrachloroethene	0.081	0.05		1.6
Kleinfelder 2000c	7/18/2000	SB-4	4	Toluene	0.19	7		<1
RETEC 2003a	6/24/2003	WWALL	9	Toluene	0.067	7		<1
Kleinfelder 2000c	7/18/2000	SB-12	4	Trichloroethene	1	0.03		33
Kleinfelder 2000c	7/18/2000	SB-12	11	Trichloroethene	0.087	0.03		2.9
Kleinfelder 2000c	7/18/2000	SB-4	4	Xylenes	0.52	9		<1
RETEC 2003a	6/24/2003	WWALL	9	Xylenes	0.1	9		<1
Kleinfelder 2000c	7/18/2000	SB-3	4	Zinc	120	24,000	770	<1
Kleinfelder 2000c	8/1/2000	SS-1	0-1	Zinc	120	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-5	4	Zinc	84	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-12	4	Zinc	62	24,000	770	<1

Table D-5
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Kleinfelder 2000c	7/18/2000	SB-6	4	Zinc	57	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-14	4	Zinc	33	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-1	4	Zinc	30	24,000	770	<1
Kleinfelder 2000c	8/1/2000	SS-3	0-1	Zinc	26	24,000	770	<1
Kleinfelder 2000c	8/1/2000	SS-2	0-1	Zinc	21	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-2	4	Zinc	20	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-9	4	Zinc	14	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-8	4	Zinc	11	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-15	4	Zinc	11	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-7	4	Zinc	10	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-13	4	Zinc	10	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-10	4	Zinc	7.4	24,000	770	<1
Kleinfelder 2000c	7/18/2000	SB-16	4	Zinc	7.3	24,000	770	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater is approximately 10 feet bgs.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-6
Chemicals Detected in Groundwater
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Kleinfelder 2000c	7/19/2000	MW-5	1,1,1-Trichloroethane	0.63	200		<1
AGRA 1997b	8/26/1997	MW-5	Arsenic	180	0.058	370	3,103
Kleinfelder 2000c	7/19/2000	MW-3	Arsenic	45	0.058	370	776
Kleinfelder 2000c	7/19/2000	MW-2	Arsenic	29	0.058	370	500
Kleinfelder 2000c	7/19/2000	MW-1	Arsenic	28	0.058	370	483
Kleinfelder 2000c	7/19/2000	MW-5	Arsenic	21	0.058	370	362
AGRA 1997b	8/26/1997	MW-5	Arsenic	15	0.058	370	259
Kleinfelder 2000c	7/19/2000	MW-8	Arsenic	8.4	0.058	370	145
Kleinfelder 2000c	7/19/2000	MW-3	Barium	280	3,200		<1
Kleinfelder 2000c	7/19/2000	MW-1	Barium	210	3,200		<1
Kleinfelder 2000c	7/19/2000	MW-5	Barium	210	3,200		<1
Kleinfelder 2000c	7/19/2000	MW-2	Barium	160	3,200		<1
AGRA 1997b	8/26/1997	MW-5	Barium	100	3,200		<1
Kleinfelder 2000c	7/19/2000	MW-8	Barium	25	3,200		<1
RETEC 2003a	6/24/2003	Excavwater	Benzene	370	0.8		463
Kleinfelder 2000c	7/19/2000	MW-2	Carbon disulfide	0.29	800		<1
AGRA 1997b	8/26/1997	MW-8	Chloroform	4.1	80		<1
AGRA 1997b	8/26/1997	MW-5	Chloroform	2.6	80		<1
Kleinfelder 2000c	7/19/2000	MW-3	Chromium	83	50	320	1.7
Kleinfelder 2000c	7/19/2000	MW-1	Chromium	77	50	320	1.5
Kleinfelder 2000c	7/19/2000	MW-2	Chromium	43	50	320	<1
Kleinfelder 2000c	7/19/2000	MW-5	Chromium	36	50	320	<1
AGRA 1997b	8/26/1997	MW-5	Chromium	13	50	320	<1
RETEC 2003a	6/24/2003	Excavwater	Diesel-range hydrocarbons	380	500		<1
RETEC 2003a	6/24/2003	Excavwater	Ethylbenzene	77	700		<1
RETEC 2003a	6/24/2003	Excavwater	Gasoline-range hydrocarbons	7,000	800		8.8
RETEC 2003a	6/24/2003	Excavwater	Lead	5,500	15	13	423
Kleinfelder 2000c	7/19/2000	MW-1	Lead	76	15	13	5.8

Table D-6
Chemicals Detected in Groundwater
Former Long Painting - 10th Avenue S Facility

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Kleinfelder 2000c	7/19/2000	MW-5	Lead	45	15	13	3.5
AGRA 1997b	8/26/1997	MW-5	Lead	41	15	13	3.2
Kleinfelder 2000c	7/19/2000	MW-3	Lead	33	15	13	2.5
Kleinfelder 2000c	7/19/2000	MW-2	Lead	31	15	13	2.4
Kleinfelder 2000c	7/19/2000	MW-8	Lead	2.9	15	13	<1
AGRA 1997b	8/26/1997	MW-5	Lead	1.4	15	13	<1
AGRA 1997b	8/26/1997	MW-5	Methylene chloride	3.5	5		<1
AGRA 1997b	8/26/1997	MW-8	Methylene chloride	3.3	5		<1
RETEC 2003a	6/24/2003	Excavwater	MTBE	59	20		3.0
Kleinfelder 2000c	7/19/2000	MW-5	Tetrachloroethene	0.92	5		<1
RETEC 2003a	6/24/2003	Excavwater	Toluene	770	1,000		<1
RETEC 2003a	6/24/2003	Excavwater	Xylenes	390	1,000		<1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

MTBE - Methyl tertiary butyl ether

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL (SAIC 2006).

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#25		Arsenic	48	0.67	12,000	72
Ecology 2000d	10/17/2000	LPN#11		Arsenic	38	0.67	12,000	57
Ecology 2000d	10/17/2000	LPN#9		Arsenic	25	0.67	12,000	37
Ecology 2000d	10/17/2000	LPN#14		Arsenic	24	0.67	12,000	36
Ecology 2000d	10/17/2000	LPN#22		Cadmium	1.5	2	34	<1
Ecology 2000d	10/17/2000	LPN#2		Cadmium	0.80	2	34	<1
Ecology 2000d	10/17/2000	LPN#14		Cadmium	0.72	2	34	<1
Ecology 2000d	10/17/2000	LPN#25		Cadmium	0.71	2	34	<1
Ecology 2000d	10/17/2000	LPN#12		Cadmium	0.68	2	34	<1
Ecology 2000d	10/17/2000	LPN#1		Cadmium	0.63	2	34	<1
Ecology 2000d	10/17/2000	LPN#2		Chromium	39		5,400	<1
Ecology 2000d	10/17/2000	LPN#25		Chromium	23		5,400	<1
Ecology 2000d	10/17/2000	LPN#1		Chromium	18		5,400	<1
Ecology 2000d	10/17/2000	LPN#9		Chromium	15		5,400	<1
Ecology 2000d	10/17/2000	LPN#20		Chromium	15		5,400	<1
Ecology 2000d	10/17/2000	LPN#22		Chromium	15		5,400	<1
Ecology 2000d	10/17/2000	LPN#6		Chromium	14		5,400	<1
Ecology 2000d	10/17/2000	LPN#5		Chromium	13		5,400	<1
Ecology 2000d	10/17/2000	LPN#14		Chromium	13		5,400	<1
Ecology 2000d	10/17/2000	LPN#16		Chromium	13		5,400	<1
Ecology 2000d	10/17/2000	LPN#4		Chromium	12		5,400	<1
Ecology 2000d	10/17/2000	LPN#7		Chromium	12		5,400	<1
Ecology 2000d	10/17/2000	LPN#26		Chromium	12		5,400	<1
Ecology 2000d	10/17/2000	LPN#10		Chromium	11		5,400	<1
Ecology 2000d	10/17/2000	LPN#12		Chromium	11		5,400	<1
Ecology 2000d	10/17/2000	LPN#15		Chromium	11		5,400	<1
Ecology 2000d	10/17/2000	LPN#23		Chromium	11		5,400	<1

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#17		Chromium	10		5,400	<1
Ecology 2000d	10/17/2000	LPN#18		Chromium	10		5,400	<1
Ecology 2000d	10/17/2000	LPN#24		Chromium	10		5,400	<1
Ecology 2000d	10/17/2000	LPN#8		Chromium	9.8		5,400	<1
Ecology 2000d	10/17/2000	LPN#13		Chromium	8.9		5,400	<1
Ecology 2000d	10/17/2000	LPN#3		Chromium	8.7		5,400	<1
Ecology 2000d	10/17/2000	LPN#19		Chromium	8.6		5,400	<1
Ecology 2000d	10/17/2000	LPN#11		Chromium	8.5		5,400	<1
Ecology 2000d	10/17/2000	LPN#21		Chromium	5.0		5,400	<1
Ecology 2000d	10/17/2000	LPN#8		Copper	94	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#14		Copper	66	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#1		Copper	64	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#22		Copper	58	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#9		Copper	51	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#25		Copper	39	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#2		Copper	36	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#10		Copper	35	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#12		Copper	34	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#11		Copper	30	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#15		Copper	25	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#16		Copper	22	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#24		Copper	21	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#3		Copper	20	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#5		Copper	19	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#6		Copper	19	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#23		Copper	19	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#26		Copper	19	3,200	780	<1

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#7		Copper	18	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#13		Copper	18	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#4		Copper	17	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#19		Copper	15	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#20		Copper	14	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#18		Copper	13	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#17		Copper	12	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#21		Copper	6.3	3,200	780	<1
Ecology 2000d	10/17/2000	LPN#9		Lead	410	250	1,300	1.6
Ecology 2000d	10/17/2000	LPN#22		Lead	350	250	1,300	1.4
Ecology 2000d	10/17/2000	LPN#1		Lead	230	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#12		Lead	190	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#25		Lead	170	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#2		Lead	130	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#14		Lead	130	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#11		Lead	110	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#10		Lead	100	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#15		Lead	97	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#26		Lead	86	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#3		Lead	61	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#24		Lead	58	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#7		Lead	53	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#23		Lead	50	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#13		Lead	46	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#6		Lead	44	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#16		Lead	41	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#8		Lead	34	250	1,300	<1

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#4		Lead	30	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#5		Lead	30	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#19		Lead	24	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#17		Lead	19	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#21		Lead	19	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#18		Lead	18	250	1,300	<1
Ecology 2000d	10/17/2000	LPN#20		Nickel	22			
Ecology 2000d	10/17/2000	LPN#19		Nickel	19			
Ecology 2000d	10/17/2000	LPN#8		Nickel	18			
Ecology 2000d	10/17/2000	LPN#22		Nickel	15			
Ecology 2000d	10/17/2000	LPN#5		Nickel	14			
Ecology 2000d	10/17/2000	LPN#1		Nickel	13			
Ecology 2000d	10/17/2000	LPN#6		Nickel	13			
Ecology 2000d	10/17/2000	LPN#9		Nickel	13			
Ecology 2000d	10/17/2000	LPN#12		Nickel	13			
Ecology 2000d	10/17/2000	LPN#7		Nickel	12			
Ecology 2000d	10/17/2000	LPN#10		Nickel	12			
Ecology 2000d	10/17/2000	LPN#14		Nickel	12			
Ecology 2000d	10/17/2000	LPN#2		Nickel	11			
Ecology 2000d	10/17/2000	LPN#3		Nickel	11			
Ecology 2000d	10/17/2000	LPN#4		Nickel	11			
Ecology 2000d	10/17/2000	LPN#11		Nickel	11			
Ecology 2000d	10/17/2000	LPN#16		Nickel	11			
Ecology 2000d	10/17/2000	LPN#17		Nickel	11			
Ecology 2000d	10/17/2000	LPN#18		Nickel	11			
Ecology 2000d	10/17/2000	LPN#24		Nickel	11			
Ecology 2000d	10/17/2000	LPN#25		Nickel	11			

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#13		Nickel	8.5			
Ecology 2000d	10/17/2000	LPN#26		Nickel	8.5			
Ecology 2000d	10/17/2000	LPN#23		Nickel	8.3			
Ecology 2000d	10/17/2000	LPN#15		Nickel	7.1			
Ecology 2000d	10/17/2000	LPN#21		Nickel	3.0			
Ecology 2000d	10/17/2000	LPN#2		Silver	2.0	80	12	<1
Ecology 2000d	10/17/2000	LPN#25		Zinc	510	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#1		Zinc	360	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#22		Zinc	300	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#26		Zinc	300	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#9		Zinc	250	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#8		Zinc	220	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#14		Zinc	220	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#2		Zinc	210	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#10		Zinc	170	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#12		Zinc	140	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#5		Zinc	130	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#4		Zinc	110	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#6		Zinc	110	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#7		Zinc	110	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#11		Zinc	110	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#24		Zinc	100	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#23		Zinc	88	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#3		Zinc	83	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#19		Zinc	79	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#15		Zinc	67	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#16		Zinc	63	24,000	770	<1

Table D-7
Chemicals Detected in Soil
Former Long Painting - 10th Avenue S Facility
Neighborhood Soil Assessment

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Ecology 2000d	10/17/2000	LPN#13		Zinc	61	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#20		Zinc	35	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#18		Zinc	31	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#21		Zinc	31	24,000	770	<1
Ecology 2000d	10/17/2000	LPN#17		Zinc	30	24,000	770	<1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Depth to groundwater is approximately 10 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.
Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-8
Chemicals Detected in Soil
Fire King of Seattle, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison 1995	6/16/1995	HA5-1	0.5	Acetone	0.2	72,000		<1
Bison 1995	6/16/1995	HA3-1	0.25	Arsenic	55	0.67	12,000	82
Bison 1995	6/16/1995	HA3-1	0.25	Barium	310	16,000		<1
Bison 1995	6/16/1995	HA4-1	0.5	Barium	34	16,000		<1
Bison 1995	6/16/1995	HA3-1	0.25	Cadmium	4.0	2	34	2.0
Bison 1995	6/16/1995	HA3-1	0.25	Chromium	110		5,400	<1
Bison 1995	6/16/1995	HA5-1	0.5	Heavy oil-range hydrocarbons	15,000	2,000		<1
Columbia Environmental 1995	7/28/1995	S2	1	Heavy oil-range hydrocarbons	63	2,000		<1
Columbia Environmental 1995	7/28/1995	S1	2.5	Heavy oil-range hydrocarbons	44	2,000		<1
Bison 1995	6/16/1995	HA2-2	6	Lead	140	250	1,300	<1
Bison 1995	6/16/1995	HA3-1	0.25	Lead	110	250	1,300	<1
Bison 1995	6/16/1995	HA2-2	6	Mercury	0.14	2	0.59	<1
Columbia Environmental 1995	6/16/1995	HA5-1	0.5	Methylene chloride	0.085	0.02		4.3
Columbia Environmental 1995	6/16/1995	HA5-1	0.5	PCBs	4.6	0.5	1.3	9
Colombia Environmental 1995	7/28/1995	S4	1	PCBs	0.118	0.5	1.3	<1
Colombia Environmental 1995	6/16/1995	HA5-1	0.5	Toluene	0.041	7		<1
Colombia Environmental 1995	6/16/1995	HA5-1	0.5	Xylenes	0.087	9		<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property. Groundwater was not encountered during the environmental investigations.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-9
Chemicals Detected in Soil
Coach Maintenance

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Bison 1994b	9/20/1994	Diesel Tank Overburden		Diesel-range hydrcarbons	20,000	2,000	10
Bison 1994b	9/21/1994	North Wall	5	Diesel-range hydrcarbons	6,700	2,000	3.4
Bison 1994b	9/22/1994	Bottom of Diesel Tank	9	Diesel-range hydrcarbons	87	2,000	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Groundwater was not encountered during the environmental investigations.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-11
Chemicals Detected in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Department of Health 1999	5/1/1998	#2	0.5	Arsenic	76	0.67	12,000	113
Department of Health 1999	5/1/1998	#3	0.5	Arsenic	73	0.67	12,000	109
EMR 1998	10/7/1998	ST-4	7	Benzene	7.84	0.03		261
EMR 1998	9/25/1998	PX-1	4	Benzene	5	0.03		160
EMR 1998	9/25/1998	PX-2	5	Benzene	2.8	0.03		93
EMR 1998	10/7/1998	ST-9	7	Benzene	1.08	0.03		36
EMR 1998	10/7/1998	ST-10	7	Benzene	0.34	0.03		11
EMR 1998	10/7/1998	ST-10	7	Benzene	0.27	0.03		9.0
EMR 1998	10/7/1998	ST-6	7	Benzene	0.17	0.03		5.7
EMR 1998	10/7/1998	ST-3	7	Benzene	0.15	0.03		5.0
EMR 1998	10/7/1998	ST-11	7	Benzene	0.1	0.03		3.3
EMR 1998	10/7/1998	ST-8	7	Benzene	0.07	0.03		2.3
EMR 1998	10/7/1998	ST-2	7	Benzene	0.06	0.03		2.0
Department of Health 1999	5/1/1998	#3	0.5	Chromium	360		5,400	<1
Department of Health 1999	5/1/1998	#3	0.5	Diesel-range hydrocarbons	1800	2,000		<1
EMR 1998	9/25/1998	PX-2	5	Ethylbenzene	26	6		4.3
EMR 1998	9/25/1998	PX-1	4	Ethylbenzene	19	6		3.2
EMR 1998	9/25/1998	PX-1	4	Gasoline-range hydrocarbons	5,300	30		177
EMR 1998	9/25/1998	PX-2	5	Gasoline-range hydrocarbons	2,000	30		67
Department of Health 1999	5/1/1998	#1	0.5	Lead	470	250	1,300	1.9
Department of Health 1999	5/1/1998	#2	0.5	Lead	370	250	1,300	1.5
EMR 1998	9/25/1998	PX-1	4	Lead	18	250	1,300	<1
EMR 1998	9/25/1998	PX-2	5	Lead	9.6	250	1,300	<1
EMR 1998	9/25/1998	PX-1	4	m,p-Xylene	190	16,000		<1
EMR 1998	9/25/1998	PX-2	5	m,p-Xylene	110	16,000		<1
EMR 1998	9/25/1998	PX-1	4	o-Xylene	85	16,000		<1
EMR 1998	9/25/1998	PX-2	5	o-Xylene	39	16,000		<1

Table D-11
Chemicals Detected in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
EMR 1998	9/25/1998	PX-1	4	Toluene	46	7		6.6
EMR 1998	9/25/1998	PX-2	5	Toluene	26	7		3.7

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act
CSL - Cleanup Screening Level from Washington Sediment Management Standards

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
b - Based on CSL. 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 (SAIC 2006).
Groundwater encountered at 8 feet bgs.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.
Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-11
Chemicals Detected in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Department of Health 1999	5/1/1998	#2	0.5	Arsenic	76	0.67	12,000	113
Department of Health 1999	5/1/1998	#3	0.5	Arsenic	73	0.67	12,000	109
EMR 1998	10/7/1998	ST-4	7	Benzene	7.84	0.03		261
EMR 1998	9/25/1998	PX-1	4	Benzene	5	0.03		160
EMR 1998	9/25/1998	PX-2	5	Benzene	2.8	0.03		93
EMR 1998	10/7/1998	ST-9	7	Benzene	1.08	0.03		36
EMR 1998	10/7/1998	ST-10	7	Benzene	0.34	0.03		11
EMR 1998	10/7/1998	ST-10	7	Benzene	0.27	0.03		9.0
EMR 1998	10/7/1998	ST-6	7	Benzene	0.17	0.03		5.7
EMR 1998	10/7/1998	ST-3	7	Benzene	0.15	0.03		5.0
EMR 1998	10/7/1998	ST-11	7	Benzene	0.1	0.03		3.3
EMR 1998	10/7/1998	ST-8	7	Benzene	0.07	0.03		2.3
EMR 1998	10/7/1998	ST-2	7	Benzene	0.06	0.03		2.0
Department of Health 1999	5/1/1998	#3	0.5	Chromium	360		5,400	<1
Department of Health 1999	5/1/1998	#3	0.5	Diesel-range hydrocarbons	1800	2,000		<1
EMR 1998	9/25/1998	PX-2	5	Ethylbenzene	26	6		4.3
EMR 1998	9/25/1998	PX-1	4	Ethylbenzene	19	6		3.2
EMR 1998	9/25/1998	PX-1	4	Gasoline-range hydrocarbons	5300	30		177
EMR 1998	9/25/1998	PX-2	5	Gasoline-range hydrocarbons	2000	30		67
Department of Health 1999	5/1/1998	#1	0.5	Lead	470	250	1,300	1.9
Department of Health 1999	5/1/1998	#2	0.5	Lead	370	250	1,300	1.5
EMR 1998	9/25/1998	PX-1	4	Lead	18	250	1,300	<1
EMR 1998	9/25/1998	PX-2	5	Lead	9.6	250	1,300	<1
EMR 1998	9/25/1998	PX-1	4	m,p-Xylene	190	16,000		<1
EMR 1998	9/25/1998	PX-2	5	m,p-Xylene	110	16,000		<1
EMR 1998	9/25/1998	PX-1	4	o-Xylene	85	16,000		<1
EMR 1998	9/25/1998	PX-2	5	o-Xylene	39	16,000		<1

Table D-11
Chemicals Detected in Soil
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
EMR 1998	9/25/1998	PX-1	4	Toluene	46	7		6.6
EMR 1998	9/25/1998	PX-2	5	Toluene	26	7		3.7

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Groundwater encountered at 8 feet bgs.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-12
Chemicals Detected in Groundwater
Interstate Coatings, Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
EMR 1998	10/7/1998	STW-5	Xylenes	6.6	1,000	<1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table D-13
Chemicals Detected in Soil Samples
Olympic Steel Door

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Global Environmental 2000	10/17/2000	WSW	7	Ethylbenzene	0.11	6	<1
Global Environmental 2000	10/17/2000	SSW	8	Gasoline-range hydrocarbons	360	100	3.6
Global Environmental 2000	10/17/2000	WSW	7	Gasoline-range hydrocarbons	65	100	<1
Global Environmental 2000	10/17/2000	WSW	7	Xylenes	1	9	<1
Global Environmental 2000	10/17/2000	SSW	8	Xylenes	0.87	9	<1
Global Environmental 2000	10/17/2000	NSW	10	Xylenes	0.42	9	<1
Global Environmental 2000	10/17/2000	SSW-2	8	Xylenes	0.1 D	9	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

D - Duplicate sample

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-14
Chemicals Detected in Groundwater
Olympic Steel Door

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Global Environmental 2000	10/17/2002	GW-1	Benzene	180	5	36
Global Environmental 2000	10/17/2002	GW-1	Ethylbenzene	230	700	<1
Environmental Associates 2002	2/13/2002	MW-3	Ethylbenzene	8.8	700	<1
Global Environmental 2000	10/17/2002	GW-1	Gasoline-range hydrocarbons	6,200	800	7.8
Environmental Associates 2002	2/13/2002	MW-3	Gasoline-range hydrocarbons	930	1,000	<1
Global Environmental 2000	10/17/2002	GW-1	Toluene	14	640	<1
Global Environmental 2000	10/17/2002	GW-1	Xylenes	98	1,000	<1
Environmental Associates 2002	2/13/2002	MW-3	Xylenes, m,p-	18	1,600	<1
Environmental Associates 2002	2/13/2002	MW-3	Xylenes, o-	1	1,600	<1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-15
Chemicals Detected in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #2	5	Benzene	100	0.03		3,333
Bison 1994a	6/1/1994	SS #10	Stockpile	Benzene	41	0.03		1,367
Bison 1994a	6/1/1994	SS #3	6	Benzene	21	0.03		700
Bison 1994a	6/1/1994	SS #4	4.5	Benzene	19	0.03		633
Bison 1994a	6/1/1994	SS #1	10	Benzene	8.4	0.03		280
Bison 1994a	6/1/1994	SS #9	Stockpile	Benzene	5.4	0.03		180
Bison 1994a	6/1/1994	SS #12	12	Benzene	4.7	0.03		157
Bison 1994a	6/1/1994	SS #11	Stockpile	Benzene	3.6	0.03		120
Bison 1994a	6/1/1994	SS #15	12	Benzene	3.1	0.03		103
Bison 1994a	6/1/1994	WS1	6	Benzene	1.9	0.03		63
Bison 1994a	6/1/1994	SS #6	Stockpile	Benzene	1.7	0.03		57
Bison 1994a	6/1/1994	SS #5	4	Benzene	1.5	0.03		50
Bison 1994a	6/1/1994	SS #7	Stockpile	Benzene	0.86	0.03		29
Bison 1994a	6/1/1994	SS #8	Stockpile	Benzene	0.79	0.03		26
Bison 1994a	6/1/1994	SS #13	6	Benzene	0.14	0.03		4.7
Bison 1994a	6/1/1994	SS #2	5	Ethylbenzene	390	6		65
Bison 1994a	6/1/1994	SS #4	4.5	Ethylbenzene	280	6		47
Bison 1994a	6/1/1994	SS #3	6	Ethylbenzene	90	6		15
Bison 1994a	6/1/1994	SS #10	Stockpile	Ethylbenzene	49	6		8.2
Bison 1994a	6/1/1994	SS #5	4	Ethylbenzene	35	6		5.8
Bison 1994a	6/1/1994	SS #9	Stockpile	Ethylbenzene	27	6		4.5
Bison 1994a	6/1/1994	SS #1	10	Ethylbenzene	22	6		3.7
Bison 1994a	6/1/1994	SS #7	Stockpile	Ethylbenzene	13	6		2.2
Bison 1994a	6/1/1994	SS #11	Stockpile	Ethylbenzene	13	6		2.2
Bison 1994a	6/1/1994	SS #6	Stockpile	Ethylbenzene	9.7	6		1.6
Bison 1994a	6/1/1994	SS #12	12	Ethylbenzene	4.6	6		<1
Bison 1994a	6/1/1994	SS #8	Stockpile	Ethylbenzene	2.7	6		<1
Bison 1994a	6/1/1994	SS #15	12	Ethylbenzene	2	6		<1
Bison 1994a	6/1/1994	SS #13	6	Ethylbenzene	0.78	6		<1
Bison 1994a	6/1/1994	SS #4	4.5	Gasoline-range hydrocarbons	38,000	30		1,267
Bison 1994a	6/1/1994	SS #2	5	Gasoline-range hydrocarbons	36,000	30		1,200
Bison 1994a	6/1/1994	SS #5	4	Gasoline-range hydrocarbons	16,000	30		533

Table D-15
Chemicals Detected in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #3	6	Gasoline-range hydrocarbons	13,000	30		433
Bison 1994a	6/1/1994	SS #10	Stockpile	Gasoline-range hydrocarbons	4,200	30		140
Bison 1994a	6/1/1994	SS #7	Stockpile	Gasoline-range hydrocarbons	4,100	30		137
Bison 1994a	6/1/1994	SS #1	10	Gasoline-range hydrocarbons	3,900	30		130
Bison 1994a	6/1/1994	SS #8	Stockpile	Gasoline-range hydrocarbons	3,500	30		117
Bison 1994a	6/1/1994	SS #9	Stockpile	Gasoline-range hydrocarbons	2,500	30		83
Bison 1994a	6/1/1994	SS #6	Stockpile	Gasoline-range hydrocarbons	2,200	30		73
Bison 1994a	6/1/1994	SS #11	Stockpile	Gasoline-range hydrocarbons	1,700	30		57
Bison 1994a	6/1/1994	SS #12	12	Gasoline-range hydrocarbons	750	30		25
Bison 1994a	6/1/1994	SS #15	12	Gasoline-range hydrocarbons	230	30		7.7
Bison 1994a	6/1/1994	SS #13	6	Gasoline-range hydrocarbons	180	30		6.0
Bison 1994a	6/1/1994	WS1	6	Gasoline-range hydrocarbons	33	30		1.1
Bison 1994a	6/1/1994	SS #14	8	Gasoline-range hydrocarbons	4.9	30		<1
Bison 1994a	6/1/1994	SS #6	Stockpile	Lead	25	250	67	<1
Bison 1994a	6/1/1994	SS #5	4	Lead	14	250	67	<1
Bison 1994a	6/1/1994	SS #2	5	Toluene	1,600	7		229
Bison 1994a	6/1/1994	SS #4	4.5	Toluene	770	7		110
Bison 1994a	6/1/1994	SS #3	6	Toluene	370	7		53
Bison 1994a	6/1/1994	SS #10	Stockpile	Toluene	230	7		33
Bison 1994a	6/1/1994	SS #1	10	Toluene	77	7		11
Bison 1994a	6/1/1994	SS #9	Stockpile	Toluene	76	7		11
Bison 1994a	6/1/1994	SS #5	4	Toluene	75	7		11
Bison 1994a	6/1/1994	SS #6	Stockpile	Toluene	35	7		5.0
Bison 1994a	6/1/1994	SS #11	Stockpile	Toluene	35	7		5.0
Bison 1994a	6/1/1994	SS #7	Stockpile	Toluene	18	7		2.6
Bison 1994a	6/1/1994	SS #12	12	Toluene	5.4	7		<1
Bison 1994a	6/1/1994	SS #8	Stockpile	Toluene	3.5	7		<1
Bison 1994a	6/1/1994	SS #15	12	Toluene	2.8	7		<1
Bison 1994a	6/1/1994	WS1	6	Toluene	1.8	7		<1
Bison 1994a	6/1/1994	SS #13	6	Toluene	1.3	7		<1
Bison 1994a	6/1/1994	SS #14	8	Toluene	0.1	7		<1

Table D-15
Chemicals Detected in Soil
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison 1994a	6/1/1994	SS #2	5	Xylenes	3,600	9		400
Bison 1994a	6/1/1994	SS #4	4.5	Xylenes	3,500	9		389
Bison 1994a	6/1/1994	SS #3	6	Xylenes	1,100	9		122
Bison 1994a	6/1/1994	SS #5	4	Xylenes	680	9		76
Bison 1994a	6/1/1994	SS #10	Stockpile	Xylenes	330	9		37
Bison 1994a	6/1/1994	SS #1	10	Xylenes	290	9		32
Bison 1994a	6/1/1994	SS #7	Stockpile	Xylenes	220	9		24
Bison 1994a	6/1/1994	SS #9	Stockpile	Xylenes	190	9		21
Bison 1994a	6/1/1994	SS #6	Stockpile	Xylenes	150	9		17
Bison 1994a	6/1/1994	SS #8	Stockpile	Xylenes	110	9		12
Bison 1994a	6/1/1994	SS #11	Stockpile	Xylenes	110	9		12
Bison 1994a	6/1/1994	SS #12	12	Xylenes	37	9		4.1
Bison 1994a	6/1/1994	SS #15	12	Xylenes	9.9	9		1.1
Bison 1994a	6/1/1994	SS #13	6	Xylenes	6.1	9		<1
Bison 1994a	6/1/1994	WS1	6	Xylenes	4.5	9		<1
Bison 1994a	6/1/1994	SS #14	8	Xylenes	0.31	9		<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater is unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-16
Chemicals Detected in Groundwater
Marine Lumber Services Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Marine Lumber Service 2003	10/17/1996	MMW-1	Benzene	116	0.8	146
Marine Lumber Service 2003	8/1/1998	MMW-1	Benzene	21	0.8	26
Marine Lumber Service 2003	9/27/2000	MMW-1	Benzene	10	0.8	13
Marine Lumber Service 2003	10/17/1996	MMW-1	Ethylbenzene	1,530	700	2.2
Marine Lumber Service 2003	8/1/1998	MMW-1	Ethylbenzene	270	700	<1
Marine Lumber Service 2003	9/27/2000	MMW-1	Ethylbenzene	220	700	<1
Marine Lumber Service 2003	10/17/1996	MMW-1	Gasoline-range hydrocarbons	0.1	800	<1
Marine Lumber Service 2003	8/1/1998	MMW-1	Gasoline-range hydrocarbons	0.018	800	<1
Marine Lumber Service 2003	9/27/2000	MMW-1	Gasoline-range hydrocarbons	0.024	800	<1
Marine Lumber Service 2003	10/17/1996	MMW-1	Toluene	5,790	640	9.0
Marine Lumber Service 2003	8/1/1998	MMW-1	Toluene	200	640	<1
Marine Lumber Service 2003	9/27/2000	MMW-1	Toluene	17	640	<1
Marine Lumber Service 2003	10/17/1996	MMW-1	Xylenes	18,900	1,000	19
Marine Lumber Service 2003	8/1/1998	MMW-1	Xylenes	3,100	1,000	3.1
Marine Lumber Service 2003	9/27/2000	MMW-1	Xylenes	2,100	1,000	2.1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-17
Chemicals Detected in Soil
Former Glitsa American

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	3-4	Arsenic	2.9	0.67	12,000	4.3
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	3-4	Arsenic	2.68	0.67	12,000	4.0
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	3-4	Arsenic	1.96	0.67	12,000	2.9
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	3-4	Chromium	9.75		5,400	<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	3-4	Chromium	9.15		5,400	<1
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	3-4	Chromium	7.34		5,400	<1
Environmental Associates 2009b	4/20/2009	LAR-1	3-4	Chromium	5		5,400	<1
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	7-8	Ethylbenzene	38	6		6.3
Environmental Associates 2009a	3/3/2009	W-4	4	Ethylbenzene	23	6		3.8
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Ethylbenzene	9.6	6		1.6
Environmental Associates 2009b	4/27/2009	HA3 (VES-3)	3-4	Ethylbenzene	5.6	6		<1
Environmental Associates 2009b	4/24/2009	HA1 (VES-1)	3-4	Ethylbenzene	4.4	6		<1
Environmental Associates 2009b	4/20/2009	LAR-2	5-6	Ethylbenzene	4	6		<1
Environmental Associates 2009a	5/5/2009	RE-W-6	6	Ethylbenzene	4.1	6		<1
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Ethylbenzene	3.1	6		<1
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	7-8	Ethylbenzene	1.8	6		<1
Environmental Associates 2009a	3/3/2009	S-6	6	Ethylbenzene	0.37	6		<1
Environmental Associates 2009b	4/27/2009	HA2 (VES-2)	3-4	Ethylbenzene	0.23	6		<1
Environmental Associates 2009a	3/3/2009	N-6	6	Ethylbenzene	0.15	6		<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	7-8	Ethylbenzene	0.12	6		<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	5-6	Ethylbenzene	0.11	6		<1
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	5-6	Ethylbenzene	0.10	6		<1
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	5-6	Ethylbenzene	0.06	6		<1
Environmental Associates 2009a	3/3/2009	B-12	12	Ethylbenzene	0.04	6		<1
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	3-4	Lead	9.91	250	1,300	<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	3-4	Lead	5.19	250	1,300	<1

Table D-17
Chemicals Detected in Soil
Former Glitsa American

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	3-4	Lead	4.54	250	1,300	<1
Environmental Associates 2009b	4/20/2009	LAR-2	5-6	Stoddard Solvent (mineral spirits)	92,000	100		920
Environmental Associates 2009a	3/3/2009	W-4	4	Stoddard Solvent (mineral spirits)	19,000	100		190
Environmental Associates 2010	12/9/2009	W2 (SGB7)	7-8	Stoddard Solvent (mineral spirits)	9,800	100		98
Environmental Associates 2010	12/9/2009	W3 (SGB8)	3-4	Stoddard Solvent (mineral spirits)	9,400	100		94
Environmental Associates 2010	12/9/2009	W12 (SGB1)	11-12	Stoddard Solvent (mineral spirits)	9,000	100		90
Environmental Associates 2010	12/9/2009	W3 (SGB8)	7-8	Stoddard Solvent (mineral spirits)	7,700	100		77
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2010	12/9/2009	W7 (SGB5)	7-8	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2010	12/9/2009	W12 (SGB1)	7-8	Stoddard Solvent (mineral spirits)	4,700	100		47
Environmental Associates 2009a	5/5/2009	RE-W-6	6	Stoddard Solvent (mineral spirits)	4,100	100		41
Environmental Associates 2010	12/9/2009	W11 (SGB2)	7-8	Stoddard Solvent (mineral spirits)	2,100	100		21
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Stoddard Solvent (mineral spirits)	2,000	100		20
Environmental Associates 2010	12/9/2009	W6 (SGB6)	7-8	Stoddard Solvent (mineral spirits)	1,700	100		17
Environmental Associates 2009b	4/27/2009	HA3 (VES-3)	3-4	Stoddard Solvent (mineral spirits)	1,500	100		15
Environmental Associates 2009b	4/24/2009	HA1 (VES-1)	3-4	Stoddard Solvent (mineral spirits)	980	100		9.8
Environmental Associates 2010	12/9/2009	W10 (SGB3)	7-8	Stoddard Solvent (mineral spirits)	318	100		3.2
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	7-8	Toluene	0.27	7		<1
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Toluene	0.20	7		<1
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Toluene	0.06	7		<1
Environmental Associates 2009b	4/27/2009	HA3 (VES-3)	3-4	Toluene	0.04	7		<1
Environmental Associates 2009a	3/3/2009	W-4	4	Xylenes	40	9		4.4
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	7-8	Xylenes	38	9		4.2
Environmental Associates 2009a	5/5/2009	RE-W-6	6	Xylenes	25	9		2.8
Environmental Associates 2009b	4/20/2009	LAR-2	5-6	Xylenes	20	9		2.2
Environmental Associates 2009b	4/24/2009	HA1 (VES-1)	3-4	Xylenes	18	9		2.0

Table D-17
Chemicals Detected in Soil
Former Glitsa American

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environmental Associates 2009a	5/5/2009	RE-SW-6	6	Xylenes	17	9		1.9
Environmental Associates 2009a	3/3/2009	PCS-1	composite	Xylenes	11	9		1.2
Environmental Associates 2009b	4/27/2009	HA3 (VES-3)	3-4	Xylenes	4.2	9		<1
Environmental Associates 2009b	5/1/2009	HA6 (VES-6)	7-8	Xylenes	2.2	9		<1
Environmental Associates 2009a	3/3/2009	S-6	6	Xylenes	1.2	9		<1
Environmental Associates 2009a	5/5/2009	RE-NW-6	6	Xylenes	0.61	9		<1
Environmental Associates 2009b	4/27/2009	HA2 (VES-2)	3-4	Xylenes	0.43	9		<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	7-8	Xylenes	0.41	9		<1
Environmental Associates 2009a	3/3/2009	N-6	6	Xylenes	0.39	9		<1
Environmental Associates 2009b	5/1/2009	HA5 (VES-5)	5-6	Xylenes	0.21	9		<1
Environmental Associates 2009a	3/3/2009	B-12	12	Xylenes	0.18	9		<1
Environmental Associates 2009b	5/1/2009	HA4 (VES-4)	5-6	Xylenes	0.09	9		<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Groundwater encountered at 9.5 feet bgs.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-18
Chemicals Detected in Groundwater
Former Glitsa American

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Environmental Associates 2009b	4/20/2009	LAR-2	Benzene	29.0	0.795	36
Environmental Associates 2009b	5/14/2009	VES-4	Benzene	7.9	0.795	10
Environmental Associates 2009b	5/14/2009	VES-5	Benzene	4.7	0.795	5.9
Environmental Associates 2009b	5/14/2009	VES-6	Benzene	4.4	0.795	5.5
Environmental Associates 2009b	12/16/2008	MW-4	Benzene	1	0.795	1.3
Environmental Associates 2009b	4/20/2009	LAR-2	cis-1,2-Dichloroethene	1.3		
Environmental Associates 2009b	4/20/2009	LAR-2	Ethylbenzene	28	700	<1
Environmental Associates 2009b	5/14/2009	VES-4	Ethylbenzene	7.5	700	<1
Environmental Associates 2009b	12/2/2008	MW-1	Ethylbenzene	5	700	<1
Environmental Associates 2009b	12/16/2008	MW-4	Ethylbenzene	5.0	700	<1
Friedman & Bruya 2008	12/3/2008	B-1-GW	Ethylbenzene	5	700	<1
Friedman & Bruya 2008	12/3/2008	B-3-GW	Ethylbenzene	5	700	<1
Friedman & Bruya 2008	12/3/2008	B-2-GW	Ethylbenzene	2	700	<1
Environmental Associates 2009b	5/14/2009	VES-6	Ethylbenzene	1.2	700	<1
Environmental Associates 2009b	4/20/2009	LAR-2	Gasoline-range hydrocarbons	170,000	800	213
Environmental Associates 2009b	5/14/2009	VES-4	Gasoline-range hydrocarbons	86,000	800	108
Environmental Associates 2009b	5/14/2009	VES-6	Gasoline-range hydrocarbons	65,000	800	81
Environmental Associates 2009b	5/14/2009	VES-5	Gasoline-range hydrocarbons	57,000	800	71
Environmental Associates 2010	4/7/2010	W1 (SGB-9)	Gasoline-range hydrocarbons	27,000	800	34
Environmental Associates 2010	12/9/2009	W6 (SGB-6)	Gasoline-range hydrocarbons	24,000	800	30
Environmental Associates 2010	12/9/2009	W7 (SGB-5)	Gasoline-range hydrocarbons	24,000	800	30
Environmental Associates 2010	4/18/2009	W7 (SGB-5)	Gasoline-range hydrocarbons	16,000	800	20
Environmental Associates 2010	4/7/2010	W4 (SGB-10)	Gasoline-range hydrocarbons	15,000	800	19
Environmental Associates 2010	4/18/2009	W6 (SGB-6)	Gasoline-range hydrocarbons	13,000	800	16
Environmental Associates 2009b	12/2/2008	MW-1	Gasoline-range hydrocarbons	11,000	800	14
Environmental Associates 2010	4/18/2009	W8 (SGB-4)	Gasoline-range hydrocarbons	6,400	800	8.0
Environmental Associates 2010	4/18/2009	W5 (VES-4)	Gasoline-range hydrocarbons	6,100	800	7.6
Environmental Associates 2010	12/9/2009	W13 (VES-6)	Gasoline-range hydrocarbons	6,100	800	7.6
Environmental Associates 2010	4/18/2009	W11 (SGB-2)	Gasoline-range hydrocarbons	4,800	800	6.0

Table D-18
Chemicals Detected in Groundwater
Former Glitsa American

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
Environmental Associates 2010	4/18/2009	W9 (VES-5)	Gasoline-range hydrocarbons	4,500	800	5.6
Environmental Associates 2010	12/9/2009	W11 (SGB-2)	Gasoline-range hydrocarbons	3,600	800	4.5
Environmental Associates 2010	12/9/2009	W2 (SGB-7)	Gasoline-range hydrocarbons	3,500	800	4.4
Environmental Associates 2010	12/9/2009	W8 (SGB-4)	Gasoline-range hydrocarbons	3,500	800	4.4
Environmental Associates 2010	12/9/2009	W10 (SGB-3)	Gasoline-range hydrocarbons	3,300	800	4.1
Environmental Associates 2009b	12/16/2008	MW-4	Gasoline-range hydrocarbons	2,500	800	3.1
Environmental Associates 2010	12/9/2009	W3 (SGB-8)	Gasoline-range hydrocarbons	120	800	<1
Environmental Associates 2009b	12/16/2008	MW-2	Gasoline-range hydrocarbons	92	800	<1
Environmental Associates 2009b	12/16/2008	MW-3	Gasoline-range hydrocarbons	71	800	<1
Friedman & Bruya 2008	12/4/2008	B-1-GW	Stoddard Solvent Range	11,000	800	13.8
Friedman & Bruya 2008	12/4/2008	B-3-GW	Stoddard Solvent Range	3,000	800	3.8
Friedman & Bruya 2008	12/4/2008	B-2-GW	Stoddard Solvent Range	1,100	800	1.4
Environmental Associates 2009b	4/20/2009	LAR-2	Toluene	1.5	1000	<1
Environmental Associates 2009b	4/20/2009	MW-6	Trichloroethene	1.5	5	<1
Environmental Associates 2009b	4/20/2009	LAR-2	Vinyl Chloride	4	0.2	20
Environmental Associates 2009b	12/2/2008	MW-1	Xylenes	14	1,000	<1
Friedman & Bruya 2008	12/3/2008	B-1-GW	Xylenes	14	1,000	<1
Friedman & Bruya 2008	12/3/2008	B-3-GW	Xylenes	11	1,000	<1
Environmental Associates 2009b	5/14/2009	VES-4	Xylenes	7.8	1,000	<1
Friedman & Bruya 2008	12/3/2008	B-2-GW	Xylenes	7	1,000	<1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-19
Chemicals Detected in Soil
Seidelhuber Iron and Bronze Works Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
McFabco 2011	9/11/1991	3	6.5	Ethylbenzene	0.52	6	<1
McFabco 2011	9/11/1991	1	8.5	Ethylbenzene	0.37	6	<1
McFabco 2011	9/11/1991	3	6.5	Toluene	0.33	7	<1
McFabco 2011	9/11/1991	1	8.5	Toluene	0.14	7	<1
McFabco 2011	9/11/1991	1	8.5	Xylene	2	9	<1
McFabco 2011	9/11/1991	3	6.5	Xylene	0.29	9	<1

ft bgs - Feet below ground surface
mg/kg - Milligrams per kilogram
MTCA - Model Toxics Control Act

a - The lower of MTCA Method A or B cleanup levels was selected, from CLARC database.
Table presents detected chemicals only.
Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table D-20
Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2008a	5/28/2008	CS-1	0.5	1,1,1-Trichloroethane	0.056	2		<1
PNG 1995	9/11/1995	B-4	7.5	1,1-Dichloroethane	0.0131	16,000		<1
Environ 2007a	6/13/2007	SB-5	1.5	1,2,4-Trimethylbenzene	24.7			
Environ 2007a	6/13/2007	SB-2	2	1,2,4-Trimethylbenzene	2.66			
Environ 2007b	10/18/2007	SB-9	7.5	1,2,4-Trimethylbenzene	1.97			
Environ 2007b	10/19/2007	SB-14	2.5	1,2,4-Trimethylbenzene	1.81			
Environ 2007b	10/18/2007	SB-7	2.5	1,2,4-Trimethylbenzene	1.57			
Environ 2007b	10/18/2007	SB-11	2.5	1,2,4-Trimethylbenzene	0.52			
Environ 2008a	5/28/2008	CS-15	8	1,2,4-Trimethylbenzene	0.51			
Environ 2008a	5/28/2008	CS-1	0.5	1,2,4-Trimethylbenzene	0.5 D			
Environ 2008a	5/28/2008	CS-2	2.25	1,2,4-Trimethylbenzene	0.42			
Environ 2008a	5/29/2008	CS-34	6	1,2,4-Trimethylbenzene	0.39			
Environ 2008a	5/29/2008	CS-19	1	1,2,4-Trimethylbenzene	0.37			
Environ 2008a	5/29/2008	CS-24	5	1,2,4-Trimethylbenzene	0.27			
Environ 2008a	5/28/2008	CS-4	1	1,2,4-Trimethylbenzene	0.21			
Environ 2008a	5/29/2008	CS-33	2.5	1,2,4-Trimethylbenzene	0.21			
PNG 1995	9/11/1995	B-4	7.5	1,2,4-Trimethylbenzene	0.205			
Environ 2007b	10/19/2007	SB-14	7.5	1,2,4-Trimethylbenzene	0.203			
Environ 2008a	5/28/2008	CS-3	2.5	1,2,4-Trimethylbenzene	0.17			
Environ 2008a	5/29/2008	CS-22	7	1,2,4-Trimethylbenzene	0.16			
Environ 2008a	5/29/2008	CS-27	2.5	1,2,4-Trimethylbenzene	0.12			
Environ 2008a	5/28/2008	CS-13	5	1,2,4-Trimethylbenzene	0.089			
Environ 2008a	5/28/2008	CS-1	0.5	1,2,4-Trimethylbenzene	0.074			
Environ 2007b	10/19/2007	SB-19	2.5	1,2,4-Trimethylbenzene	0.0469			
Environ 2007b	10/18/2007	SB-1	4	1,2,4-Trimethylbenzene	0.0397			
Environ 2007b	10/19/2007	SB-16	2.5	1,2,4-Trimethylbenzene	0.0317			
Environ 2007b	10/19/2007	SB-17	2.5	1,2,4-Trimethylbenzene	0.017			
Environ 2007a	6/13/2007	SB-5	1.5	1,3,5-Trimethylbenzene	7.29	800		<1
Environ 2007a	6/13/2007	SB-2	2	1,3,5-Trimethylbenzene	1.24	800		<1
Environ 2007b	10/18/2007	SB-7	2.5	1,3,5-Trimethylbenzene	0.78	800		<1

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Chemicals Detected in Soil
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007b	10/19/2007	SB-14	2.5	1,3,5-Trimethylbenzene	0.773	800		<1
Environ 2007b	10/18/2007	SB-9	7.5	1,3,5-Trimethylbenzene	0.339	800		<1
Environ 2008a	5/28/2008	CS-1	0.5	1,3,5-Trimethylbenzene	0.24 D	800		<1
Environ 2007b	10/18/2007	SB-11	2.5	1,3,5-Trimethylbenzene	0.222	800		<1
Environ 2008a	5/28/2008	CS-2	2.25	1,3,5-Trimethylbenzene	0.22	800		<1
Environ 2008a	5/29/2008	CS-19	1	1,3,5-Trimethylbenzene	0.15	800		<1
Environ 2007b	10/18/2007	SB-1	4	1,3,5-Trimethylbenzene	0.143	800		<1
Environ 2008a	5/28/2008	CS-15	8	1,3,5-Trimethylbenzene	0.13	800		<1
Environ 2008a	5/29/2008	CS-27	2.5	1,3,5-Trimethylbenzene	0.12	800		<1
Environ 2008a	5/28/2008	CS-1	0.5	1,3,5-Trimethylbenzene	0.078	800		<1
Environ 2008a	5/28/2008	CS-3	2.5	1,3,5-Trimethylbenzene	0.078	800		<1
Environ 2008a	5/28/2008	CS-16	8	1,3,5-Trimethylbenzene	0.07	800		<1
Environ 2008a	5/29/2008	CS-33	2.5	1,3,5-Trimethylbenzene	0.069	800		<1
Environ 2008a	5/29/2008	CS-24	5	1,3,5-Trimethylbenzene	0.067	800		<1
Environ 2008a	5/28/2008	CS-4	1	1,3,5-Trimethylbenzene	0.058	800		<1
Environ 2008a	5/28/2008	CS-5	0.5	1,3,5-Trimethylbenzene	0.055	800		<1
Environ 2008a	5/29/2008	CS-22	7	1,3,5-Trimethylbenzene	0.053	800		<1
Environ 2008a	5/29/2008	CS-34	6	1,3,5-Trimethylbenzene	0.042	800		<1
Environ 2007b	10/19/2007	SB-19	2.5	1,3,5-Trimethylbenzene	0.0341	800		<1
Environ 2007b	10/19/2007	SB-17	2.5	1,3,5-Trimethylbenzene	0.0171	800		<1
Environ 2007b	10/19/2007	SB-16	2.5	1,3,5-Trimethylbenzene	0.0146	800		<1
PNG 1995	9/11/1995	B-4	7.5	2-Chlorotoluene	0.0359	1,600		<1
Environ 2007b	10/19/2007	SB-21	2.5	Acetone	4.5	72,000		<1
Environ 2007b	10/19/2007	SB-20	2.5	Acetone	4.28	72,000		<1
Environ 2007b	10/19/2007	SB-14	7.5	Acetone	3.58	72,000		<1
Environ 2007b	10/18/2007	SB-11	2.5	Acetone	3.22	72,000		<1
Environ 2007b	10/18/2007	SB-9	7.5	Acetone	3.03	72,000		<1
Environ 2007b	10/19/2007	SB-15	2.5	Acetone	2.05	72,000		<1
Environ 2007b	10/19/2007	SB-21	1	Acetone	1.96	72,000		<1
Environ 2007b	10/19/2007	SB-20	1	Acetone	1.53	72,000		<1

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Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007b	10/19/2007	SB-19	2.5	Acetone	0.598	72,000		<1
Environ 2007b	10/19/2007	SS-4	1	Acetone	0.553	72,000		<1
PNG 1995	9/11/1995	B-2	7.5	Acetone	0.354	72,000		<1
Environ 2007b	10/19/2007	SB-18	2.5	Acetone	0.26	72,000		<1
Environ 2007b	10/19/2007	SB-17	2.5	Acetone	0.096	72,000		<1
Environ 2007b	10/19/2007	SB-16	2.5	Acetone	0.0916	72,000		<1
Environ 2007b	10/18/2007	SB-9	7.5	Benzene	0.172	0.03		5.7
Environ 2008a	5/28/2008	CS-1	0.5	Benzene	0.052	0.03		1.7
Environ 2007a	6/13/2007	SB-1	4	Benzo(a)anthracene	0.0774	1.4	0.27	<1
Environ 2007a	6/13/2007	SB-1	4	Benzo(a)pyrene	0.144	0.1	0.21	1.4
Environ 2007a	6/13/2007	SB-1	4	Chrysene	0.239	140	0.46	<1
Environ 2007a	6/13/2007	SB-2	2	Chrysene	0.0137	140	0.46	<1
Environ 2008a	5/28/2008	CS-1	0.5	cis-1,2-Dichloroethene	0.039	160		<1
Environ 2007a	6/13/2007	SB-1	4	Dibenzo(a,h)anthracene	0.0774	0.14	0.033	2.3
Environ 2007a	6/13/2007	SB-4	1.5	Diesel-range hydrocarbons	6,370	2,000		3.2
Environ 2008a	5/29/2008	CS-27	2.5	Diesel-range hydrocarbons	3,850	2,000		1.9
Environ 2007a	6/13/2007	SB-2	2	Diesel-range hydrocarbons	446	2,000		<1
Environ 2008a	5/29/2008	CS-19	1	Diesel-range hydrocarbons	350	2,000		<1
Environ 2008a	5/29/2008	CS-28	2.5	Diesel-range hydrocarbons	220	2,000		<1
Environ 2007b	10/18/2007	SB-20	1	Diesel-range hydrocarbons	26.9	2,000		<1
Environ 2007a	6/13/2007	SB-3	1.5	Diesel-range hydrocarbons	16.7	2,000		<1
Environ 2007a	6/13/2007	SB-5	1.5	Ethylbenzene	4,490	6		748
Environ 2007a	6/13/2007	SB-5	1.5	Ethylbenzene	4.49	6		<1
Environ 2007b	10/18/2007	SB-9	7.5	Ethylbenzene	1.11	6		<1
Environ 2008a	5/28/2008	CS-16	8	Ethylbenzene	0.62	6		<1
Environ 2008a	5/29/2008	CS-34	6	Ethylbenzene	0.14	6		<1
Environ 2008a	5/29/2008	CS-24	5	Ethylbenzene	0.1	6		<1
Environ 2008a	5/29/2008	CS-22	7	Ethylbenzene	0.059	6		<1
Environ 2008a	5/28/2008	CS-1	0.5	Ethylbenzene	0.055	6		<1
PNG 1995	9/11/1995	B-4	7.5	Ethylbenzene	0.0117	6		<1

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Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007a	6/13/2007	SB-1	4	Indeno(1,2,3-cd)pyrene	0.0594	1.4	0.088	<1
Environ 2007a	6/13/2007	SB-5	1.5	Isopropylbenzene	0.968			
PNG 1995	9/11/1995	B-4	7.5	Isopropylbenzene	0.324			
Environ 2007b	10/18/2007	SB-9	7.5	Isopropylbenzene	0.0718			
Environ 2007a	6/13/2007	SB-2	3.75	Lead	1,330	250	67	20
Environ 2007a	6/13/2007	SB-5	3.5	Lead	1,160	250	67	17
Environ 2007a	6/13/2007	SB-4	3.75	Lead	1,120	250	67	17
Environ 2007a	6/13/2007	SB-3	3.75	Lead	1,090	250	67	16
Environ 2007a	6/13/2007	SB-4	1.5	Lead	920	250	67	14
Environ 2007a	6/13/2007	SB-3	1.5	Lead	820	250	67	12
Environ 2007a	6/13/2007	SB-2	2	Lead	632	250	67	9.4
Environ 2007a	6/13/2007	SB-1	4	Lead	467	250	67	7.0
Environ 2007a	6/13/2007	SB-5	1.5	Lead	415	250	67	6.2
PNG 1995	9/11/1995	B-4	7.5	m,p-Xylene	0.0616	16,000		<1
PNG 1995	9/11/1995	B-4	7.5	Methylene chloride	0.0258	0.02		1.3
Environ 2007b	10/19/2007	SS-4	1	Methylene chloride	0.0161	0.02		<1
Environ 2007b	10/19/2007	SB-19	2.5	Methylene chloride	0.0121	0.02		<1
Environ 2007b	10/19/2007	SS-3	0.5	Methylene chloride	0.0114	0.02		<1
Environ 2007b	10/18/2007	SB-9	7.5	Methylene chloride	0.0113	0.02		<1
Environ 2007b	10/19/2007	SB-15	2.5	Methylene chloride	0.011	0.02		<1
Environ 2007b	10/19/2007	SB-16	2.5	Methylene chloride	0.00814	0.02		<1
Environ 2007b	10/19/2007	SB-17	2.5	Methylene chloride	0.00671	0.02		<1
Environ 2007b	10/19/2007	SS-2	0.5	Methylene chloride	0.00628	0.02		<1
Environ 2007b	10/19/2007	SB-18	2.5	Methylene chloride	0.00556	0.02		<1
Environ 2008a	5/28/2008	CS-9	0.5	Mineral oil	14,000	4,000		3.5
Environ 2008a	5/28/2008	CS-10	3	Mineral oil	145	4,000		<1
Environ 2007a	6/13/2007	SB-4	1.5	Motor oil-range hydrocarbons	28,100	2,000		14
Environ 2008a	5/28/2008	CS-1	0.5	Motor oil-range hydrocarbons	4,400 D	2,000		2.2
Environ 2008a	5/28/2008	CS-1	0.5	Motor oil-range hydrocarbons	4,300	2,000		2.2
Environ 2008a	5/28/2008	CS-3	2.5	Motor oil-range hydrocarbons	2,500	2,000		1.3

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Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007a	6/13/2007	SB-2	2	Motor oil-range hydrocarbons	1,910	2,000		<1
Environ 2007b	10/18/2007	SB-11	2	Motor oil-range hydrocarbons	1,800	2,000		<1
Environ 2008a	5/28/2008	CS-2	2.25	Motor oil-range hydrocarbons	1,740	2,000		<1
Environ 2007a	6/13/2007	SB-1	4	Motor oil-range hydrocarbons	1,670	2,000		<1
Environ 2008a	5/29/2008	CS-19	1	Motor oil-range hydrocarbons	1,440	2,000		<1
Environ 2007a	6/13/2007	SB-1	6	Motor oil-range hydrocarbons	1,240	2,000		<1
Environ 2007b	10/18/2007	SS-1	0.25	Motor oil-range hydrocarbons	1,100	2,000		<1
Environ 2007a	6/13/2007	SB-5	1.5	Motor oil-range hydrocarbons	783	2,000		<1
Environ 2008a	5/29/2008	CS-20	1	Motor oil-range hydrocarbons	680	2,000		<1
Environ 2007b	10/18/2007	SB-8	0.5	Motor oil-range hydrocarbons	300	2,000		<1
Environ 2007a	6/13/2007	SB-3	1.5	Motor oil-range hydrocarbons	147	2,000		<1
Environ 2007b	10/18/2007	SB-6	0.5	Motor oil-range hydrocarbons	110 D	2,000		<1
Environ 2007b	10/18/2007	SB-6	0.5	Motor oil-range hydrocarbons	80	2,000		<1
Environ 2007b	10/18/2007	SB-20	1	Motor oil-range hydrocarbons	75.4	2,000		<1
Environ 2007a	6/13/2007	SB-5	1.5	Naphthalene	3.36	5	0.20	17
Environ 2008a	5/28/2008	CS-3	2.5	Naphthalene	0.37	5	0.20	1.9
Environ 2007b	10/18/2007	SB-9	7.5	Naphthalene	0.343	5	0.20	1.7
Environ 2008a	5/28/2008	CS-4	1	Naphthalene	0.19	5	0.20	<1
Environ 2008a	5/28/2008	CS-1	0.5	Naphthalene	0.14 D	5	0.20	<1
Environ 2008a	5/28/2008	CS-2	2.25	Naphthalene	0.14	5	0.20	<1
PNG 1995	9/11/1995	B-4	7.5	Naphthalene	0.0885	5	0.2	<1
Environ 2008a	5/28/2008	CS-13	5	Naphthalene	0.072	5	0.20	<1
Environ 2008a	5/28/2008	CS-1	0.5	Naphthalene	0.071	5	0.20	<1
Environ 2008a	5/29/2008	CS-27	2.5	Naphthalene	0.068	5	0.20	<1
Environ 2008a	5/28/2008	CS-7	0.5	Naphthalene	0.067	5	0.20	<1
Environ 2007b	10/19/2007	SB-15	2.5	Naphthalene	0.0612	5	0.20	<1
Environ 2008a	5/29/2008	CS-19	1	Naphthalene	0.061	5	0.20	<1
Environ 2008a	5/29/2008	CS-34	6	Naphthalene	0.054	5	0.20	<1
Environ 2008a	5/29/2008	CS-24	5	Naphthalene	0.051	5	0.20	<1

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Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2008a	5/29/2008	CS-22	7	Naphthalene	0.05	5	0.20	<1
Environ 2007b	10/19/2007	SB-17	2.5	Naphthalene	0.0435	5	0.20	<1
Environ 2007b	10/18/2007	SB-1	4	Naphthalene	0.0217	5	0.20	<1
Environ 2007b	10/19/2007	SB-18	2.5	Naphthalene	0.0131	5	0.20	<1
Environ 2007a	6/13/2007	SB-5	1.5	n-Butyl benzene	1.12			
PNG 1995	9/11/1995	B-4	7.5	n-Butyl benzene	1.02			
Environ 2007a	6/13/2007	SB-2	2	n-Butyl benzene	0.216			
Environ 2008a	5/29/2008	CS-19	1	n-Butyl benzene	0.089			
Environ 2007b	10/19/2007	SB-19	2.5	n-Butyl benzene	0.0424			
Environ 2007a	6/13/2007	SB-5	1.5	n-Propylbenzene	3.2	8,000		<1
Environ 2007a	6/13/2007	SB-2	2	n-Propylbenzene	0.264	8,000		<1
Environ 2007b	10/18/2007	SB-9	7.5	n-Propylbenzene	0.193	8,000		<1
Environ 2008a	5/29/2008	CS-34	6	n-Propylbenzene	0.042	8,000		<1
PNG 1995	9/11/1995	B-4	7.5	o-Xylene	0.0527	16,000		<1
PNG 1995	9/11/1995	B-4	7.5	p-Isopropyl benzene	0.038			
Environ 2007a	6/13/2007	SB-2	2	p-Isopropyltoluene	0.286			
Environ 2007a	6/13/2007	SB-5	1.5	p-Isopropyltoluene	0.272			
Environ 2007b	10/19/2007	SB-14	2.5	p-Isopropyltoluene	0.197			
Environ 2008a	5/28/2008	CS-1	0.5	p-Isopropyltoluene	0.037			
Environ 2007a	6/13/2007	SB-5	1.5	sec-Butyl benzene	0.511			
Environ 2007a	6/13/2007	SB-2	2	sec-Butyl benzene	0.22			
Environ 2008a	5/28/2008	CS-16	8	sec-Butyl benzene	0.081			
PNG 1995	9/11/1995	B-4	7.5	sec-Butyl benzene	0.02			
Environ 2007b	10/18/2007	SB-9	7.5	sec-Butyl benzene	0.0111			
Environ 2008a	5/29/2008	CS-34	6	tert-Butylbenzene	0.051			
Environ 2007a	6/13/2007	SB-2	2	Tetrachloroethylene (PCE)	16	0.05		320
Environ 2007b	10/18/2007	SB-7	2.5	Tetrachloroethylene (PCE)	8.4	0.05		168
Environ 2007b	10/19/2007	SB-14	2.5	Tetrachloroethylene (PCE)	1.87	0.05		37.4

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Chemicals Detected in Soil
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Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2008a	5/29/2008	CS-27	2.5	Tetrachloroethylene (PCE)	1.76	0.05		35.2
Environ 2008a	5/28/2008	CS-1	0.5	Tetrachloroethylene (PCE)	1.43 D	0.05		28.6
Environ 2008a	5/28/2008	CS-2	2.25	Tetrachloroethylene (PCE)	1.34	0.05		26.8
Environ 2008a	5/28/2008	CS-3	2.5	Tetrachloroethylene (PCE)	1.19	0.05		23.8
Environ 2008a	5/28/2008	CS-11	0.5	Tetrachloroethylene (PCE)	0.71	0.05		14.2
Environ 2008a	5/28/2008	CS-6	2.5	Tetrachloroethylene (PCE)	0.52	0.05		10.4
Environ 2008a	5/28/2008	CS-9	0.5	Tetrachloroethylene (PCE)	0.48	0.05		9.6
Environ 2008a	5/29/2008	CS-19	1	Tetrachloroethylene (PCE)	0.4	0.05		8
Environ 2007a	6/13/2007	SB-2	2	Tetrachloroethylene (PCE)	0.219	0.05		4.38
Environ 2007a	6/13/2007	SB-5	1.5	Tetrachloroethylene (PCE)	0.174	0.05		3.48
Environ 2008a	5/28/2008	CS-7	0.5	Tetrachloroethylene (PCE)	0.17	0.05		3.4
Environ 2007b	10/19/2007	SB-21	1	Tetrachloroethylene (PCE)	0.161	0.05		3.22
Environ 2007b	10/18/2007	SB-9	7.5	Tetrachloroethylene (PCE)	0.152	0.05		3.04
Environ 2008a	5/28/2008	CS-10	3	Tetrachloroethylene (PCE)	0.14	0.05		2.8
Environ 2008a	5/29/2008	CS-17	0.33	Tetrachloroethylene (PCE)	0.12	0.05		2.4
Environ 2007b	10/18/2007	SB-1	4	Tetrachloroethylene (PCE)	0.105	0.05		2.1
Environ 2007b	10/18/2007	SB-6	0.5	Tetrachloroethylene (PCE)	0.1	0.05		2
Environ 2007b	10/18/2007	SB-11	2	Tetrachloroethylene (PCE)	0.1	0.05		2
Environ 2008a	5/28/2008	CS-1	0.5	Tetrachloroethylene (PCE)	0.099	0.05		1.98
Environ 2008a	5/28/2008	CS-5	0.5	Tetrachloroethylene (PCE)	0.097	0.05		1.94
Environ 2007b	10/18/2007	SS-1	0.25	Tetrachloroethylene (PCE)	0.07	0.05		1.4
Environ 2007b	10/18/2007	SS-1	0.8	Tetrachloroethylene (PCE)	0.07	0.05		1.4
Environ 2007b	10/18/2007	SB-8	0.5	Tetrachloroethylene (PCE)	0.06	0.05		1.2
Environ 2007b	10/18/2007	SS-1	0.25	Tetrachloroethylene (PCE)	0.06	0.05		1.2
Environ 2008a	5/28/2008	CS-16	8	Tetrachloroethylene (PCE)	0.045	0.05		<1
Environ 2007b	10/19/2007	SB-13	3.5	Tetrachloroethylene (PCE)	0.03	0.05		<1
Environ 2008a	5/28/2008	CS-13	5	Tetrachloroethylene (PCE)	0.028	0.05		<1
Environ 2007b	10/19/2007	SB-17	2.5	Tetrachloroethylene (PCE)	0.00375	0.05		<1
Environ 2007a	6/13/2007	SB-5	1.5	Toluene	3,330	7		476
Environ 2007a	6/13/2007	SB-5	1.5	Toluene	3.33	7		<1

Table D-20
Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2007b	10/18/2007	SB-9	7.5	Toluene	2.84	7		<1
Environ 2008a	5/29/2008	CS-24	5	Toluene	0.31	7		<1
Environ 2008a	5/29/2008	CS-22	7	Toluene	0.27	7		<1
Environ 2008a	5/28/2008	CS-16	8	Toluene	0.17	7		<1
Environ 2008a	5/28/2008	CS-15	8	Toluene	0.13	7		<1
Environ 2008a	5/29/2008	CS-27	2.5	Toluene	0.11	7		<1
Environ 2008a	5/29/2008	CS-34	6	Toluene	0.11	7		<1
Environ 2008a	5/29/2008	CS-20	1	Toluene	0.089	7		<1
Environ 2008a	5/28/2008	CS-13	5	Toluene	0.078	7		<1
Environ 2008a	5/29/2008	CS-19	1	Toluene	0.072	7		<1
PNG 1995	9/11/1995	B-4	7.5	Toluene	0.0238	7		<1
PNG 1995	9/11/1995	B-4	7.5	trans-1,2-Dichloroethane	0.0311	11		<1
Environ 2007a	6/13/2007	SB-2	2	Trichloroethylene	0.334	0.03		11
Environ 2007b	10/18/2007	SS-1	0.8	Trichloroethylene	0.05	0.03		1.7
Environ 2008a	5/28/2008	CS-1	0.5	Trichloroethylene	0.045	0.03		1.5
Environ 2007b	10/19/2007	SB-13	3.5	Trichloroethylene	0.04	0.03		1.3
Environ 2007b	10/18/2007	SS-1	0.25	Trichloroethylene	0.02	0.03		<1
Environ 2007a	6/13/2007	SB-5	1.5	Xylenes	29,700	9		3,300
Environ 2007a	6/13/2007	SB-4	1.5	Xylenes	501	9		56
Environ 2007a	6/13/2007	SB-5	1.5	Xylenes	29.7	9		3.3
Environ 2007b	10/18/2007	SB-9	7.5	Xylenes	7.64	9		<1
Environ 2008a	5/29/2008	CS-34	6	Xylenes	1.1	9		<1
Environ 2008a	5/28/2008	CS-15	8	Xylenes	0.85	9		<1
Environ 2008a	5/29/2008	CS-24	5	Xylenes	0.78	9		<1
Environ 2007b	10/18/2007	SB-11	2.5	Xylenes	0.709	9		<1
Environ 2008a	5/29/2008	CS-22	7	Xylenes	0.52	9		<1
Environ 2008a	5/29/2008	CS-33	2.5	Xylenes	0.52	9		<1
Environ 2007a	6/13/2007	SB-2	2	Xylenes	0.501	9		<1
Environ 2008a	5/29/2008	CS-27	2.5	Xylenes	0.36	9		<1
Environ 2008a	5/28/2008	CS-1	0.5	Xylenes	0.27 D	9		<1

Table D-20
Chemicals Detected in Soil
Coast Crane Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Environ 2008a	5/28/2008	CS-1	0.5	Xylenes	0.2	9		<1
Environ 2008a	5/28/2008	CS-2	2.25	Xylenes	0.13	9		<1
Environ 2008a	5/28/2008	CS-13	5	Xylenes	0.13	9		<1
Environ 2008a	5/28/2008	CS-3	2.5	Xylenes	0.098	9		<1
Environ 2008a	5/28/2008	CS-4	1	Xylenes	0.082	9		<1
Environ 2008a	5/28/2008	CS-5	0.5	Xylenes	0.063	9		<1
Environ 2008a	5/29/2008	CS-30	2.5	Xylenes	0.062	9		<1
Environ 2008a	5/29/2008	CS-19	1	Xylenes	0.061	9		<1
Environ 2007b	10/19/2007	SB-16	2.5	Xylenes	0.0236	9		<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-21
Chemicals Detected in Soil
Ness Cranes, Inc.

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
O'Sullivan 1993	11/6/1992	No. 12		2-Methylnaphthalene	2.1	320	0.073	29
O'Sullivan 1993	11/6/1992	No. 12		Acetone	0.022	72,000		<1
O'Sullivan 1993	11/6/1992	No. 13		Acetone	0.013	72,000		<1
Enviros 1991	8/22/1991	W-Wall		Arsenic	70	0.67	12,000	104
O'Sullivan 1993	11/6/1992	No. 12		Carbon disulfide	0.008	8,000		<1
O'Sullivan 1993	11/6/1992	No. 12		Dibenzofuran	0.31	80	0.059	5.3
O'Sullivan 1993	11/6/1992	No. 13		Diesel-range hydrocarbons	33,588	2,000		17
O'Sullivan 1993	11/6/1992	No. 12		Diesel-range hydrocarbons	14,579	2,000		7.3
O'Sullivan 1993	11/4/1992	1		Diesel-range hydrocarbons	4,799	2,000		2.4
O'Sullivan 1993	11/6/1992	No. 10		Diesel-range hydrocarbons	618	2,000		<1
O'Sullivan 1993	11/6/1992	No. 12		Fluorene	0.70	3,200	0.081	8.6
Enviros 1991	8/22/1991	W-Wall		Lead	65	250	67	1.0
O'Sullivan 1993	11/6/1992	No. 12		Naphthalene	0.25	5	0.2	1.3
O'Sullivan 1993	11/6/1992	No. 12		Phenanthrene	1		0.5	2.0
O'Sullivan 1993	11/6/1992	No. 13		Pyrene	44	2,400	1.4	31
Enviros 1991	8/22/1991	W-Wall		Total petroleum hydrocarbons	690	100		6.9
Enviros 1991	8/22/1991	Pit Floor		Total petroleum hydrocarbons	640	100		6.4
Enviros 1991	8/22/1991	W-Wall		Total petroleum hydrocarbons	590 D	100		5.9
Enviros 1991	8/22/1991	S-Wall/E-Wall	composite	Total petroleum hydrocarbons	35	100		<1
Enviros 1991	8/22/1991	N-Wall		Total petroleum hydrocarbons	28.0	100		<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-22
Chemicals Detected in Soil
Rasmussen Equipment Company

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
Geotech 1994a	2/18/1994	94065-E2-BOT	8.5	Diesel-range hydrocarbons	580	2000	<1
Geotech 1994a	2/18/1994	94065-E1-BOT	8.5	Diesel-range hydrocarbons	250	2000	<1
Geotech 1994a	4/14/1994	102 CTRBOTTOM	9.5	Total petroleum hydrocarbons	190	2000	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

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

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level
or Soil-to-Sediment Screening Level, whichever is lower.

Table D-23
Chemicals Detected in Soil
National Products Inc.

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Barium	26	16,000		<1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Barium	21.3	16,000		<1
Hart Crowser 1999a	11/12/1996	CB-1	3.0 - 5.0	Barium	16	16,000		<1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Cadmium	1.0	2	34	<1
Hart Crowser 1999a	11/12/1996	CB-1	3.0 - 5.0	Cadmium	0.92	2	34	<1
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Cadmium	0.5	2	34	<1
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Chromium	9.2		5,400	<1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Chromium	8.7		5,400	<1
Hart Crowser 1999a	11/12/1996	CB-1	3.0 - 5.0	Chromium	5.91		5,400	<1
Hart Crowser 1999a	11/25/1996	SP-12	6.0 - 8.0	Heavy oil-range hydrocarbons	490	2,000		<1
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Lead	39.4	250	1,300	<1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Lead	19.8	250	1,300	<1
Hart Crowser 1999a	4/11/1997	B-7-S1	0 - 2.0	Tetrachloroethylene	0.31	0.05		6.2
Hart Crowser 1999a	4/11/1997	B-10-S1	0 - 2.0	Tetrachloroethylene	0.31	0.05		6.2
Hart Crowser 1999a	4/11/1997	B-14-S1	0 - 2.0	Tetrachloroethylene	0.31	0.05		6.2
Hart Crowser 1999a	11/25/1996	SP-2	6.0 - 8.0	Tetrachloroethylene	0.19	0.05		3.8
Hart Crowser 1999a	4/11/1997	B-9-S1	0 - 2.0	Tetrachloroethylene	0.19	0.05		3.8
Hart Crowser 1999a	4/11/1997	B-12-S1	0 - 2.0	Tetrachloroethylene	0.19	0.05		3.8
Hart Crowser 1999a	4/11/1997	B-15-S1	0 - 2.0	Tetrachloroethylene	0.19	0.05		3.8
Hart Crowser 1999a	4/11/1997	B-8-S1	0 - 2.0	Tetrachloroethylene	0.15	0.05		3.0
Hart Crowser 1999a	11/25/1996	SP-1	6.0 - 8.0	Tetrachloroethylene	0.11	0.05		2.2
Hart Crowser 1999a	4/11/1997	B-13-S1	0 - 2.0	Tetrachloroethylene	0.11	0.05		2.2
Hart Crowser 1999a	11/25/1996	SP-3	10.0 -12.0	Tetrachloroethylene	0.1	0.05		2.0
Hart Crowser 1999a	4/11/1997	B-16-S1	0 - 2.0	Tetrachloroethylene	0.1	0.05		2.0
Hart Crowser 1999a	4/11/1997	B-11-S1	0 - 2.0	Tetrachloroethylene	0.085	0.05		1.7
Hart Crowser 1999a	11/25/1996	SP-6	6.0 - 8.0	Tetrachloroethylene	0.06 D	0.05		1.2

Table D-23
Chemicals Detected in Soil
National Products Inc.

Source	Sample Date	Sample Location	Sample Depth (ft)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Hart Crowser 1999a	11/12/1996	CB-2	3.0 - 5.0	Vanadium	28.5	5.6		5.1
Hart Crowser 1999a	11/12/1996	CB-3	0 - 2.5	Vanadium	28.5	5.6		5.1
Hart Crowser 1999a	11/12/1996	CB-1	3.0 - 5.0	Vanadium	24.90	5.6		4.4

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater at this property is approximately 10 feet bgs.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	11/26/1996	MW-1	1,1,1-Trichloroethane	55	200		<1
Hart Crowser 1999a	4/18/1997	MW-1	1,1,1-Trichloroethane	47 D	200		<1
Hart Crowser 1999a	11/11/1997	MW-1	1,1,1-Trichloroethane	45	200		<1
Hart Crowser 1999a	11/11/1996	MW-1	1,1,1-Trichloroethane	42.1 D	200		<1
Hart Crowser 1999a	4/18/1997	MW-1	1,1,1-Trichloroethane	42	200		<1
Hart Crowser 1999a	11/11/1996	MW-1	1,1,1-Trichloroethane	41.5	200		<1
Hart Crowser 1999a	11/25/1996	SP-1	1,1,1-Trichloroethane	30	200		<1
Hart Crowser 1999a	2/15/1999	MW-1	1,1,1-Trichloroethane	28	200		<1
Hart Crowser 1999a	10/30/1998	MW-1	1,1,1-Trichloroethane	24	200		<1
Hart Crowser 1999a	2/15/1999	HC-1	1,1,1-Trichloroethane	0.5	200		<1
Hart Crowser 1999a	2/15/1999	HC-1	1,1,1-Trichloroethane	0.5	200		<1
Hart Crowser 1999a	10/30/1998	HC-3	1,1,1-Trichloroethane	0.2	200		<1
Hart Crowser 1999a	2/15/1999	HC-3	1,1,1-Trichloroethane	0.2	200		<1
Hart Crowser 1999a	11/11/1996	MW-1	1,1-Dichloroethane	11.8	1,600		<1
Hart Crowser 1999a	11/11/1996	MW-1	1,1-Dichloroethane	11.8 D	1,600		<1
Hart Crowser 1999a	11/25/1996	SP-1	1,1-Dichloroethane	7.8	1,600		<1
Hart Crowser 1999a	11/11/1997	MW-1	1,1-Dichloroethane	3.1	1,600		<1
Hart Crowser 1999a	2/15/1999	MW-1	1,1-Dichloroethane	1.5	1,600		<1
Hart Crowser 1999a	10/30/1998	HC-3	1,1-Dichloroethane	1.4	1,600		<1
Hart Crowser 1999a	1/22/1999	HC-3	1,1-Dichloroethane	1.4	1,600		<1
Hart Crowser 1999a	10/30/1998	MW-1	1,1-Dichloroethane	1.3	1,600		<1
Hart Crowser 1999a	2/15/1999	HC-3	1,1-Dichloroethane	1	1,600		<1
Hart Crowser 1999a	10/30/1998	HC-1	1,1-Dichloroethane	0.5	1,600		<1
Hart Crowser 1999a	1/22/1999	HC-1	1,1-Dichloroethane	0.3	1,600		<1

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	11/11/1996	MW-1	1,1-Dichloroethene	2.8	400		<1
Hart Crowser 1999a	11/11/1996	MW-1	1,1-Dichloroethene	3 D	400		<1
Hart Crowser 1999a	11/11/1997	MW-1	1,1-Dichloroethene	0.3	400		<1
Hart Crowser 1999a	11/13/1996	MW-3	Arsenic	7.1	0.058	370	122
Hart Crowser 1999a	11/11/1996	MW-1	Arsenic	5.4	0.058	370	93
Hart Crowser 1999a	11/13/1996	MW-3	Barium	109	3,200		<1
Hart Crowser 1999a	11/11/1996	MW-1	Barium	107.7 D	3,200		<1
Hart Crowser 1999a	11/11/1996	MW-1	Barium	92.4	3,200		<1
Hart Crowser 1999a	11/11/1996	MW-2	Barium	81.4	3,200		<1
Hart Crowser 1999a	11/13/1996	MW-3	Chromium	26.8	50	320	<4
Hart Crowser 1999a	11/11/1996	MW-1	Chromium	24.1 D	50	320	<3
Hart Crowser 1999a	11/11/1996	MW-1	Chromium	18.8	50	320	<2
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	cis-1,2-Dichloroethene	40	16		2.5
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	cis-1,2-Dichloroethene	36	16		2.3
Hart Crowser 1999a	11/11/1996	MW-2	cis-1,2-Dichloroethene	15.3	16		<1
Hart Crowser 1999a	12/6/1996	D-2 (28-30 ft)	cis-1,2-Dichloroethene	13	16		<1
Hart Crowser 1999a	11/11/1997	MW-2	cis-1,2-Dichloroethene	11	16		<1
Hart Crowser 1999a	11/25/1996	SP-6	cis-1,2-Dichloroethene	6.9 D	16		<1
Hart Crowser 1999a	11/25/1996	SP-6	cis-1,2-Dichloroethene	6.8	16		<1
Hart Crowser 1999a	11/11/1996	MW-1	cis-1,2-Dichloroethene	5 D	16		<1
Hart Crowser 1999a	11/11/1996	MW-1	cis-1,2-Dichloroethene	4.7	16		<1
Hart Crowser 1999a	10/30/1998	MW-2	cis-1,2-Dichloroethene	4.4	16		<1
Hart Crowser 1999a	10/30/1998	MW-2	cis-1,2-Dichloroethene	4.3 D	16		<1
Hart Crowser 1999a	1/22/1999	MW-2	cis-1,2-Dichloroethene	4.2	16		<1
Hart Crowser 1999a	1/22/1999	MW-3	cis-1,2-Dichloroethene	2.5	16		<1
Hart Crowser 1999a	1/22/1999	HC-1	cis-1,2-Dichloroethene	2	16		<1
Hart Crowser 1999a	1/22/1999	HC-2	cis-1,2-Dichloroethene	1.9	16		<1
Hart Crowser 1999a	1/22/1999	HC-3	cis-1,2-Dichloroethene	1.9	16		<1

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	1/22/1999	MW-2	cis-1,2-Dichloroethene	1.6 D	16		<1
Hart Crowser 1999a	10/30/1998	MW-1	cis-1,2-Dichloroethene	1.1	16		<1
Hart Crowser 1999a	10/30/1998	HC-3	cis-1,2-Dichloroethene	0.5	16		<1
Hart Crowser 1999a	11/11/1997	MW-1	cis-1,2-Dichloroethene	0.3	16		<1
Hart Crowser 1999a	2/15/1999	HC-3	cis-1,2-Dichloroethene	0.2	16		<1
Hart Crowser 1999a	1/22/1999	HC-3	Iron	18,800	11,200		<1
Hart Crowser 1999a	10/30/1998	HC-3	Iron	13,600	11,200		<1
Hart Crowser 1999a	2/15/1999	HC-3	Iron	11,800	11,200		<1
Hart Crowser 1999a	10/30/1998	HC-1	Iron	9,330	11,200		<1
Hart Crowser 1999a	10/30/1998	HC-1	Iron	6,290	11,200		<1
Hart Crowser 1999a	10/30/1998	HC-2	Iron	1,770	11,200		<1
Hart Crowser 1999a	1/22/1999	HC-2	Iron	700	11,200		<1
Hart Crowser 1999a	2/15/1999	HC-2	Iron	700	11,200		<1
Hart Crowser 1999a	2/15/1999	HC-1	Iron	160 D	11,200		<1
Hart Crowser 1999a	2/15/1999	HC-1	Iron	140	11,200		<1
Hart Crowser 1999a	10/30/1998	MW-2	Iron	80	11,200		<1
Hart Crowser 1999a	10/30/1998	MW-2	Iron	80 D	11,200		<1
Hart Crowser 1999a	1/22/1999	MW-2	Iron	50	11,200		<1
Hart Crowser 1999a	1/22/1999	MW-2	Iron	50 D	11,200		<1
Hart Crowser 1999a	10/30/1998	MW-1	Iron	30	11,200		<1
Hart Crowser 1999a	11/11/1996	MW-1	Lead	10.3	15	13	<1
Hart Crowser 1999a	11/11/1996	MW-1	Lead	10.1 D	15	13	<1
Hart Crowser 1999a	11/13/1996	MW-3	Lead	6.9	15	13	<1
Hart Crowser 1999a	11/11/1996	MW-1	Tetrachloroethylene (PCE)	48.8	5		9.8
Hart Crowser 1999a	11/11/1996	MW-1	Tetrachloroethylene (PCE)	48 D	5		9.6
Hart Crowser 1999a	4/18/1997	MW-1	Tetrachloroethylene (PCE)	47	5		9.4
Hart Crowser 1999a	4/18/1997	MW-1	Tetrachloroethylene (PCE)	47 D	5		9.4
Hart Crowser 1999a	11/26/1996	MW-1	Tetrachloroethylene (PCE)	41	5		8.2

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	11/11/1997	MW-1	Tetrachloroethylene (PCE)	39	5		7.8
Hart Crowser 1999a	2/15/1999	MW-1	Tetrachloroethylene (PCE)	32	5		6.4
Hart Crowser 1999a	10/30/1998	MW-1	Tetrachloroethylene (PCE)	26	5		5.2
Hart Crowser 1999a	11/25/1996	SP-1	Tetrachloroethylene (PCE)	20	5		4.0
Hart Crowser 1999a	12/6/1996	D-1 (25-28.5 ft)	Tetrachloroethylene (PCE)	18	5		3.6
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Tetrachloroethylene (PCE)	16	5		3.2
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Tetrachloroethylene (PCE)	15	5		3.0
Hart Crowser 1999a	1/22/1999	MW-2	Tetrachloroethylene (PCE)	1	5		<1
Hart Crowser 1999a	1/22/1999	HC-3	Tetrachloroethylene (PCE)	0.9	5		<1
Hart Crowser 1999a	1/22/1999	HC-1	Tetrachloroethylene (PCE)	0.8	5		<1
Hart Crowser 1999a	1/22/1999	HC-2	Tetrachloroethylene (PCE)	0.7	5		<1
Hart Crowser 1999a	1/22/1999	MW-3	Tetrachloroethylene (PCE)	0.6	5		<1
Hart Crowser 1999a	2/15/1999	HC-3	Tetrachloroethylene (PCE)	0.4	5		<1
Hart Crowser 1999a	10/30/1998	MW-2	Tetrachloroethylene (PCE)	0.3 D	5		<1
Hart Crowser 1999a	10/30/1998	HC-3	Tetrachloroethylene (PCE)	0.3	5		<1
Hart Crowser 1999a	10/30/1998	MW-2	trans-1,2-Dichloroethene	0.6	160		<1
Hart Crowser 1999a	10/30/1998	MW-2	trans-1,2-Dichloroethene	0.6 D	160		<1
Hart Crowser 1999a	1/22/1999	MW-2	trans-1,2-Dichloroethene	0.3	160		<1
Hart Crowser 1999a	1/22/1999	MW-2	trans-1,2-Dichloroethene	0.3 D	160		<1
Hart Crowser 1999a	1/22/1999	MW-2	Trichloroethylene (TCE)	70	5		14
Hart Crowser 1999a	11/11/1996	MW-2	Trichloroethylene (TCE)	54	5		11
Hart Crowser 1999a	11/11/1997	MW-2	Trichloroethylene (TCE)	50	5		10
Hart Crowser 1999a	1/22/1999	HC-1	Trichloroethylene (TCE)	49	5		9.8
Hart Crowser 1999a	1/22/1999	HC-2	Trichloroethylene (TCE)	45	5		9.0
Hart Crowser 1999a	10/30/1998	MW-1	Trichloroethylene (TCE)	39	5		7.8
Hart Crowser 1999a	1/22/1999	MW-3	Trichloroethylene (TCE)	39	5		7.8
Hart Crowser 1999a	1/22/1999	HC-3	Trichloroethylene (TCE)	38	5		7.6
Hart Crowser 1999a	4/18/1997	MW-2	Trichloroethylene (TCE)	34	5		6.8

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	10/30/1998	MW-2	Trichloroethylene (TCE)	24	5		4.8
Hart Crowser 1999a	10/30/1998	MW-2	Trichloroethylene (TCE)	24 D	5		4.8
Hart Crowser 1999a	1/22/1999	MW-2	Trichloroethylene (TCE)	22 D	5		4.4
Hart Crowser 1999a	11/11/1996	MW-1	Trichloroethylene (TCE)	16.9	5		3.4
Hart Crowser 1999a	11/11/1996	MW-1	Trichloroethylene (TCE)	16.7 D	5		3.3
Hart Crowser 1999a	11/11/1997	MW-1	Trichloroethylene (TCE)	16	5		3.2
Hart Crowser 1999a	4/18/1997	MW-1	Trichloroethylene (TCE)	15 D	5		3.0
Hart Crowser 1999a	11/26/1996	MW-1	Trichloroethylene (TCE)	14	5		2.8
Hart Crowser 1999a	4/18/1997	MW-1	Trichloroethylene (TCE)	12	5		2.4
Hart Crowser 1999a	2/15/1999	MW-1	Trichloroethylene (TCE)	10	5		2.0
Hart Crowser 1999a	11/25/1996	SP-1	Trichloroethylene (TCE)	4.9	5		1.0
Hart Crowser 1999a	12/6/1996	D-1 (25-28.5 ft)	Trichloroethylene (TCE)	3.1	5		<1
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Trichloroethylene (TCE)	2.7	5		<1
Hart Crowser 1999a	12/6/1996	D-1 (37.5-39 ft)	Trichloroethylene (TCE)	2.7	5		<1
Hart Crowser 1999a	12/6/1996	CPT-1	Trichloroethylene (TCE)	2.1	5		<1
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	Trichloroethylene (TCE)	1.9	5		<1
Hart Crowser 1999a	12/6/1996	D-2 (40-44 ft)	Trichloroethylene (TCE)	1.8	5		<1
Hart Crowser 1999a	11/25/1996	SP-6	Trichloroethylene (TCE)	1.6 D	5		<1
Hart Crowser 1999a	11/25/1996	SP-6	Trichloroethylene (TCE)	1.5	5		<1
Hart Crowser 1999a	10/30/1998	HC-3	Trichloroethylene (TCE)	0.7	5		<1
Hart Crowser 1999a	10/30/1998	MW-3	Trichloroethylene (TCE)	0.4	5		<1
Hart Crowser 1999a	2/15/1999	HC-3	Trichloroethylene (TCE)	0.4	5		<1
Hart Crowser 1999a	10/30/1998	HC-1	Trichloroethylene (TCE)	0.3	5		<1
Hart Crowser 1999a	10/20/1998	HC-2	Trichloroethylene (TCE)	0.3	5		<1

Table D-24
Chemicals Detected in Groundwater
National Products Inc.

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	GW-to-Sediment Screening Level[b] (ug/L)	Exceedance Factor
Hart Crowser 1999a	11/11/1996	MW-1	Vanadium	107 D	1.12		96
Hart Crowser 1999a	11/13/1996	MW-3	Vanadium	59.5	1.12		53
Hart Crowser 1999a	11/11/1996	MW-1	Vanadium	42.6	1.12		38
Hart Crowser 1999a	11/11/1996	MW-2	Vanadium	29.1	1.12		26

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

D - Duplicate sample

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL (SAIC 2006).

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Groundwater-to-Sediment Screening Value, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-25
Chemicals Detected in Soil
Former Scott Andrews Property

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
K&S Environmental 2000	12/21/2000	C2	8	Xylenes	0.0763	9	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

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

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Table D-26
Chemicals Detected in Soil
Former Crosby Auto Repair Shop

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Exceedance Factor
SD&C 2000	9/20/2000	B1	12	Ethylbenzene	0.16	6	<1
SD&C 2000	9/20/2000	B1	12	Gasoline-range hydrocarbons	160	100	1.6
SD&C 2000	9/20/2000	B1	12	Xylenes	0.8	9	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Depth to groundwater at this property is approximately 15 feet bgs.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-27
Chemicals Detected in Groundwater
Former Crosby Auto Repair Shop

Source	Sample Date	Sample Location	Chemical	GW Conc'n (ug/L)	MTCA Cleanup Level[a] (ug/L)	Exceedance Factor
SD&C 2000	9/20/2000	B-1	Benzene	8.1	0.8	10
SD&C 2000	9/20/2000	B-1	Ethylbenzene	110	700	<1
SD&C 2000	9/20/2000	B-1	Gasoline-range hydrocarbons	2,400	800	3.0
SD&C 2000	9/20/2000	B-1	Toluene	8.5	640	<1
SD&C 2000	9/20/2000	B-1	Xylenes	180	1,000	<1

GW - Groundwater

ug/L - Micrograms per liter

MTCA - Model Toxics Control Act

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

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.

Table D-28
Chemicals Detected in Soil
Warner's Foreign Auto Repair

Source	Sample Date	Sample Location	Sample Depth (ft bgs)	Chemical	Soil Conc'n (mg/kg)	MTCA Cleanup Level[a] (mg/kg)	Soil-to-Sediment Screening Level[b] (mg/kg)	Exceedance Factor
Bison 1992a	1/9/1992	#2	5	Gasoline-range hydrocarbons	3,100	100		31
Bison 1992a	1/9/1992	#3	20	Lead	33	250	67	<1
Bison 1992a	1/9/1992	#1	15	Lead	16	250	67	<1

ft bgs - Feet below ground surface

mg/kg - Milligrams per kilogram

DW - Dry weight

MTCA - Model Toxics Control Act

CSL - Cleanup Screening Level from Washington Sediment Management Standards

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

b - Based on CSL. 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 (SAIC 2006).

Depth to groundwater unknown at this property.

Table presents detected chemicals only.

Exceedance factors are the ratio of the detected concentration to the MTCA Cleanup Level or Soil-to-Sediment Screening Level, whichever is lower.

Chemicals and samples with exceedance factors greater than 1 are shaded light yellow.